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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Combined Level 2 and Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 436488, 436518, and 437370

Naval Weapons Station Earle
Colts Neck, New Jersey

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

Packing Slip:

EnSafe Inc.
Building C36 Naval Weapons Station Earle
SDG: 436488, 436518 and 437370
Attn:Resolution Consultants

Table of Contents

DODQSM Cover Sheet.....1

Case Narrative.....3

Chain of Custody and Supporting Documentation.....6

LC-MS/MS Analysis.....8

Case Narrative.....9

Sample Data Summary.....13

Quality Control Summary.....24

Sample Data.....29

Standards.....130

Quality Control Data.....285

Miscellaneous.....396

LC-MS/MS Analysis.....405

Case Narrative.....406

Sample Data Summary.....410

Quality Control Summary.....421

Sample Data.....426

Standards.....527

Quality Control Data.....722

Miscellaneous.....883

LC-MS/MS Analysis.....892

Case Narrative.....893

Sample Data Summary.....896

Quality Control Summary.....898

Sample Data.....902

Standards.....913

Quality Control Data.....1050

Miscellaneous.....1142

DODQSM Cover Sheet

DOD-QSM Cover Sheet

Building C36 Naval Weapons Station Earle

November 17, 2017

GEL Laboratories, LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Project Manager: Lindsay Fabra
Phone Extension: 4443
Email: Lindsay.Fabra@gel.com

Contract Purchase Order: 24420

Work Order: 437370, 436518 and 436488 **SDG:** 436488, 436518 and 437370

Client Contact:
Resolution Consultants
EnSafe Inc.
Attn:Dana Miller/Jennifer O'Keefe 5724 Summer Trees Drive
Memphis, Tennessee 38134

Project Identification: Building C36 Naval Weapons Station Earle

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

GEL appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 27, 2017 and October 28, 2017. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Rev01: This data package is revised to include the corrected calculation for the detected concentration. If you have any questions, please do not hesitate to contact me at the phone number or e-mail address listed above.

Sincerely,

Lindsay Fabra

Lindsay Fabra
Project Manager

Case Narrative

Rev01: This data package is revised to include the corrected calculation for the detected concentration.

DODQSM Case Narrative
for
EnSafe Inc.
SDG: 437370
Work Orders: 437370, 436518 and 436488

November 17, 2017

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample Receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on October 27, 2017 and October 28, 2017 for analysis. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
436488001	16MW06_1017
436488002	16MW11_1017
436488003	16MW15_1017
436488004	16MW24_1017
436488005	16MW36_1017
436488006	DUP1GW1017
436488007	GW-102617FB
436518001	29MW01_1017
436518002	29MW02_1017
436518003	16MW09_1017
436518004	16MW25_1017
436518005	GW-102717FB
436518006	EBGW102717
437370001	Trip Blank

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, and data from the following fractions: LCMSMS-Misc.

Lindsay Fabra
Project Manager

Chain of Custody and Supporting Documentation

List of current GEL Certifications as of 17 November 2017

State	Certification
Alaska	UST−0110
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA170010
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122018−1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	9904
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−17−12
Utah NELAP	SC000122017−24
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

LC-MS/MS Analysis

Case Narrative

LCMSMS-Misc
Technical Case Narrative
EnSafe Inc. (ESAF)
SDG #: 436488

Product: **The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS**
Analytical Method: EPA 537 Modified
Analytical Procedure: GL-OA-E-076 REV# 4
Analytical Batches: 1714407 and 1714400

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
436488001	16MW06_1017
436488002	16MW11_1017
436488003	16MW15_1017
436488004	16MW24_1017
436488005	16MW36_1017
436488006	DUP1GW1017
436488007	GW-102617FB
1203908641	Method Blank (MB)
1203908642	Laboratory Control Sample (LCS)
1203908644	436488001(16MW06_1017) Matrix Spike (MS)
1203908646	436488001(16MW06_1017) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
The following samples were diluted to bring the over range concentrations within the calibration range. 436488002 (16MW11_1017), 436488003 (16MW15_1017) and 436488004 (16MW24_1017).

Analyte	436488		
	002	003	004
Perfluorohexanesulfonate (PFHxS)	10X	10X	5X
Perfluorooctanesulfonate (PFOS)	10X	10X	5X

Miscellaneous Information

Additional Comments
The following samples were filtered prior to extraction to remove sediment. 1203908644 (16MW06_1017MS), 1203908646 (16MW06_1017MSD), 436488001 (16MW06_1017), 436488004 (16MW24_1017) and 436488006 (DUP1GW1017).

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ESAF001 EnSafe Inc.

Client SDG: 436488 GEL Work Order: 436488

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the MS or MSD is outside of specified acceptance criteria.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Jannie Shaw - Busby **Name: Jannie Shaw-Busby**

Date: 10 NOV 2017 **Title: Senior Chemist**

Sample Data Summary

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488001**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-06**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW06_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 02:23**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**264.42 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117095.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00251	ug/L	0.00125	0.00251	0.00378
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00251	ug/L	0.00125	0.00251	0.00378
375-73-5	Perfluorobutanesulfonate (PFBS)	J	0.000801	ug/L	0.000624	0.00127	0.00168
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00127	ug/L	0.000737	0.00127	0.00189
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00127	ug/L	0.000624	0.00127	0.00189
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0025	ug/L	0.000624	0.00127	0.00189
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.00307	ug/L	0.000624	0.00115	0.00172
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00266	ug/L	0.000624	0.00127	0.00189
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00112	ug/L	0.000624	0.00125	0.00189
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0266	ug/L	0.000624	0.00125	0.00189
335-67-1	Perfluorooctanoic acid (PFOA)		0.0106	ug/L	0.000662	0.00125	0.00189
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00125	ug/L	0.000624	0.00125	0.00189
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00125	ug/L	0.000624	0.00125	0.00189
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00125	ug/L	0.000624	0.00125	0.00189

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488002**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-11**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW11_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:10**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**279.07 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117100.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00238	ug/L	0.00118	0.00238	0.00358
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00238	ug/L	0.00118	0.00238	0.00358
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00497	ug/L	0.000591	0.0012	0.00159
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.0012	ug/L	0.000699	0.0012	0.00179
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.0012	ug/L	0.000591	0.0012	0.00179
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00525	ug/L	0.000591	0.0012	0.00179
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0113	ug/L	0.000591	0.0012	0.00179
375-95-1	Perfluorononanoic acid (PFNA)	J	0.000926	ug/L	0.000591	0.00118	0.00179
335-67-1	Perfluorooctanoic acid (PFOA)		0.0144	ug/L	0.000627	0.00118	0.00179
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00118	ug/L	0.000591	0.00118	0.00179
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00118	ug/L	0.000591	0.00118	0.00179
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00118	ug/L	0.000591	0.00118	0.00179

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488002**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-11**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW11_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 14:09**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**279.07 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117128.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0457	ug/L	0.00591	0.0109	0.0163
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.185	ug/L	0.00591	0.0118	0.0179

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 13:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488003**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-15**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW15_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:32**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**281.56 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117101.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00236	ug/L	0.00117	0.00236	0.00355
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00236	ug/L	0.00117	0.00236	0.00355
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0113	ug/L	0.000586	0.00119	0.00158
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00119	ug/L	0.000693	0.00119	0.00178
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00119	ug/L	0.000586	0.00119	0.00178
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0112	ug/L	0.000586	0.00119	0.00178
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0195	ug/L	0.000586	0.00119	0.00178
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00177	ug/L	0.000586	0.00117	0.00178
335-67-1	Perfluorooctanoic acid (PFOA)		0.0217	ug/L	0.000622	0.00117	0.00178
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00117	ug/L	0.000586	0.00117	0.00178
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00117	ug/L	0.000586	0.00117	0.00178
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00117	ug/L	0.000586	0.00117	0.00178

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 13:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488003**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-15**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW15_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 14:31**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**281.56 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117129.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.121	ug/L	0.00586	0.0108	0.0162
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.291	ug/L	0.00586	0.0117	0.0178

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 10:45**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488004**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-24**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW24_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:53**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**271.73 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117102.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00245	ug/L	0.00121	0.00245	0.00368
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00245	ug/L	0.00121	0.00245	0.00368
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00288	ug/L	0.000607	0.00123	0.00164
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00123	ug/L	0.000718	0.00123	0.00184
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00123	ug/L	0.000607	0.00123	0.00184
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00405	ug/L	0.000607	0.00123	0.00184
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0115	ug/L	0.000607	0.00123	0.00184
375-95-1	Perfluorononanoic acid (PFNA)		0.00209	ug/L	0.000607	0.00121	0.00184
335-67-1	Perfluorooctanoic acid (PFOA)		0.0179	ug/L	0.000644	0.00121	0.00184
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00121	ug/L	0.000607	0.00121	0.00184
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00121	ug/L	0.000607	0.00121	0.00184
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00121	ug/L	0.000607	0.00121	0.00184

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 10:45**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488004**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-24**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW24_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**5**
Run Date:	**11/02/2017 14:52**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**271.73 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117130.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0572	ug/L	0.00304	0.00561	0.00837
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0485	ug/L	0.00304	0.00607	0.0092

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 11:50**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488005**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-36**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW36_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:15**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**276.67 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117103.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.0024	ug/L	0.00119	0.0024	0.00361
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.0024	ug/L	0.00119	0.0024	0.00361
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00121	ug/L	0.000596	0.00121	0.00161
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00121	ug/L	0.000705	0.00121	0.00181
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.0011	ug/L	0.000596	0.0011	0.00164
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00119	ug/L	0.000596	0.00119	0.00181
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00119	ug/L	0.000633	0.00119	0.00181
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00119	ug/L	0.000596	0.00119	0.00181

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 00:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488006**	**Date Received:**	**10/27/2017 08:55**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**DUP1GW1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:36**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**267.6 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117104.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00249	ug/L	0.00123	0.00249	0.00374
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00249	ug/L	0.00123	0.00249	0.00374
375-73-5	Perfluorobutanesulfonate (PFBS)	J	0.000801	ug/L	0.000617	0.00125	0.00166
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00125	ug/L	0.000729	0.00125	0.00187
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00125	ug/L	0.000617	0.00125	0.00187
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0027	ug/L	0.000617	0.00125	0.00187
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.00346	ug/L	0.000617	0.00114	0.0017
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00314	ug/L	0.000617	0.00125	0.00187
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00127	ug/L	0.000617	0.00123	0.00187
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0265	ug/L	0.000617	0.00123	0.00187
335-67-1	Perfluorooctanoic acid (PFOA)		0.0108	ug/L	0.000654	0.00123	0.00187
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000617	0.00123	0.00187
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000617	0.00123	0.00187
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000617	0.00123	0.00187

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488007**	**Date Received:**	**10/27/2017 08:55**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**GW-102617FB**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:57**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**275.81 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117105.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00241	ug/L	0.0012	0.00241	0.00363
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00241	ug/L	0.0012	0.00241	0.00363
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00121	ug/L	0.000598	0.00121	0.00161
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00121	ug/L	0.000707	0.00121	0.00181
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00111	ug/L	0.000598	0.00111	0.00165
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
375-95-1	Perfluorononanoic acid (PFNA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.0012	ug/L	0.000598	0.0012	0.00181
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.0012	ug/L	0.000634	0.0012	0.00181
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.0012	ug/L	0.000598	0.0012	0.00181

Quality Control Summary

Quality Control Summary
Spike Recovery Report

SDG Number: 436488
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1714400
Matrix: WATER
Lab Sample ID: 1203908642
Instrument: LCMSMS6
Analysis Date: 11/02/2017 00:15
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
1763-23-1	LCS Perfluorooctanesulfonate (PFOS)	0.0199	0.0	0.0175	88	70-130
2058-94-8	LCS Perfluoroundecanoic acid (PFUdA)	0.0199	0.0	0.0173	87	70-130
2355-31-9	LCS N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0185	93	70-130
2991-50-6	LCS N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0165	83	70-130
307-24-4	LCS Perfluorohexanoic acid (PFHxA)	0.0199	0.0	0.0192	96	70-130
307-55-1	LCS Perfluorododecanoic acid (PFDoA)	0.0199	0.0	0.0207	104	70-130
335-67-1	LCS Perfluorooctanoic acid (PFOA)	0.0199	0.0	0.0173	87	70-130
335-76-2	LCS Perfluorodecanoic acid (PFDA)	0.0199	0.0	0.0172	87	70-130
355-46-4	LCS Perfluorohexanesulfonate (PFHxS)	0.0181	0.0	0.015	82	70-130
375-73-5	LCS Perfluorobutanesulfonate (PFBS)	0.0176	0.0	0.0171	97	70-130
375-85-9	LCS Perfluoroheptanoic acid (PFHpA)	0.0199	0.0	0.0169	85	70-130
375-95-1	LCS Perfluorononanoic acid (PFNA)	0.0199	0.0	0.0195	98	70-130
376-06-7	LCS Perfluorotetradecanoic acid (PFTeDA)	0.0199	0.0	0.0178	89	70-130
72629-94-8	LCS Perfluorotridecanoic acid (PFTrDA)	0.0199	0.0	0.0173	87	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: 436488
Sample Type: Matrix Spike
Client ID: 16MW06_1017MS
Matrix: GROUND WATER
Lab Sample ID: 1203908644
Instrument: LCMSMS6
Analysis Date: 11/02/2017 02:45
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
1763-23-1	MS	Perfluorooctanesulfonate (PFOS)	0.0188	0.0266		0.0466	107	70-130
2058-94-8	MS	Perfluoroundecanoic acid (PFUdA)	0.0188	0.00	U	0.0173	92	70-130
2355-31-9	MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0188	0.000537	U	0.0153	78	70-130
2991-50-6	MS	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0188	0.000479	U	0.0196	102	70-130
307-24-4	MS	Perfluorohexanoic acid (PFHxA)	0.0188	0.00266		0.0217	101	70-130
307-55-1	MS	Perfluorododecanoic acid (PFDoA)	0.0188	0.00	U	0.0185	99	70-130
335-67-1	MS	Perfluorooctanoic acid (PFOA)	0.0188	0.0106		0.0287	97	70-130
335-76-2	MS	Perfluorodecanoic acid (PFDA)	0.0188	0.000295	U	0.0178	93	70-130
355-46-4	MS	Perfluorohexanesulfonate (PFHxS)	0.0171	0.00307		0.0213	107	70-130
375-73-5	MS	Perfluorobutanesulfonate (PFBS)	0.0166	0.000801	J	0.0166	95	70-130
375-85-9	MS	Perfluoroheptanoic acid (PFHpA)	0.0188	0.0025		0.0205	96	70-130
375-95-1	MS	Perfluorononanoic acid (PFNA)	0.0188	0.00112	J	0.0191	96	70-130
376-06-7	MS	Perfluorotetradecanoic acid (PFTeDA)	0.0188	0.00	U	0.0169	90	70-130
72629-94-8	MS	Perfluorotridecanoic acid (PFTrDA)	0.0188	0.00	U	0.0168	89	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: 436488
Sample Type: Matrix Spike Duplicate
Client ID: 16MW06_1017MSD
Matrix: GROUND WATER
Lab Sample ID: 1203908646
Instrument: LCMSMS6
Analysis Date: 11/02/2017 03:06
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1763-23-1	MSDPerfluorooctanesulfonate (PFOS)	0.0182	0.0266		0.0458	106	70-130	2	0-30
2058-94-8	MSDPerfluoroundecanoic acid (PFUdA)	0.0182	0.00	U	0.0195	107	70-130	12	0-30
2355-31-9	MSDN-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0182	0.000537	U	0.0151	80	70-130	1	0-30
2991-50-6	MSDN-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0182	0.000479	U	0.0156	83	70-130	23	0-30
307-24-4	MSDPerfluorohexanoic acid (PFHxA)	0.0182	0.00266		0.0194	92	70-130	11	0-30
307-55-1	MSDPerfluorododecanoic acid (PFDoA)	0.0182	0.00	U	0.0202	111	70-130	9	0-30
335-67-1	MSDPerfluorooctanoic acid (PFOA)	0.0182	0.0106		0.0251	80	70-130	14	0-30
335-76-2	MSDPerfluorodecanoic acid (PFDA)	0.0182	0.000295	U	0.0171	93	70-130	4	0-30
355-46-4	MSDPerfluorohexanesulfonate (PFHxS)	0.0166	0.00307		0.0172	85	70-130	21	0-30
375-73-5	MSDPerfluorobutanesulfonate (PFBS)	0.0161	0.000801	J	0.0151	89	70-130	9	0-30
375-85-9	MSDPerfluoroheptanoic acid (PFHpA)	0.0182	0.0025		0.018	85	70-130	13	0-30
375-95-1	MSDPerfluorononanoic acid (PFNA)	0.0182	0.00112	J	0.0184	95	70-130	4	0-30
376-06-7	MSDPerfluorotetradecanoic acid (PFTeDA)	0.0182	0.00	U	0.0169	93	70-130	0	0-30
72629-94-8	MSDPerfluorotridecanoic acid (PFTrDA)	0.0182	0.00	U	0.0171	94	70-130	2	0-30

Method Blank Summary

SDG Number:	**436488**	**Client:**	**ESAF001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1714400**	**Instrument ID:**	**LCMSMS6**	**Data File:**	**PFC103117088.wiff**
Lab Sample ID:	**1203908641**	**Prep Date:**	**10/31/2017 12:00**	**Analyzed:**	**11/01/17 23:54**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1714400	1203908642	PFC103117089.wiff	11/02/17	0015
02	16MW06_1017	436488001	PFC103117095.wiff	11/02/17	0223
03	16MW06_1017MS	1203908644	PFC103117096.wiff	11/02/17	0245
04	16MW06_1017MSD	1203908646	PFC103117097.wiff	11/02/17	0306
05	16MW11_1017	436488002	PFC103117100.wiff	11/02/17	0410
06	16MW15_1017	436488003	PFC103117101.wiff	11/02/17	0432
07	16MW24_1017	436488004	PFC103117102.wiff	11/02/17	0453
08	16MW36_1017	436488005	PFC103117103.wiff	11/02/17	0515
09	DUP1GW1017	436488006	PFC103117104.wiff	11/02/17	0536
10	GW-102617FB	436488007	PFC103117105.wiff	11/02/17	0557
11	16MW11_1017DL	436488002	PFC103117128.wiff	11/02/17	1409
12	16MW15_1017DL	436488003	PFC103117129.wiff	11/02/17	1431
13	16MW24_1017DL	436488004	PFC103117130.wiff	11/02/17	1452

Sample Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488001**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-06**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW06_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 02:23**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**264.42 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117095.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00251	ug/L	0.00125	0.00251	0.00378
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00251	ug/L	0.00125	0.00251	0.00378
375-73-5	Perfluorobutanesulfonate (PFBS)	J	0.000801	ug/L	0.000624	0.00127	0.00168
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00127	ug/L	0.000737	0.00127	0.00189
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00127	ug/L	0.000624	0.00127	0.00189
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0025	ug/L	0.000624	0.00127	0.00189
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.00307	ug/L	0.000624	0.00115	0.00172
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00266	ug/L	0.000624	0.00127	0.00189
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00112	ug/L	0.000624	0.00125	0.00189
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0266	ug/L	0.000624	0.00125	0.00189
335-67-1	Perfluorooctanoic acid (PFOA)		0.0106	ug/L	0.000662	0.00125	0.00189
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00125	ug/L	0.000624	0.00125	0.00189
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00125	ug/L	0.000624	0.00125	0.00189
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00125	ug/L	0.000624	0.00125	0.00189

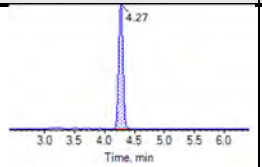
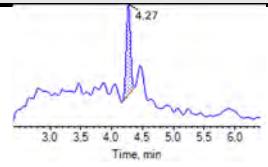
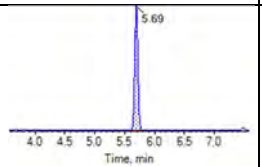
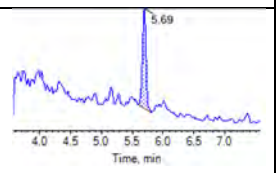
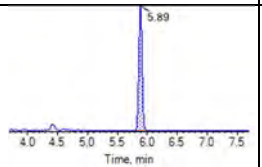
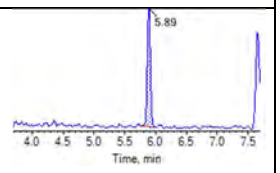
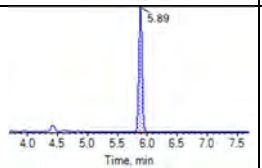
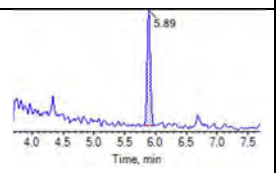
JISB GC
11/06/2017 11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 10:47:00

PFC103117095.wiff			
Sample Name	436488001	**Injection Vial**	30
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117095.wiff
Acquisition Date	11/2/2017 02:23:54	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

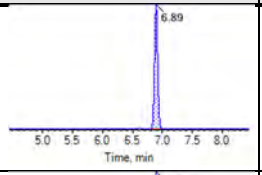
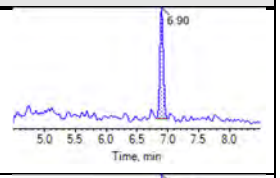
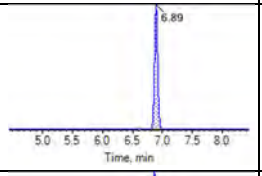
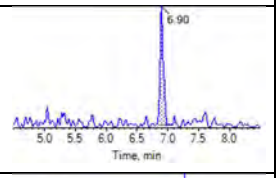
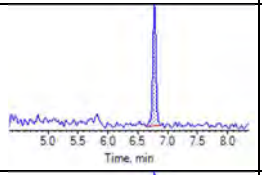
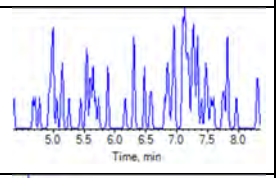
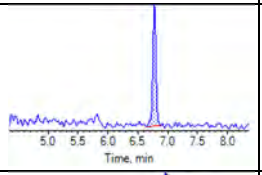
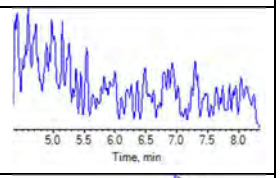
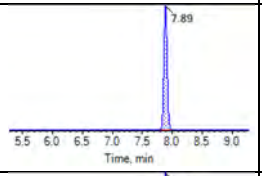
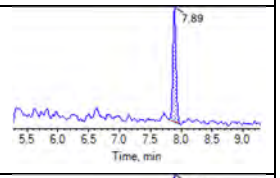
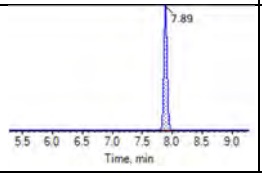
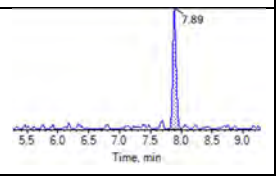
Results Summary

PFC103117095.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	158700	13C4_PFBA	137800	N/A	163.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	139800	13C5_PFPeA	247500	N/A	131.3	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	70180	13C3_PFBS	168000	N/A	42.4	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	32730	13C3_PFBS	168000	N/A	44.0	N/A	0.47/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 10:47:00

PFC103117095.wiff

Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	156200	13C5_PFHxA	292500	N/A	140.6	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	13220	13C5_PFHxA	292500	N/A	168.4	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	49750	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	49750	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.89 (7.93)	135800	13C4_PFHpA	245400	N/A	132.3	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.89 (7.93)	39360	13C4_PFHpA	245400	N/A	146.6	N/A	0.29/ 0.26		

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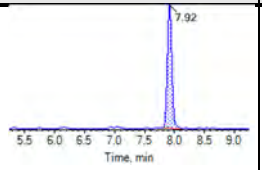
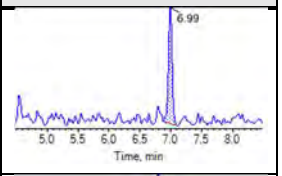
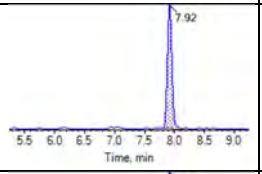
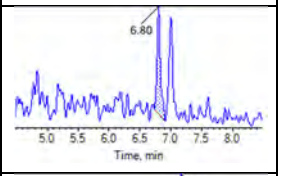
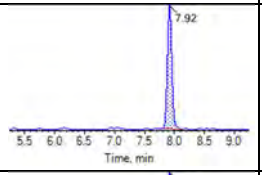
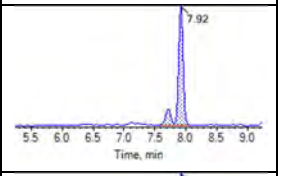
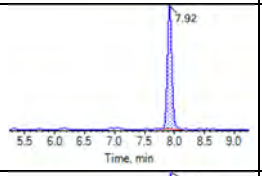
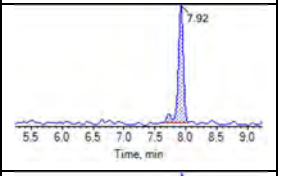
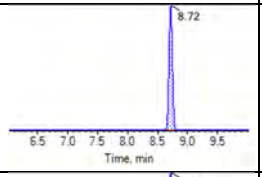
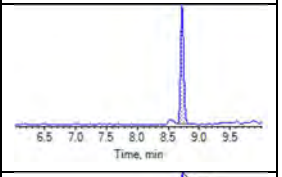
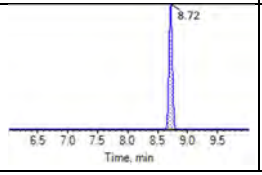
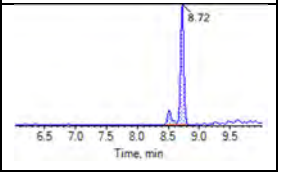
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	35880	13C3_PFHxS	85370	N/A	20.1	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.80 (7.02)	17630	13C3_PFHxS	85370	N/A	28.2	N/A	0.49/ 0.35		
PFHxS	399.0 / 80.0	7.92 (7.96)	267700	13C3_PFHxS	85370	N/A	162.6	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.92 (7.96)	70860	13C3_PFHxS	85370	N/A	170.4	N/A	0.26/ 0.25		
PFOA	413.0 / 369.0	8.72 (8.75)	529300	13C8_PFOA	223700	N/A	560.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	230800	13C8_PFOA	223700	N/A	655.3	N/A	0.44/ 0.37		

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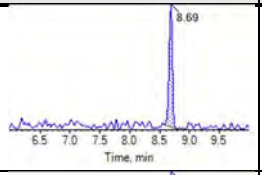
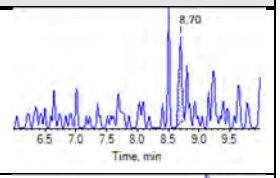
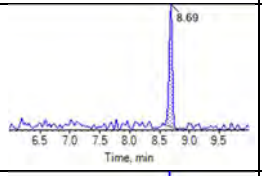
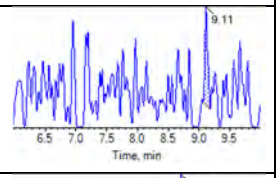
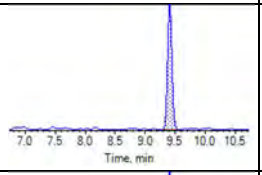
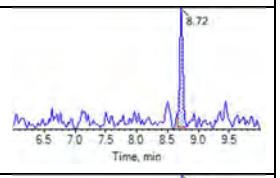
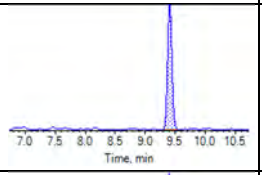
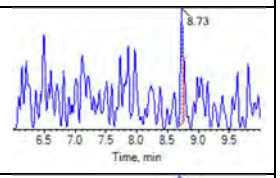
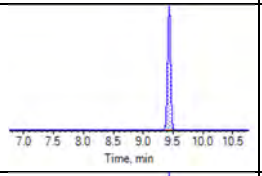
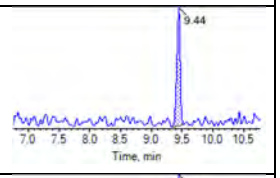
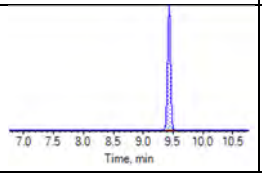
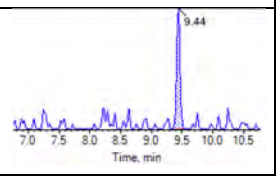
6:2 FTS	427.0 / 407.0	8.70 (8.72)	3370	13C2_6:2 FTS	42470	N/A	15.0	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	9.11 (8.72)	3192	13C2_6:2 FTS	42470	N/A	15.9	N/A	0.95/ 0.91		
PFHpS	449.0 / 80.0	8.72 (8.76)	18410	13C8_PFOS	48860	N/A	19.3	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.73 (8.76)	3284	13C8_PFOS	48860	N/A	17.1	N/A	0.18/ 0.20		
PFNA	463.0 / 419.0	9.44 (9.47)	42290	13C9_PFNA	211800	N/A	59.4	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.44 (9.47)	12160	13C9_PFNA	211800	N/A	70.8	N/A	0.29/ 0.24		

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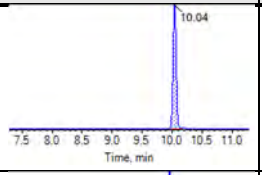
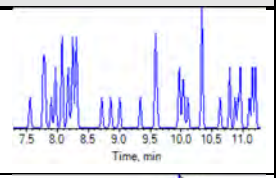
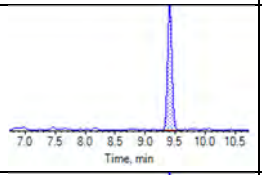
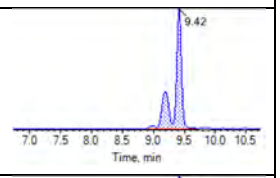
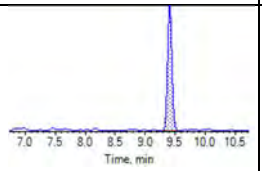
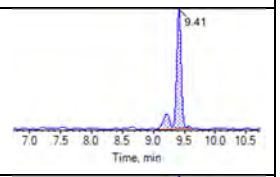
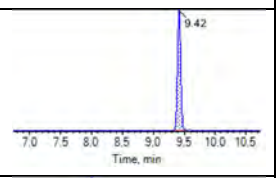
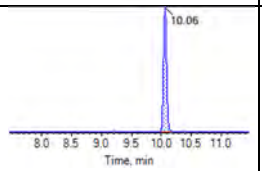
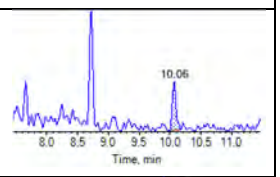
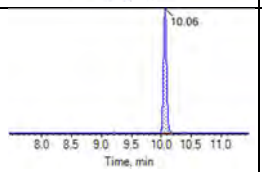
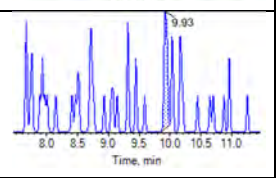
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	380500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.42 (9.45)	1115000	13C8_PFOS	48860	N/A	1404.3	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	156600	13C8_PFOS	48860	N/A	1335.8	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1507000	N/A	N/A	N/A	898.6	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.06 (10.08)	9612	13C6_PFDA	119400	N/A	15.6	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	9.93 (10.08)	1677	13C6_PFDA	119400	N/A	21.8	N/A	0.17/ 0.13		

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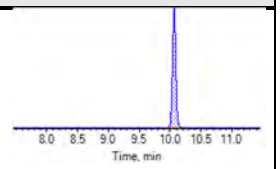
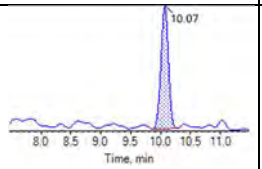
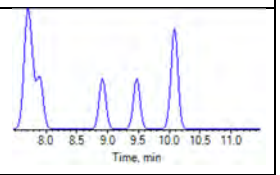
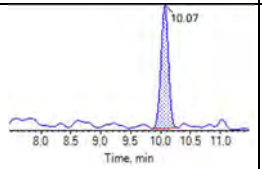
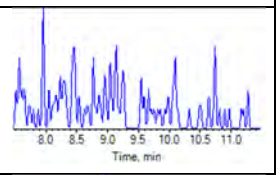
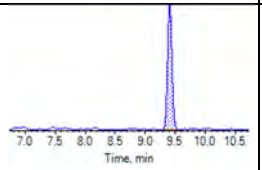
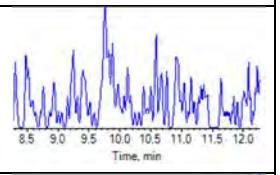
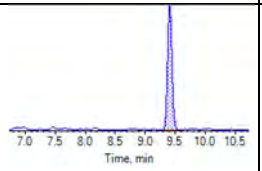
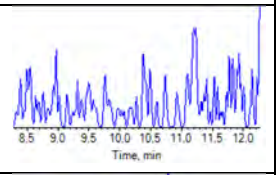
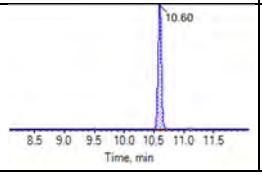
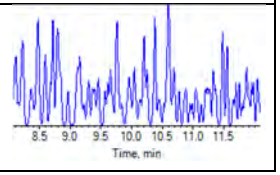
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1019000	N/A	N/A	N/A	883.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	23520	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	23520	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	162000	N/A	N/A	N/A	N/A/ 1.00		

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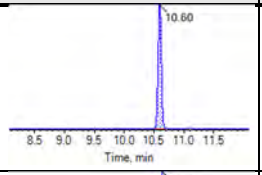
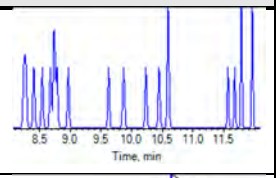
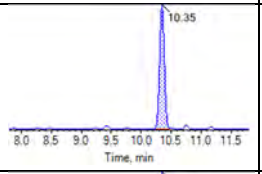
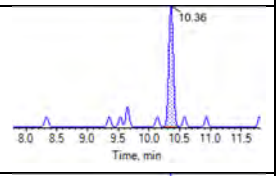
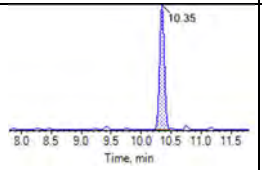
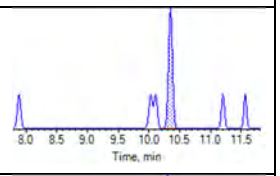
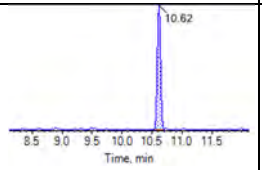
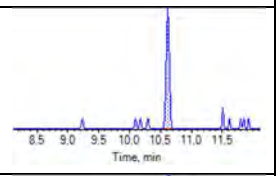
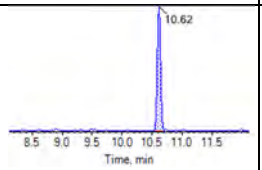
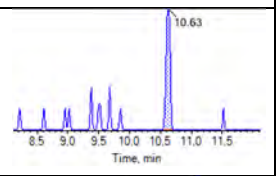
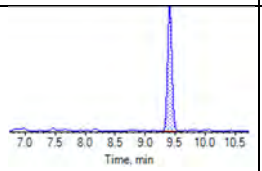
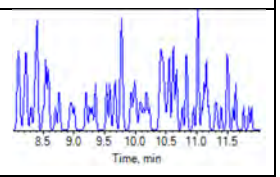
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	162000	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	4012	d3-N-MeFOSAA	35630	N/A	28.4	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	1072	d3-N-MeFOSAA	35630	N/A	15.4	N/A	0.27/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.62 (10.64)	4447	d5-N-EtFOSAA	43240	N/A	25.3	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	2753	d5-N-EtFOSAA	43240	N/A	33.0	N/A	0.62/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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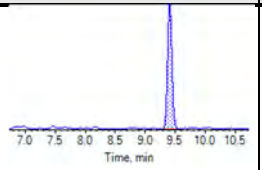
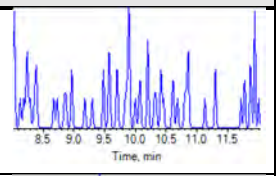
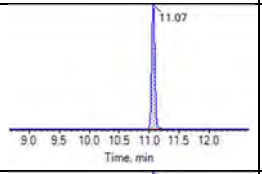
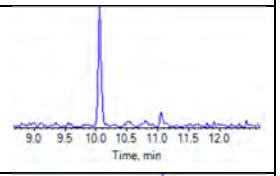
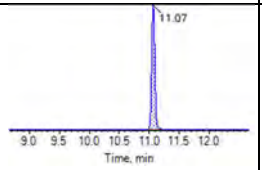
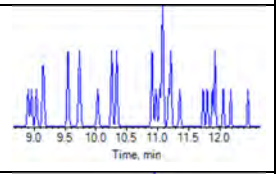
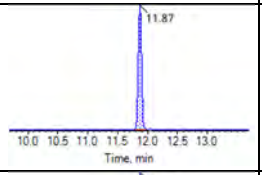
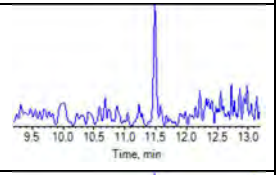
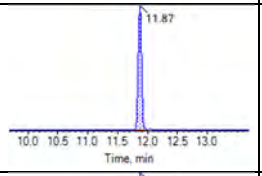
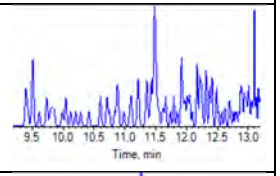
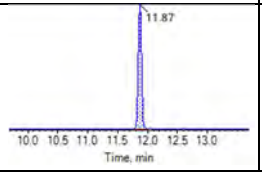
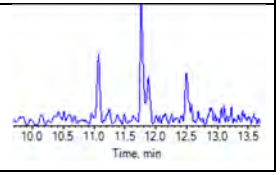
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	132700	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	132700	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	89030	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	89030	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	89030	N/A	N/A	N/A	N/A/ 1.00		

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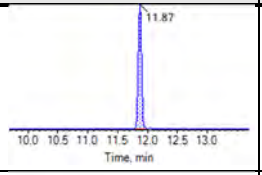
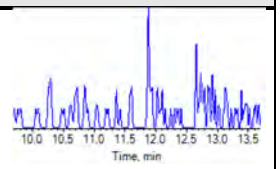
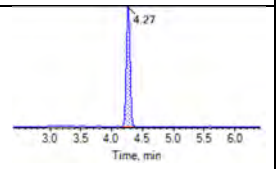
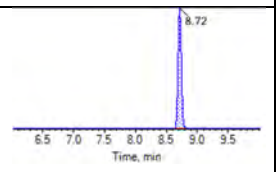
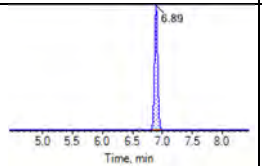
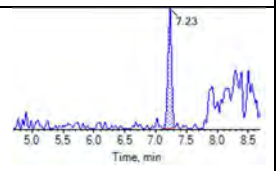
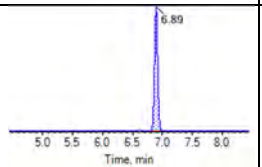
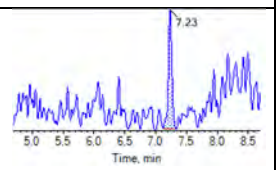
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	89030	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1444000	N/A	N/A	N/A	834.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.72 (8.75)	1185000	N/A	N/A	N/A	963.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.23 (7.26)	15670	13C5_PFHxA	292500	N/A	21.5	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.23 (7.26)	9468	13C5_PFHxA	292500	N/A	17.3	N/A	0.60/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488002**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-11**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW11_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:10**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**279.07 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117100.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00238	ug/L	0.00118	0.00238	0.00358
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00238	ug/L	0.00118	0.00238	0.00358
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00497	ug/L	0.000591	0.0012	0.00159
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.0012	ug/L	0.000699	0.0012	0.00179
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.0012	ug/L	0.000591	0.0012	0.00179
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00525	ug/L	0.000591	0.0012	0.00179
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0113	ug/L	0.000591	0.0012	0.00179
375-95-1	Perfluorononanoic acid (PFNA)	J	0.000926	ug/L	0.000591	0.00118	0.00179
335-67-1	Perfluorooctanoic acid (PFOA)		0.0144	ug/L	0.000627	0.00118	0.00179
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00118	ug/L	0.000591	0.00118	0.00179
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00118	ug/L	0.000591	0.00118	0.00179
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00118	ug/L	0.000591	0.00118	0.00179

JISB GC
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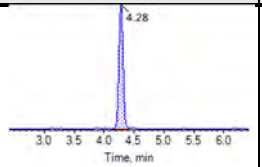
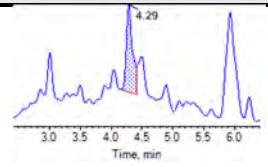
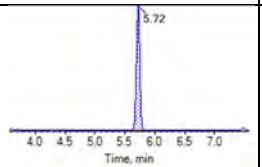
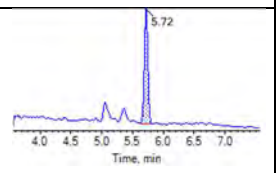
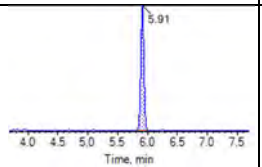
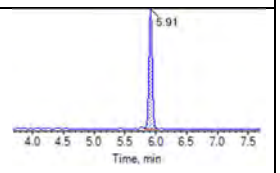
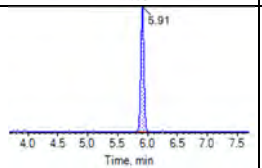
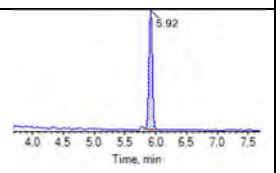
PFC103117100.wiff			
Sample Name	436488002	**Injection Vial**	33
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117100.wiff
Acquisition Date	11/2/2017 04:10:54	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117100.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	420800	13C4_PFBA	124500	N/A	479.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	623300	13C5_PFPeA	239300	N/A	605.4	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	454500	13C3_PFBS	166100	N/A	277.7	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.92 (5.89)	198600	13C3_PFBS	166100	N/A	270.3	N/A	0.44/ 0.45		

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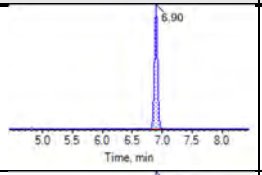
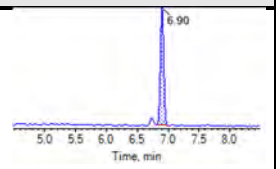
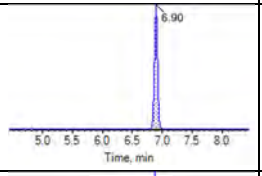
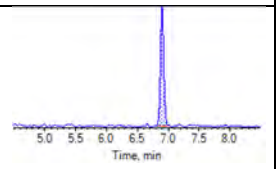
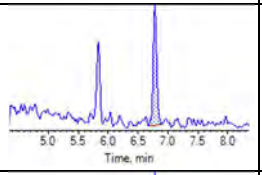
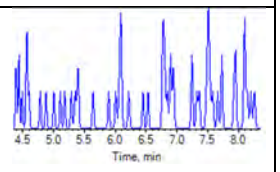
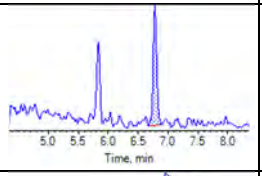
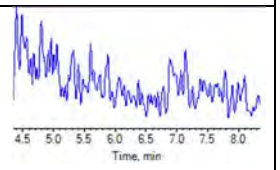
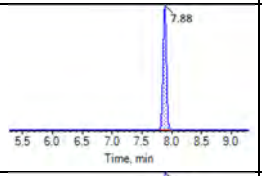
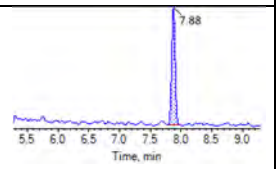
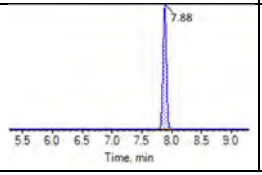
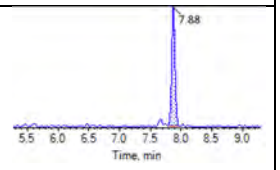
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	693900	13C5_PFHxA	290200	N/A	630.0	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	57030	13C5_PFHxA	290200	N/A	732.3	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	44270	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	44270	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	301300	13C4_PFHpA	245800	N/A	293.1	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	70480	13C4_PFHpA	245800	N/A	262.2	N/A	0.23/ 0.26		

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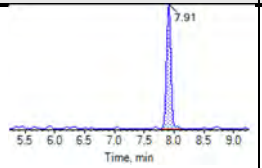
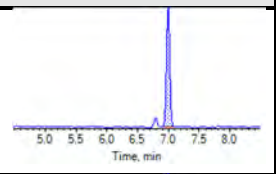
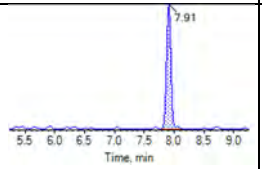
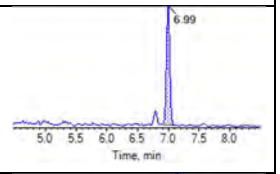
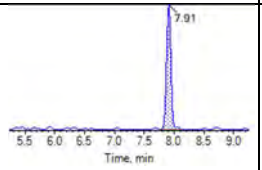
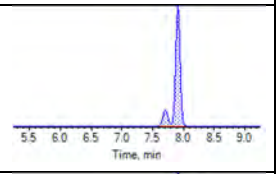
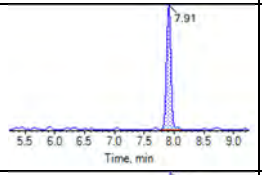
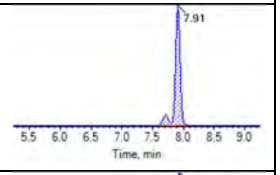
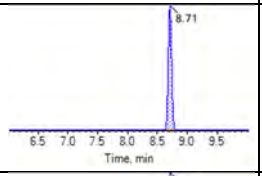
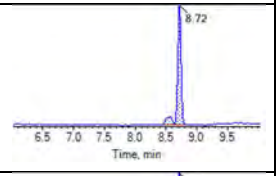
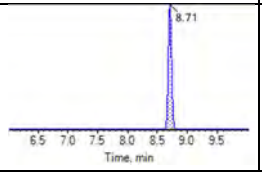
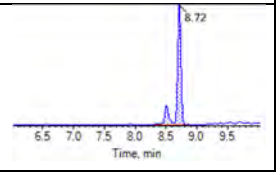
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	415100	13C3_PFHxS	79130	N/A	250.5	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	135200	13C3_PFHxS	79130	N/A	233.6	N/A	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	4078000	13C3_PFHxS	79130	N/A	2672.7	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	994700	13C3_PFHxS	79130	N/A	2581.0	N/A	0.24/ 0.25		
PFOA	413.0 / 369.0	8.72 (8.75)	868100	13C8_PFOA	256800	N/A	801.2	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	337400	13C8_PFOA	256800	N/A	834.5	N/A	0.39/ 0.37		

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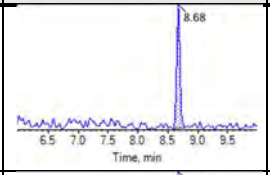
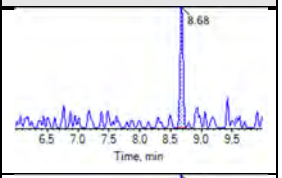
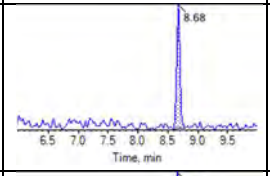
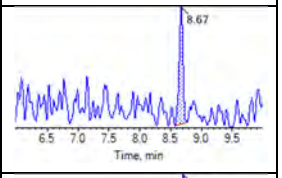
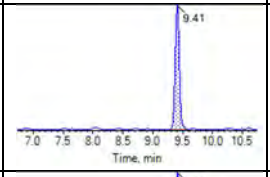
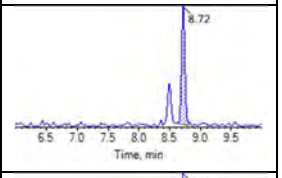
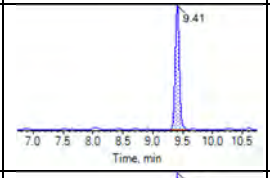
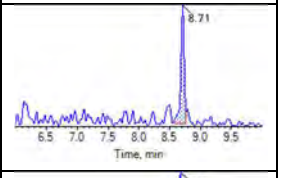
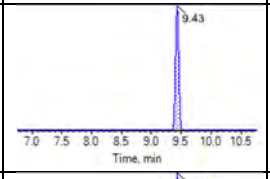
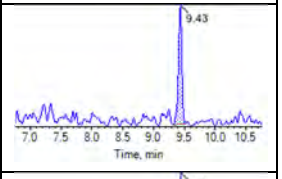
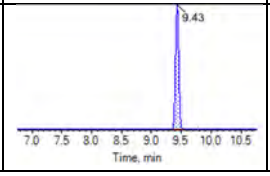
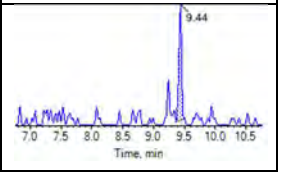
PFC103117100.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.68 (8.72)	8956	13C2_6:2 FTS	41200	N/A	41.2	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	10820	13C2_6:2 FTS	41200	N/A	55.5	N/A	1.21/ 0.91		
PFHpS	449.0 / 80.0	8.72 (8.76)	91400	13C8_PFOS	57870	N/A	81.0	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	21670	13C8_PFOS	57870	N/A	95.4	N/A	0.24/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	39860	13C9_PFNA	229400	N/A	51.7	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.44 (9.47)	6646	13C9_PFNA	229400	N/A	35.8	N/A	0.17/ 0.24		

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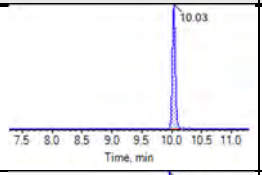
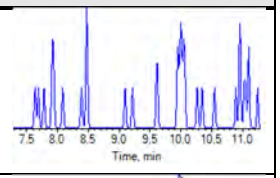
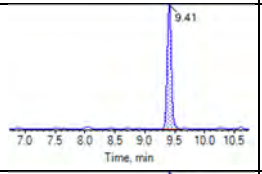
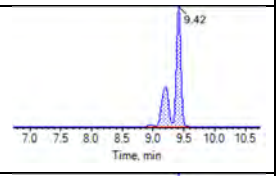
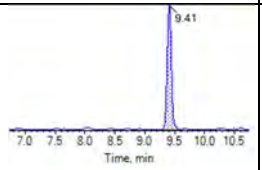
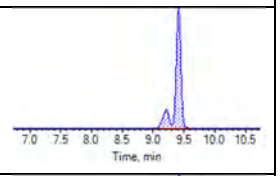
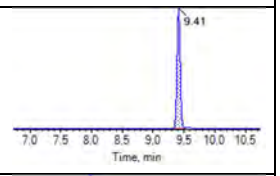
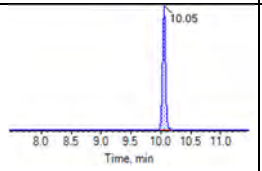
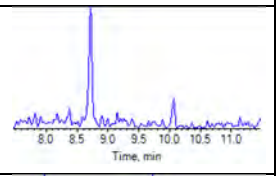
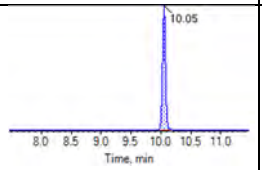
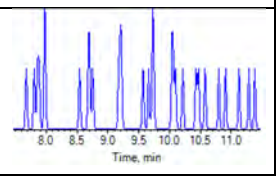
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	450000	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.42 (9.45)	10540000	13C8_PFOS	57870	N/A	11204.7	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	1524000	13C8_PFOS	57870	N/A	10976.2	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1544000	N/A	N/A	N/A	920.6	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	129800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	129800	N/A	N/A	N/A	N/A/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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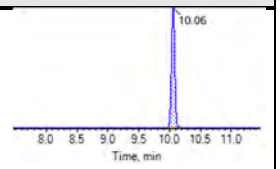
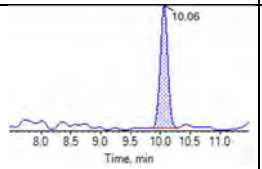
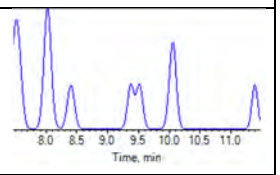
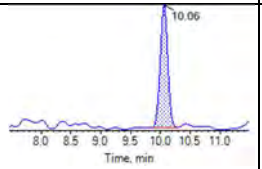
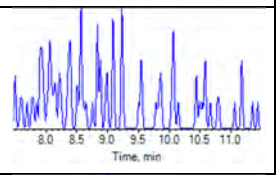
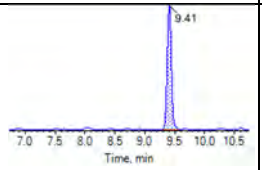
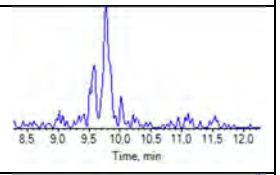
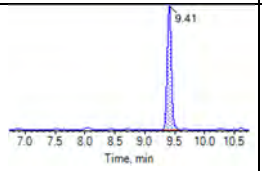
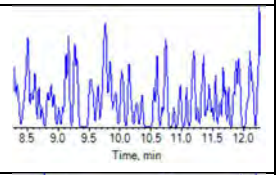
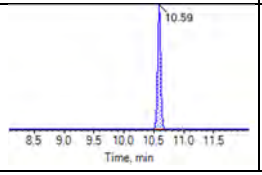
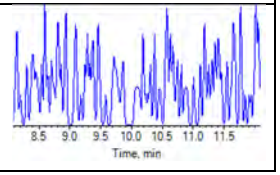
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1081000	N/A	N/A	N/A	937.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	27550	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	27550	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	57870	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	57870	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	160300	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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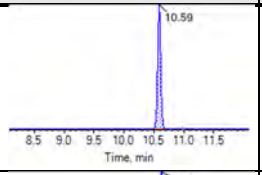
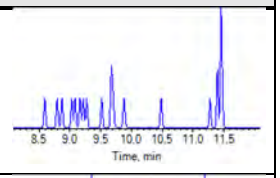
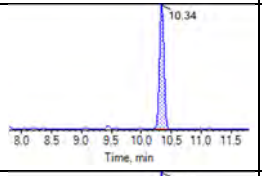
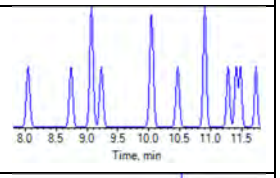
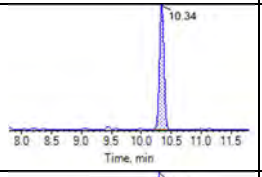
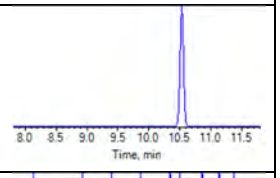
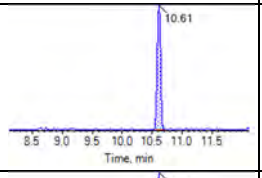
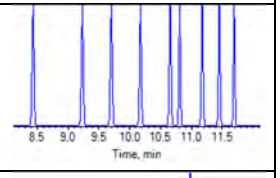
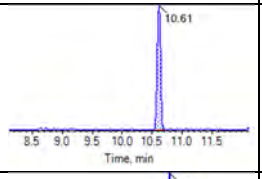
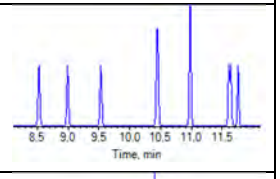
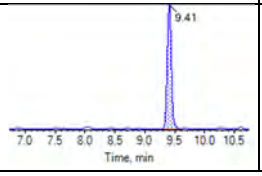
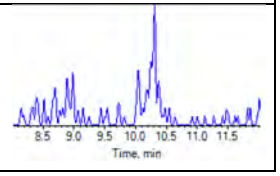
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	160300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50350	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50350	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	43860	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	43860	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	57870	N/A	N/A	N/A	N/A/ 1.00		

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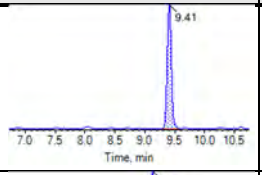
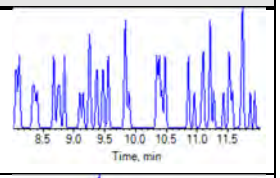
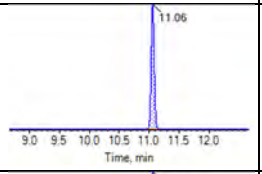
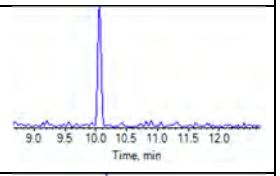
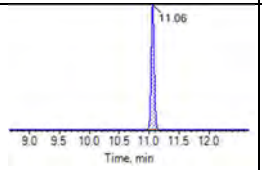
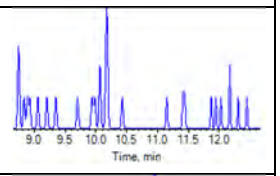
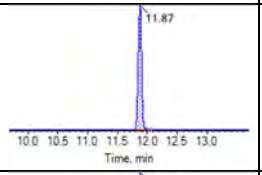
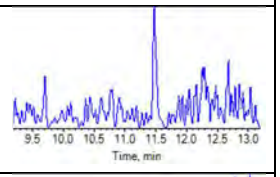
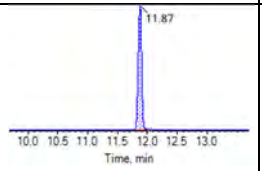
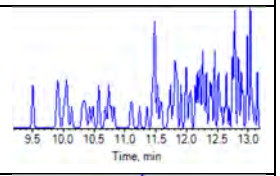
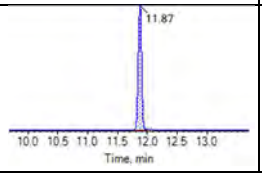
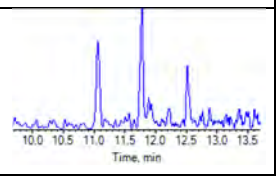
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	57870	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	157000	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	157000	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	117100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	117100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	117100	N/A	N/A	N/A	N/A/ 1.00		

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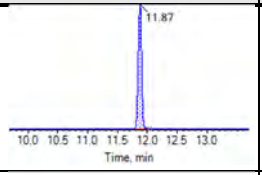
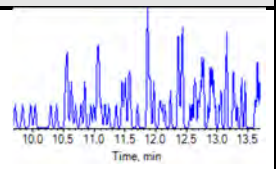
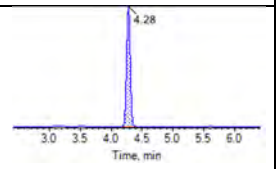
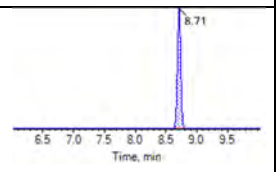
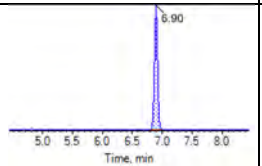
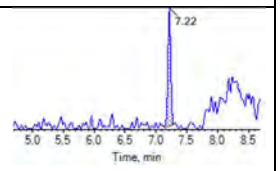
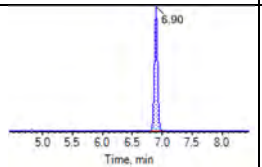
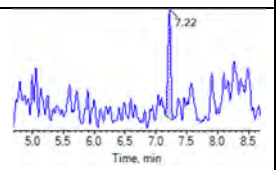
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	117100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1399000	N/A	N/A	N/A	808.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1279000	N/A	N/A	N/A	1039.6	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	11270	13C5_PFHxA	290200	N/A	15.6	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	7707	13C5_PFHxA	290200	N/A	14.2	N/A	0.68/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 13:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488003**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-15**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW15_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:32**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**281.56 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117101.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00236	ug/L	0.00117	0.00236	0.00355
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00236	ug/L	0.00117	0.00236	0.00355
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0113	ug/L	0.000586	0.00119	0.00158
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00119	ug/L	0.000693	0.00119	0.00178
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00119	ug/L	0.000586	0.00119	0.00178
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0112	ug/L	0.000586	0.00119	0.00178
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0195	ug/L	0.000586	0.00119	0.00178
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00177	ug/L	0.000586	0.00117	0.00178
335-67-1	Perfluorooctanoic acid (PFOA)		0.0217	ug/L	0.000622	0.00117	0.00178
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00117	ug/L	0.000586	0.00117	0.00178
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00117	ug/L	0.000586	0.00117	0.00178
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00117	ug/L	0.000586	0.00117	0.00178

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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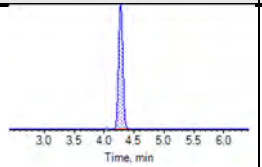
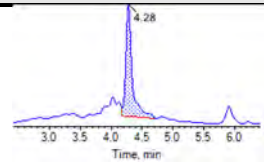
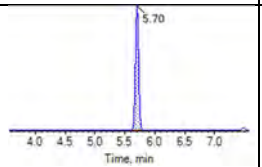
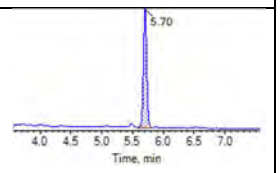
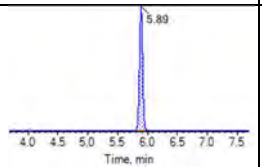
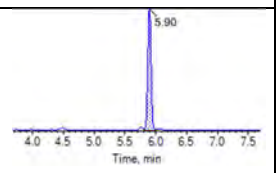
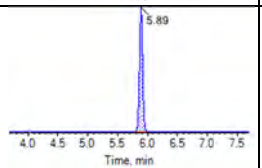
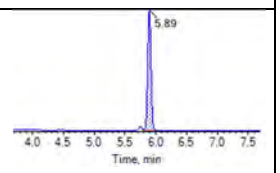
PFC103117101.wiff			
Sample Name	436488003	**Injection Vial**	34
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117101.wiff
Acquisition Date	11/2/2017 04:32:17	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117101.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	710400	13C4_PFBA	143900	N/A	700.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	938900	13C5_PFPeA	254800	N/A	856.5	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1126000	13C3_PFBS	180100	N/A	634.4	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	503600	13C3_PFBS	180100	N/A	631.9	N/A	0.45/ 0.45		

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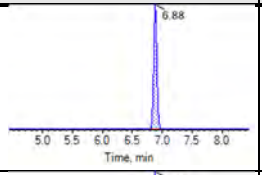
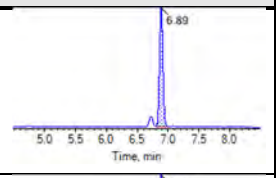
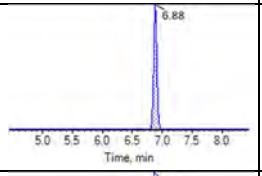
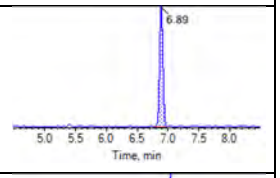
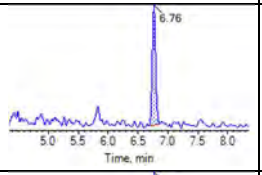
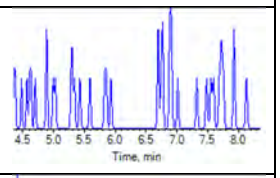
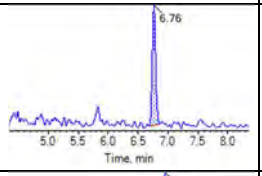
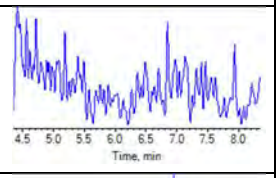
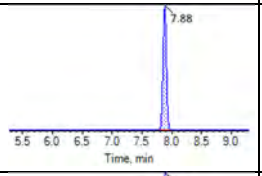
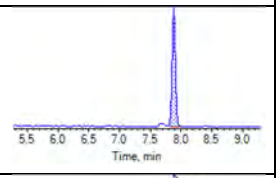
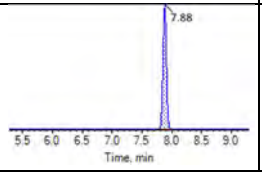
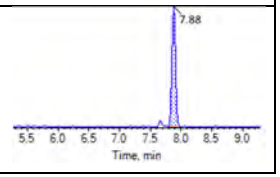
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1278000	13C5_PFHxA	306200	N/A	1099.2	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	96760	13C5_PFHxA	306200	N/A	1177.5	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	44970	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	44970	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	617500	13C4_PFHpA	235100	N/A	627.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	173300	13C4_PFHpA	235100	N/A	673.9	N/A	0.28/ 0.26		

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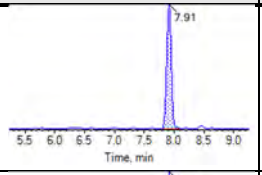
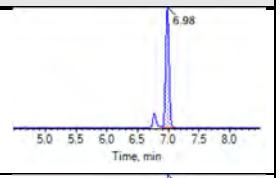
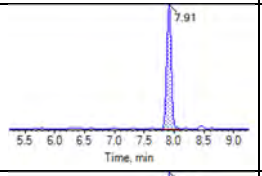
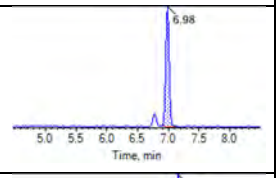
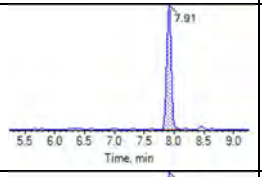
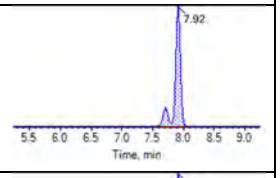
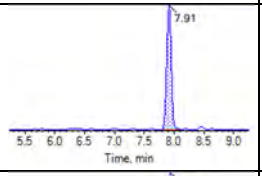
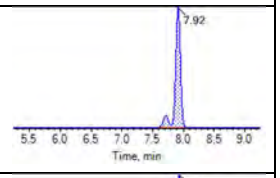
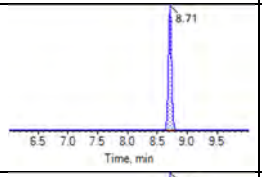
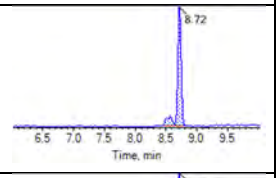
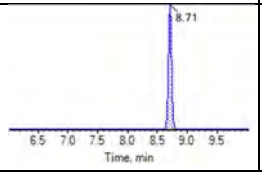
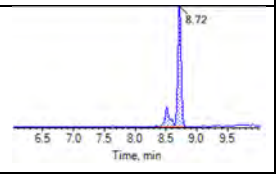
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1200000	13C3_PFHxS	81630	N/A	702.3	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	428700	13C3_PFHxS	81630	N/A	718.0	N/A	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.92 (7.96)	12800000	13C3_PFHxS	81630	N/A	8130.1	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.92 (7.96)	3225000	13C3_PFHxS	81630	N/A	8112.1	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.72 (8.75)	1276000	13C8_PFOA	247300	N/A	1223.5	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	514900	13C8_PFOA	247300	N/A	1322.8	N/A	0.40/ 0.37		

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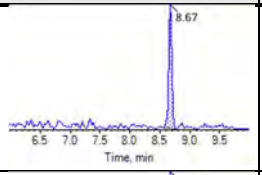
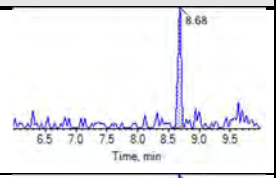
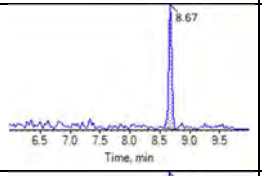
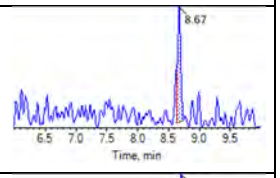
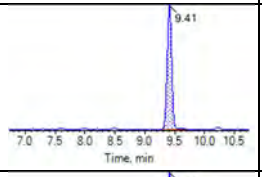
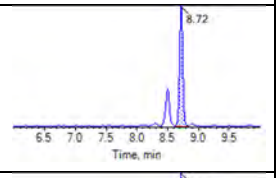
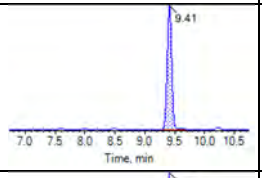
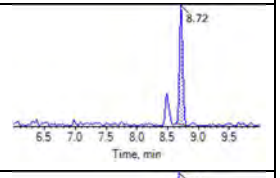
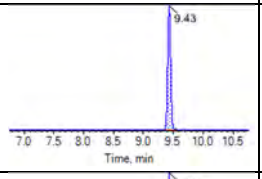
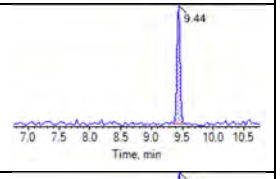
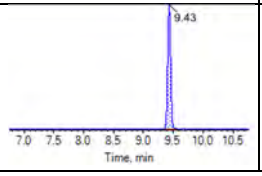
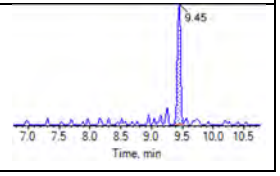
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.68 (8.72)	12090	13C2_6:2 FTS	42400	N/A	54.1	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	9905	13C2_6:2 FTS	42400	N/A	49.3	N/A	0.82/ 0.91		
PFHpS	449.0 / 80.0	8.72 (8.76)	293800	13C8_PFOS	71120	N/A	211.9	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.72 (8.76)	66710	13C8_PFOS	71120	N/A	239.0	N/A	0.23/ 0.20		
PFNA	463.0 / 419.0	9.44 (9.47)	79410	13C9_PFNA	236800	N/A	99.8	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	17650	13C9_PFNA	236800	N/A	91.9	N/A	0.22/ 0.24		

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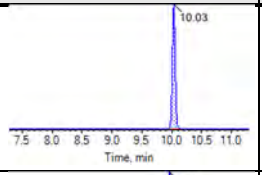
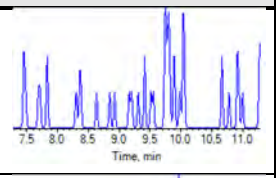
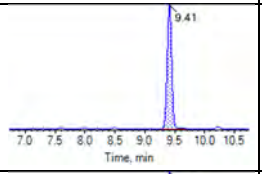
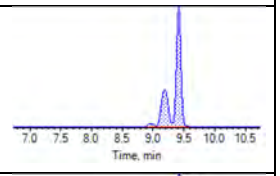
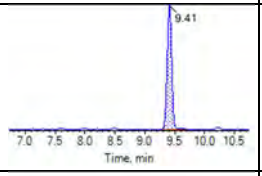
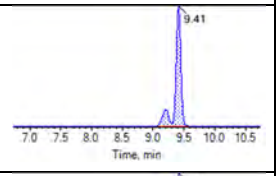
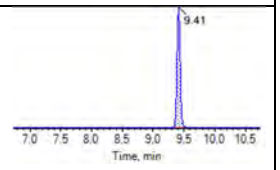
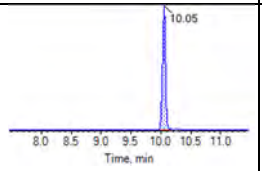
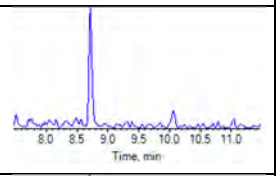
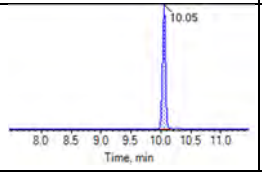
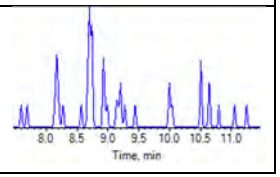
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	488300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.42 (9.45)	17700000	13C8_PFOS	71120	N/A	15316.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	2535000	13C8_PFOS	71120	N/A	14855.6	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1466000	N/A	N/A	N/A	874.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	138500	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	138500	N/A	N/A	N/A	N/A/ 0.13		

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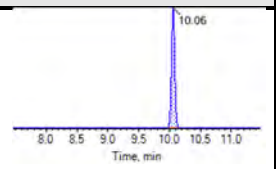
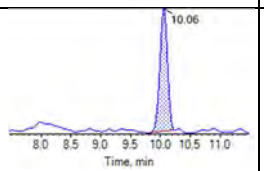
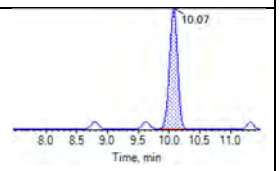
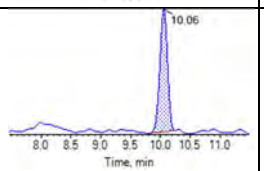
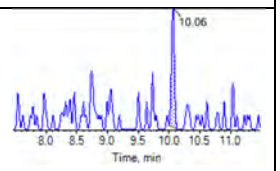
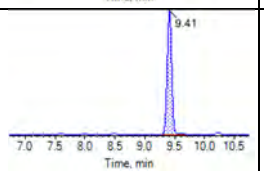
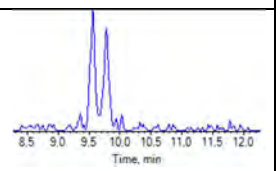
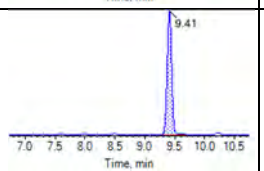
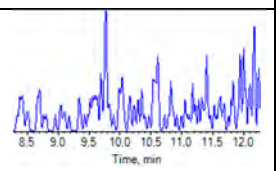
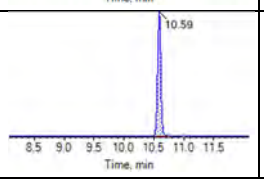
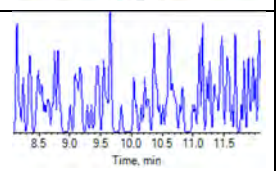
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1160000	N/A	N/A	N/A	1005.1	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	4900	13C2_8:2 FTS	25680	N/A	37.0	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.06 (10.09)	3601	13C2_8:2 FTS	25680	N/A	28.1	N/A	0.73/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	71120	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	71120	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	179500	N/A	N/A	N/A	N/A/ 1.00		

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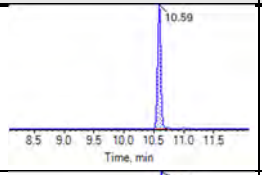
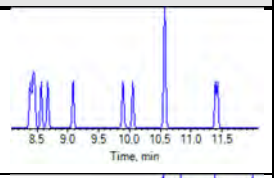
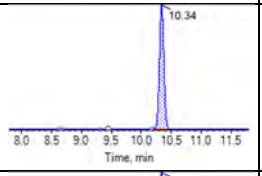
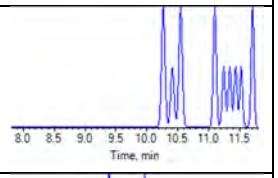
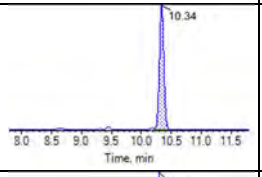
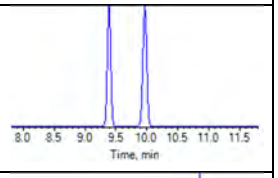
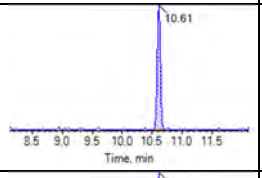
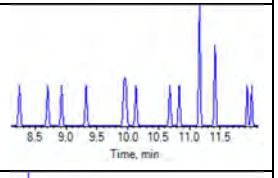
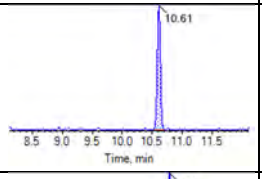
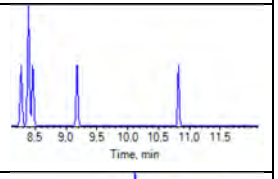
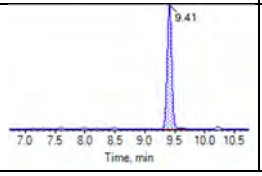
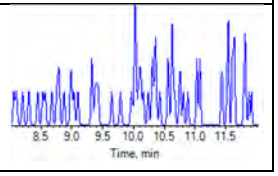
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	179500	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	51720	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	51720	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47520	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47520	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	71120	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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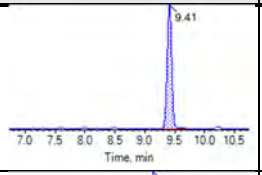
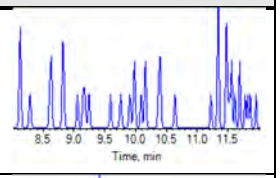
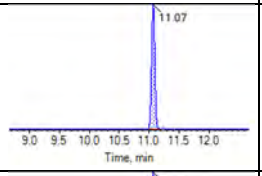
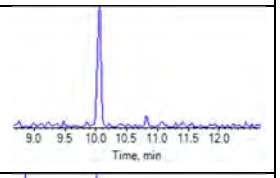
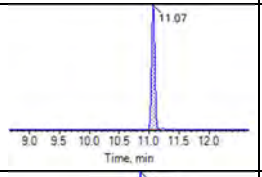
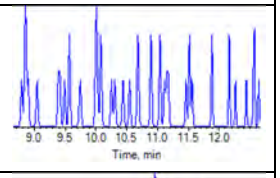
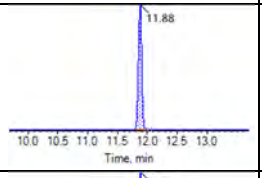
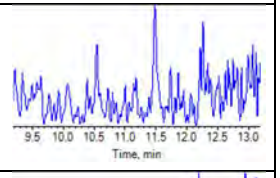
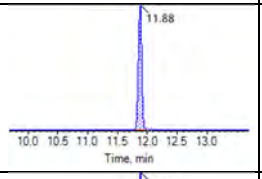
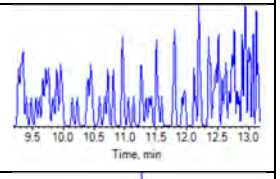
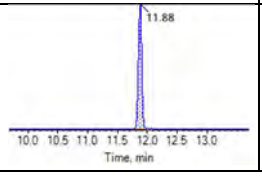
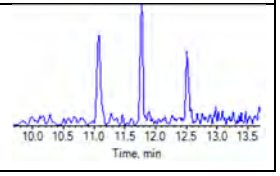
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	71120	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	170400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	170400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	127100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	127100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	127100	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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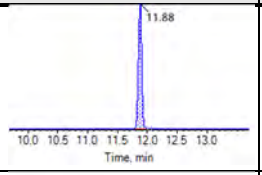
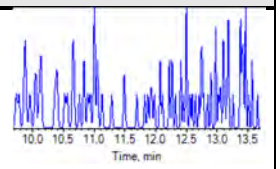
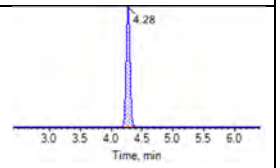
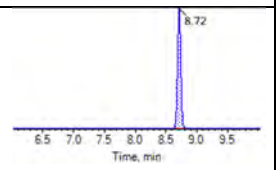
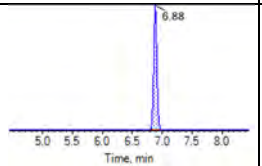
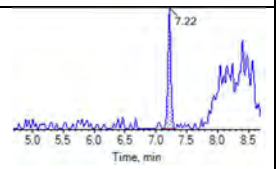
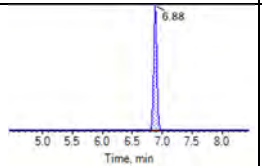
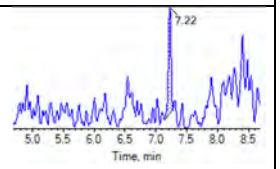
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	127100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1555000	N/A	N/A	N/A	899.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.72 (8.75)	1182000	N/A	N/A	N/A	960.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	8170	13C5_PFHxA	306200	N/A	10.7	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	6110	13C5_PFHxA	306200	N/A	10.7	N/A	0.75/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 10:45**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488004**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-24**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW24_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 04:53**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**271.73 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117102.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00245	ug/L	0.00121	0.00245	0.00368
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00245	ug/L	0.00121	0.00245	0.00368
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00288	ug/L	0.000607	0.00123	0.00164
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00123	ug/L	0.000718	0.00123	0.00184
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00123	ug/L	0.000607	0.00123	0.00184
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00405	ug/L	0.000607	0.00123	0.00184
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0115	ug/L	0.000607	0.00123	0.00184
375-95-1	Perfluorononanoic acid (PFNA)		0.00209	ug/L	0.000607	0.00121	0.00184
335-67-1	Perfluorooctanoic acid (PFOA)		0.0179	ug/L	0.000644	0.00121	0.00184
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00121	ug/L	0.000607	0.00121	0.00184
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00121	ug/L	0.000607	0.00121	0.00184
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00121	ug/L	0.000607	0.00121	0.00184

JISB GC
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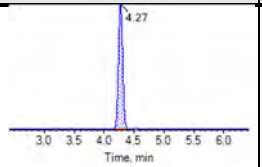
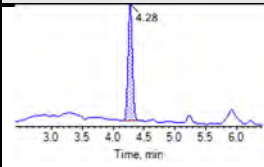
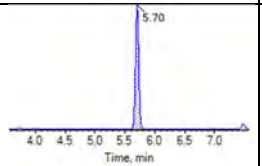
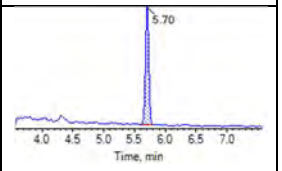
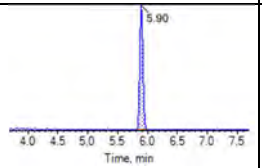
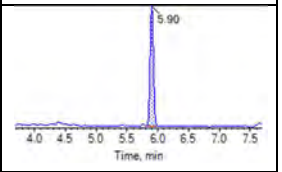
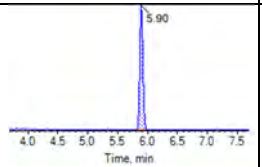
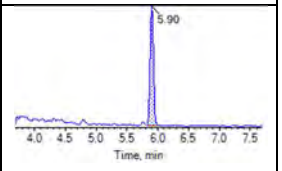
PFC103117102.wiff			
Sample Name	436488004	**Injection Vial**	35
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117102.wiff
Acquisition Date	11/2/2017 04:53:40	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117102.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	471500	13C4_PFBA	132300	N/A	505.9	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	543200	13C5_PFPeA	231400	N/A	545.7	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	244500	13C3_PFBS	158300	N/A	156.7	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	107100	13C3_PFBS	158300	N/A	152.9	N/A	0.44/ 0.45		

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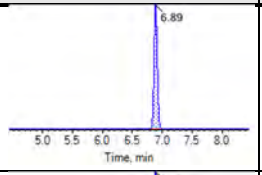
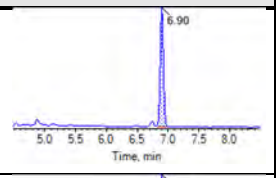
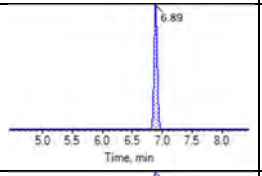
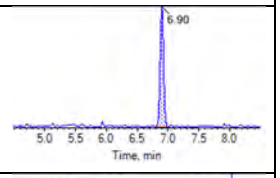
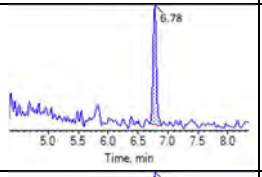
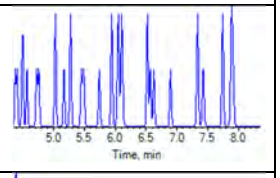
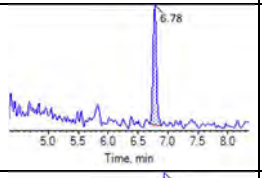
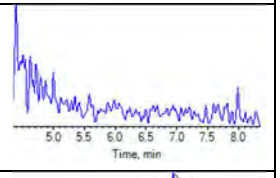
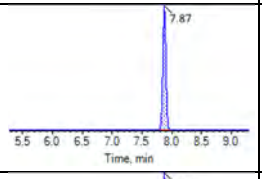
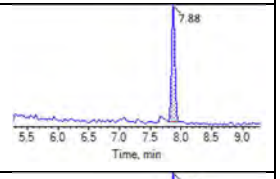
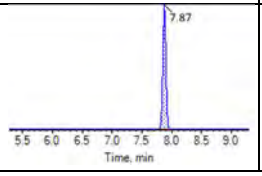
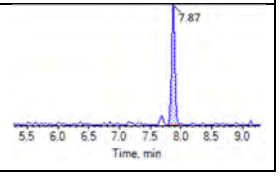
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	646700	13C5_PFHxA	273500	N/A	622.8	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	48820	13C5_PFHxA	273500	N/A	665.0	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	37390	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	37390	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	230800	13C4_PFHpA	250700	N/A	220.1	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	66940	13C4_PFHpA	250700	N/A	244.1	N/A	0.29/ 0.26		

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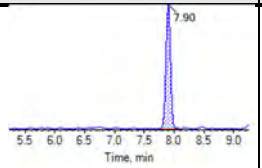
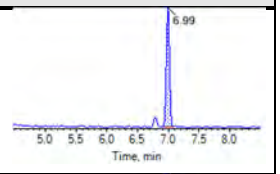
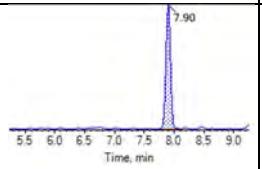
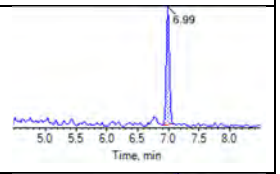
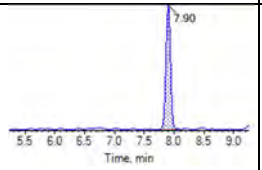
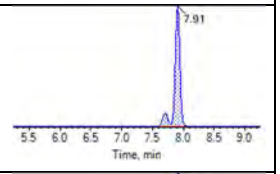
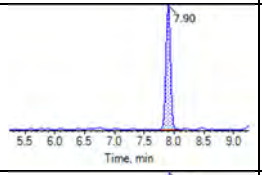
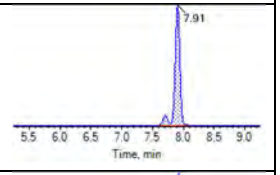
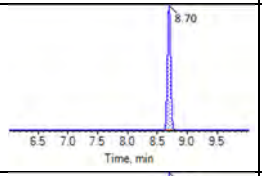
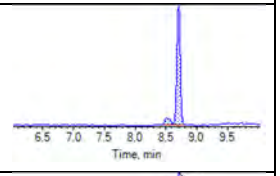
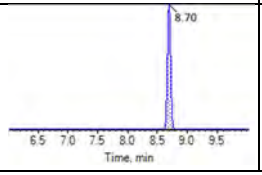
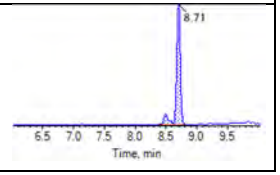
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	236400	13C3_PFHxS	75940	N/A	148.7	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	80370	13C3_PFHxS	75940	N/A	144.7	N/A	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	4976000	13C3_PFHxS	75940	N/A	3397.7	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	1222000	13C3_PFHxS	75940	N/A	3303.6	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	960500	13C8_PFOA	234000	N/A	972.9	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	386900	13C8_PFOA	234000	N/A	1050.4	N/A	0.40/ 0.37		

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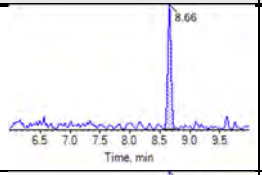
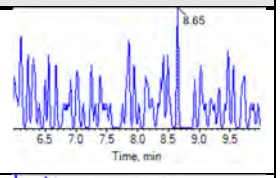
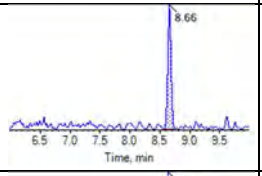
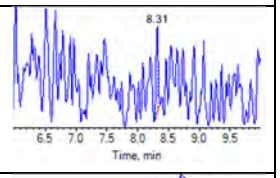
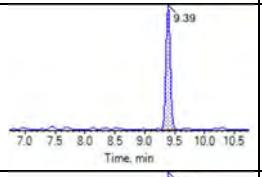
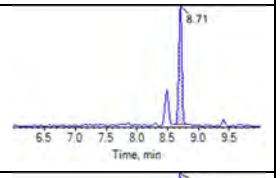
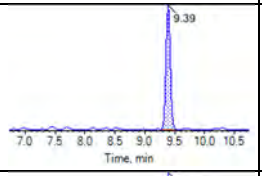
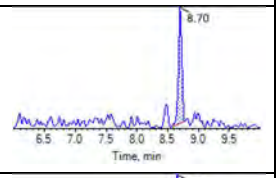
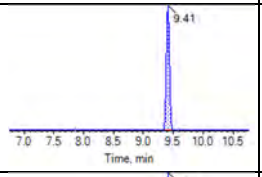
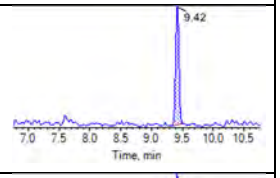
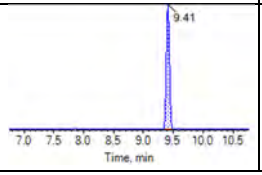
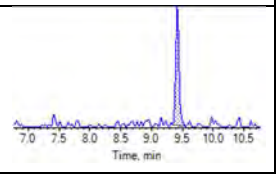
PFC103117102.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.65 (8.72)	1329	13C2_6:2 FTS	35140	N/A	7.2	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.31 (8.72)	1610	13C2_6:2 FTS	35140	N/A	9.7	N/A	1.21/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	118400	13C8_PFOS	53790	N/A	112.9	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.70 (8.76)	24400	13C8_PFOS	53790	N/A	115.6	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.42 (9.47)	83760	13C9_PFNA	219300	N/A	113.7	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	21230	13C9_PFNA	219300	N/A	119.5	N/A	0.25/ 0.24		

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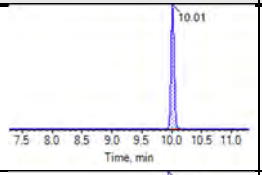
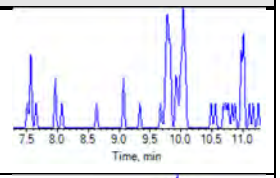
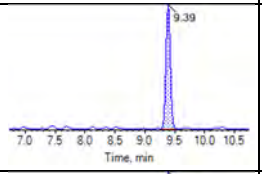
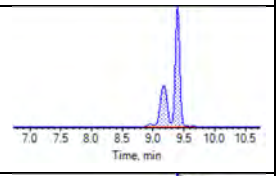
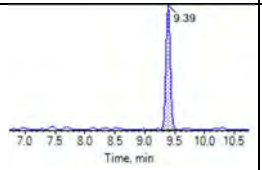
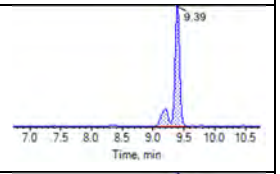
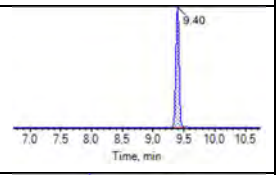
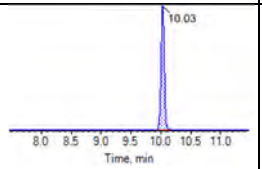
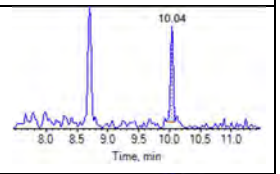
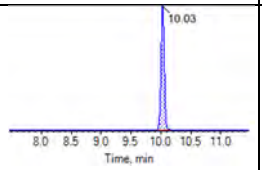
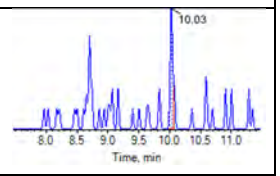
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	348800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.40 (9.45)	2956000	13C8_PFOS	53790	N/A	3382.9	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	402400	13C8_PFOS	53790	N/A	3117.4	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1576000	N/A	N/A	N/A	940.0	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	15430	13C6_PFDA	139900	N/A	21.4	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	2222	13C6_PFDA	139900	N/A	24.6	N/A	0.14/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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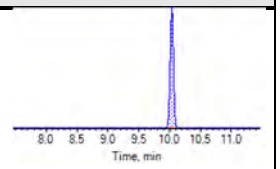
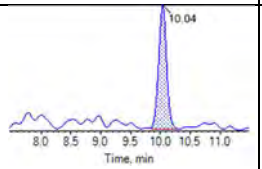
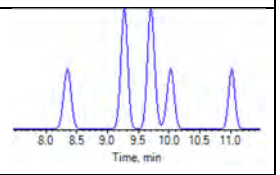
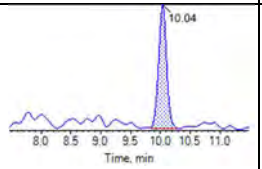
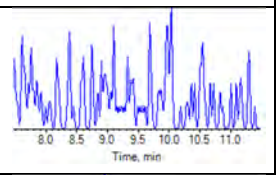
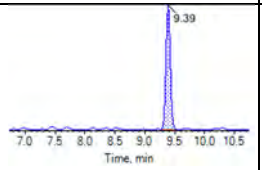
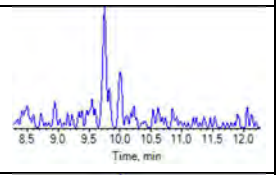
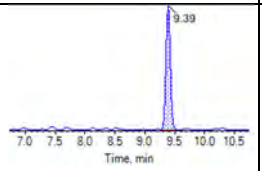
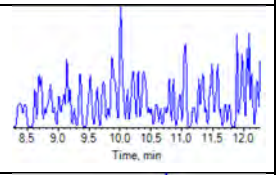
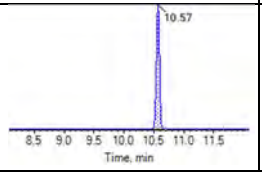
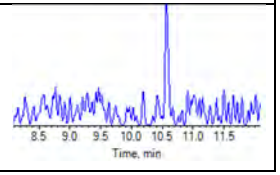
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1066000	N/A	N/A	N/A	924.0	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	19110	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	19110	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	153900	N/A	N/A	N/A	N/A/ 1.00		

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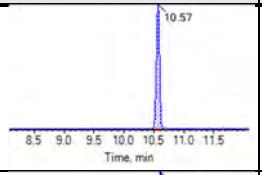
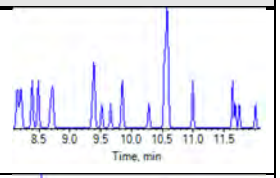
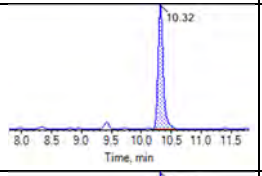
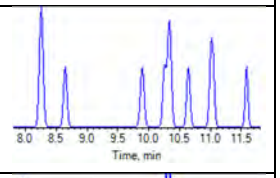
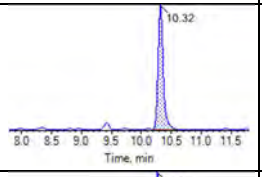
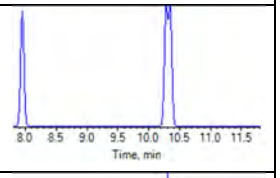
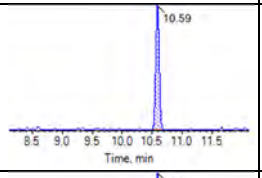
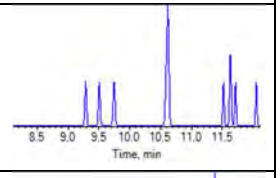
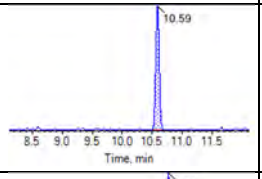
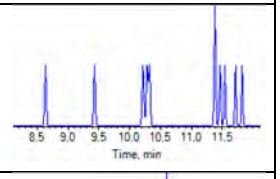
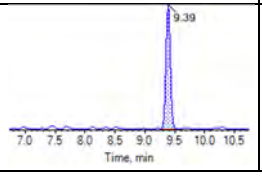
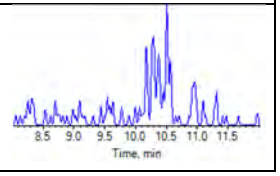
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	153900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	35240	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	35240	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	45320	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	45320	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		

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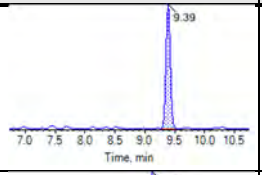
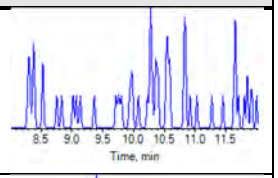
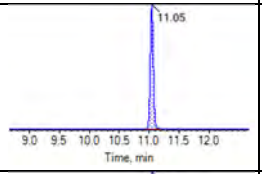
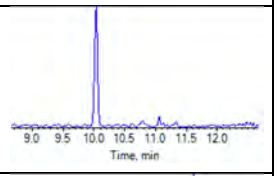
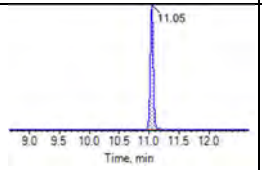
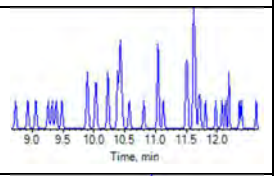
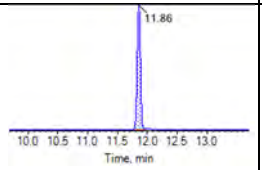
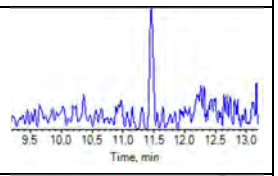
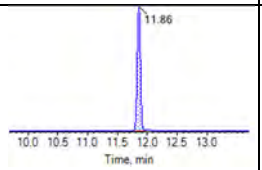
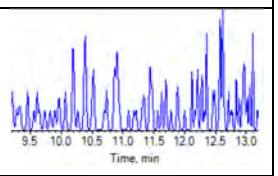
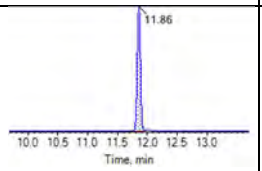
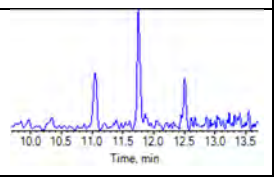
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	134800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	134800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	68170	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	68170	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	68170	N/A	N/A	N/A	N/A/ 1.00		

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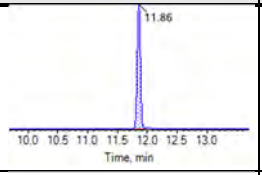
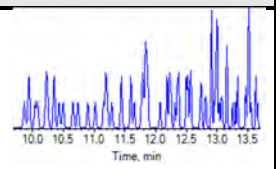
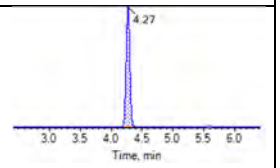
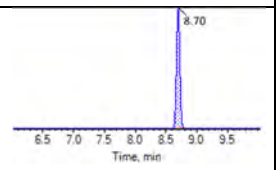
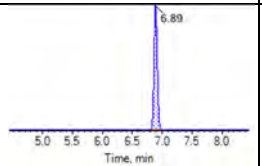
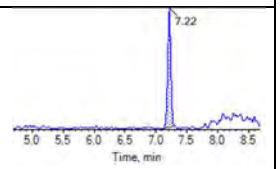
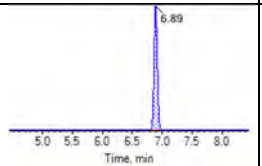
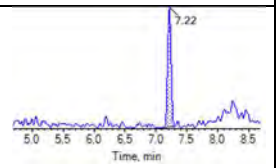
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	68170	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1492000	N/A	N/A	N/A	862.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1305000	N/A	N/A	N/A	1061.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	51300	13C5_PFHxA	273500	N/A	75.4	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	32900	13C5_PFHxA	273500	N/A	64.3	N/A	0.64/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 11:50**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488005**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-36**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW36_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:15**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**276.67 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117103.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.0024	ug/L	0.00119	0.0024	0.00361
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.0024	ug/L	0.00119	0.0024	0.00361
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00121	ug/L	0.000596	0.00121	0.00161
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00121	ug/L	0.000705	0.00121	0.00181
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.0011	ug/L	0.000596	0.0011	0.00164
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00121	ug/L	0.000596	0.00121	0.00181
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00119	ug/L	0.000596	0.00119	0.00181
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00119	ug/L	0.000633	0.00119	0.00181
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00119	ug/L	0.000596	0.00119	0.00181
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00119	ug/L	0.000596	0.00119	0.00181

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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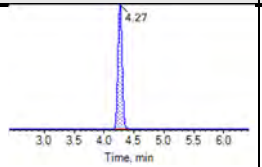
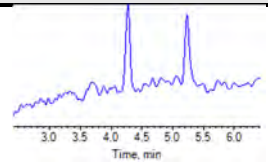
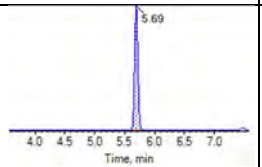
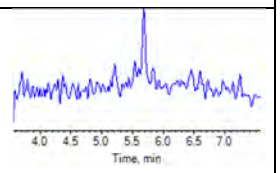
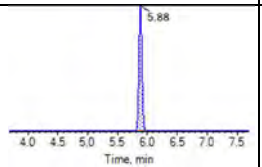
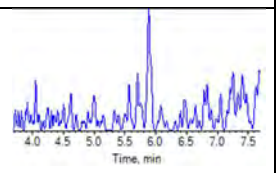
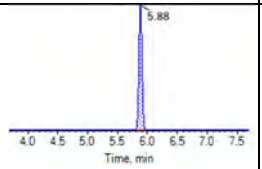
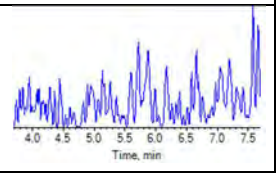
PFC103117103.wiff			
Sample Name	436488005	**Injection Vial**	36
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117103.wiff
Acquisition Date	11/2/2017 05:15:04	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117103.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	162000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	251200	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	173600	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	173600	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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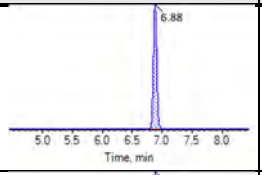
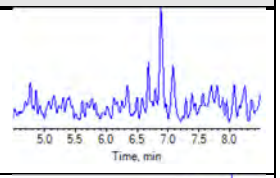
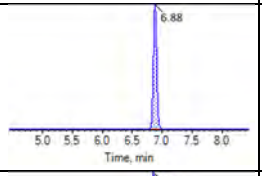
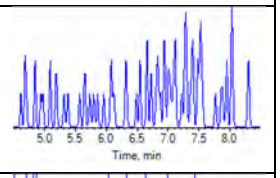
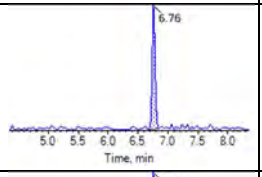
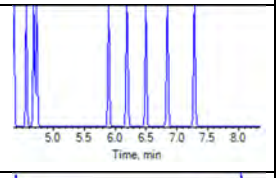
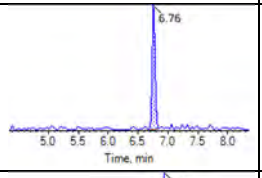
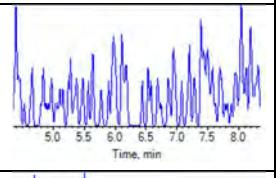
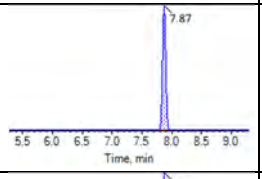
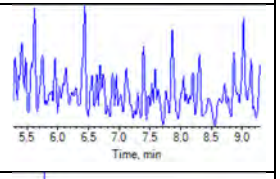
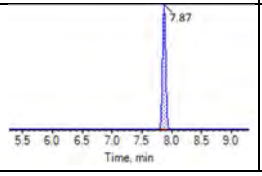
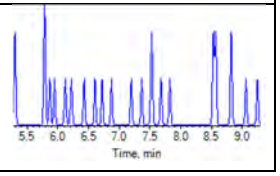
PFC103117103.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	303700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	303700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	36520	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	36520	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	248300	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	248300	N/A	N/A	N/A	N/A/ 0.26		

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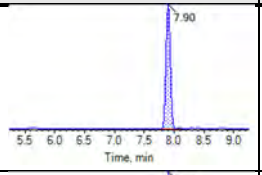
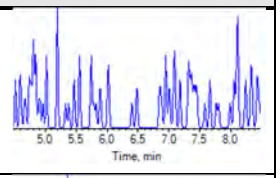
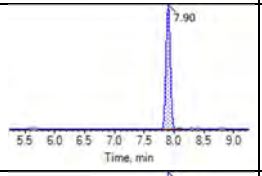
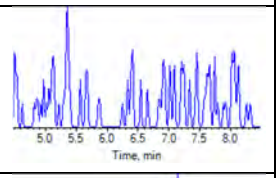
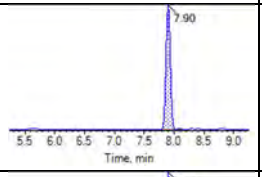
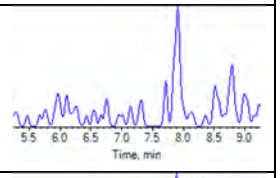
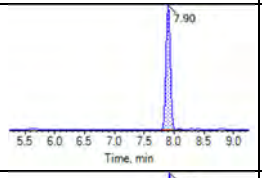
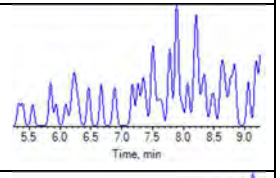
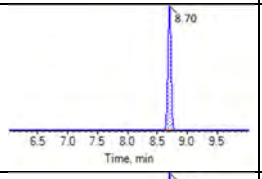
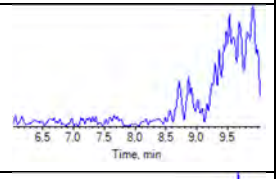
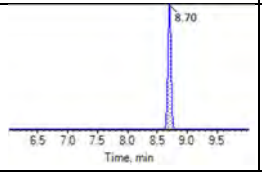
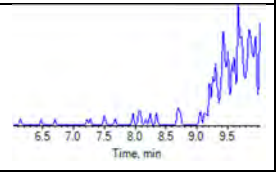
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	83140	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	83140	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	83140	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	83140	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	271100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	271100	N/A	N/A	N/A	N/A/ 0.37		

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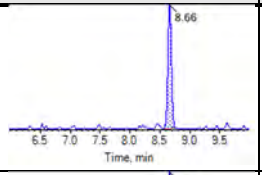
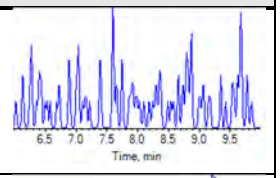
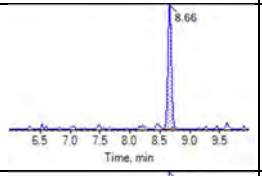
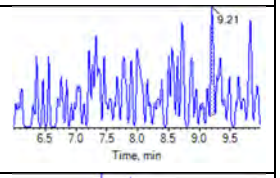
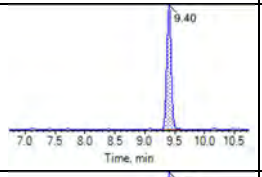
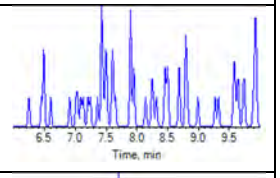
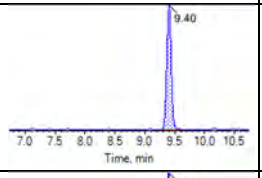
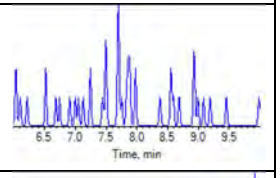
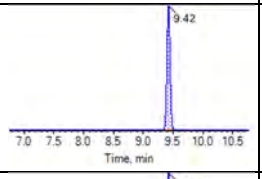
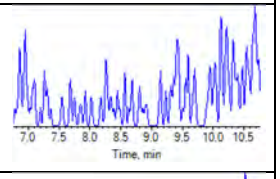
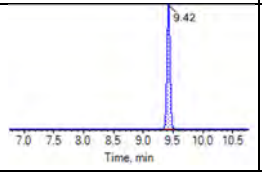
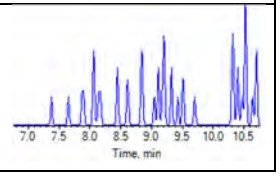
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	41120	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	9.21 (8.72)	1804	13C2_6:2 FTS	41120	N/A	9.3	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	258000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	258000	N/A	N/A	N/A	N/A/ 0.24		

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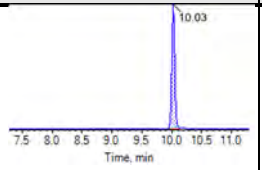
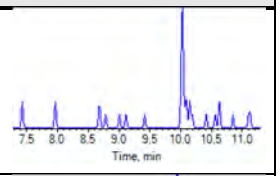
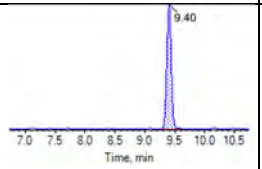
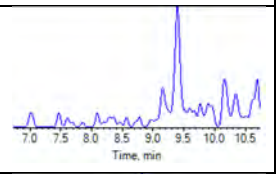
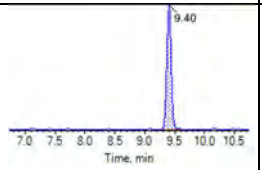
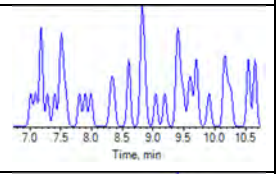
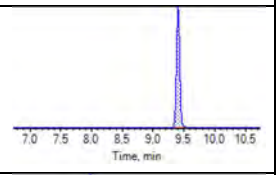
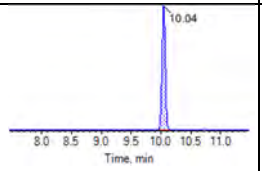
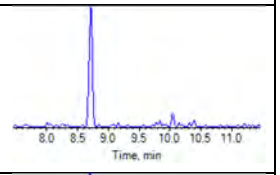
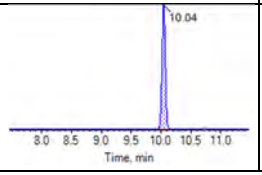
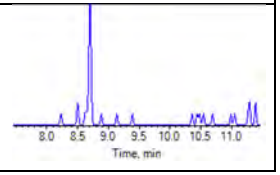
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	471100	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1567000	N/A	N/A	N/A	934.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	141700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	141700	N/A	N/A	N/A	N/A/ 0.13		

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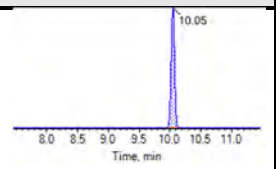
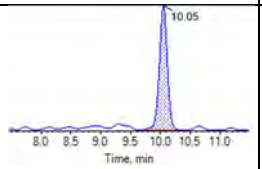
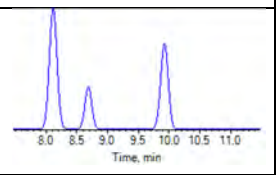
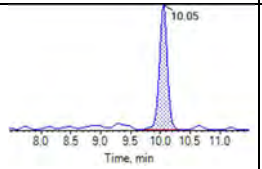
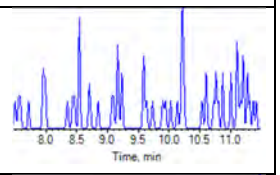
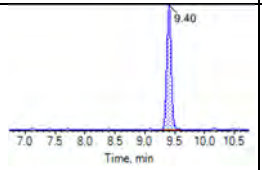
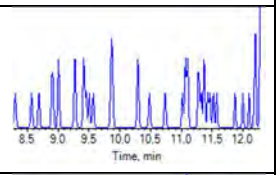
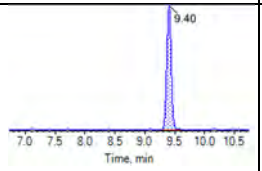
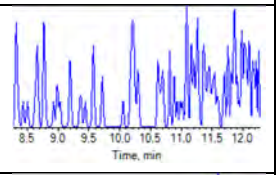
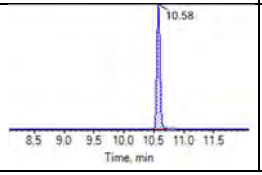
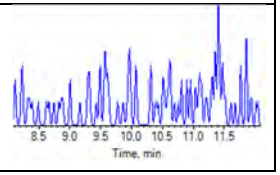
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	1051000	N/A	N/A	N/A	910.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	30260	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	30260	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	172400	N/A	N/A	N/A	N/A/ 1.00		

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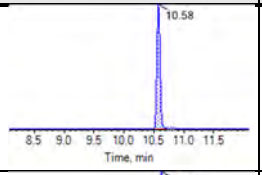
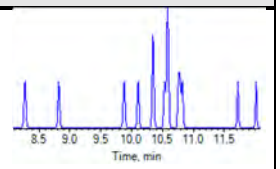
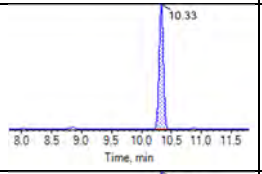
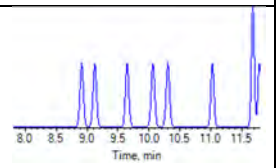
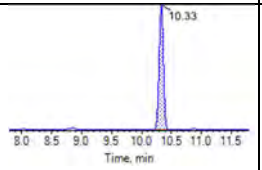
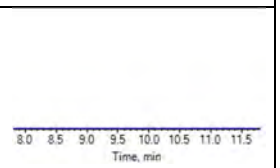
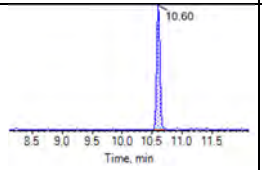
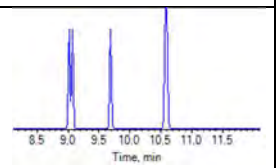
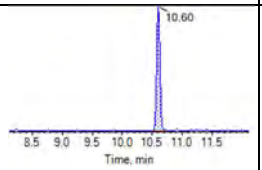
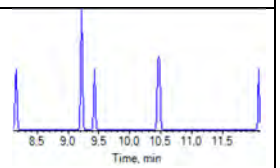
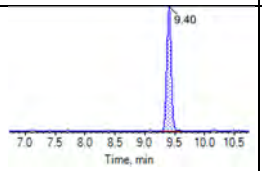
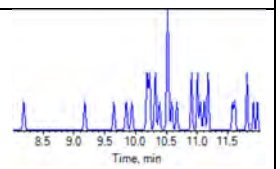
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	172400	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	43390	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	43390	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	48520	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	48520	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 1.00		

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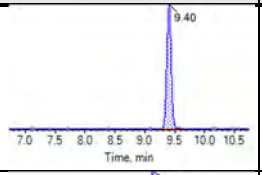
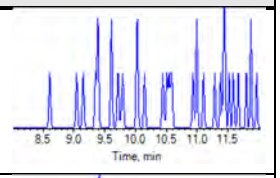
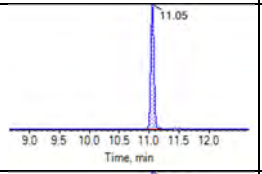
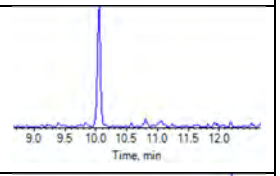
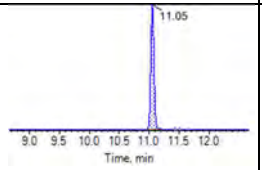
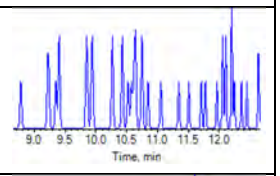
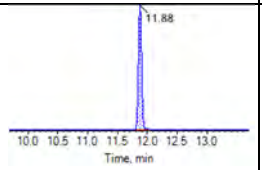
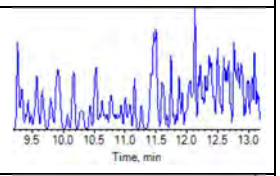
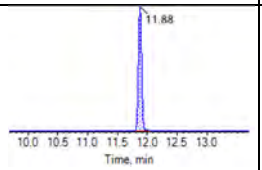
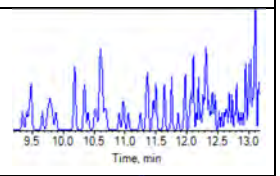
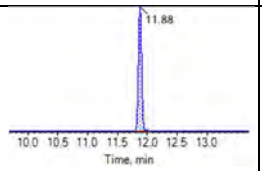
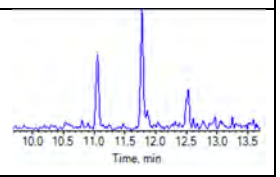
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	57140	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	158000	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	158000	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	124000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	124000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	124000	N/A	N/A	N/A	N/A/ 1.00		

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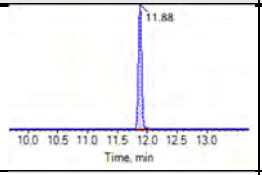
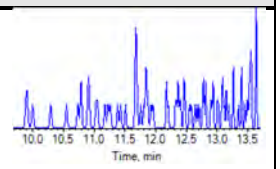
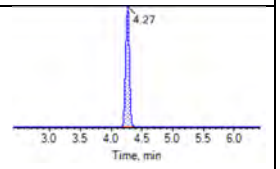
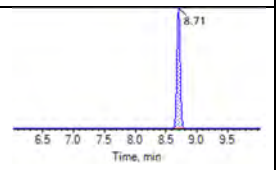
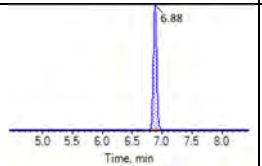
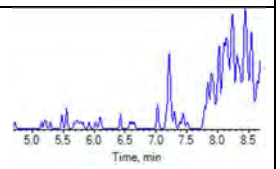
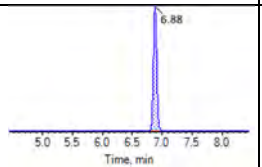
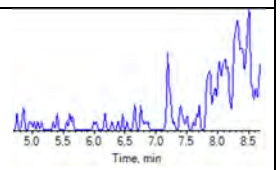
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	124000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1661000	N/A	N/A	N/A	960.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1240000	N/A	N/A	N/A	1007.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	303700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	303700	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 00:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488006**	**Date Received:**	**10/27/2017 08:55**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**DUP1GW1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:36**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**267.6 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117104.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00249	ug/L	0.00123	0.00249	0.00374
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00249	ug/L	0.00123	0.00249	0.00374
375-73-5	Perfluorobutanesulfonate (PFBS)	J	0.000801	ug/L	0.000617	0.00125	0.00166
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00125	ug/L	0.000729	0.00125	0.00187
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00125	ug/L	0.000617	0.00125	0.00187
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0027	ug/L	0.000617	0.00125	0.00187
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.00346	ug/L	0.000617	0.00114	0.0017
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00314	ug/L	0.000617	0.00125	0.00187
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00127	ug/L	0.000617	0.00123	0.00187
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0265	ug/L	0.000617	0.00123	0.00187
335-67-1	Perfluorooctanoic acid (PFOA)		0.0108	ug/L	0.000654	0.00123	0.00187
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000617	0.00123	0.00187
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000617	0.00123	0.00187
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000617	0.00123	0.00187

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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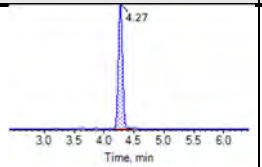
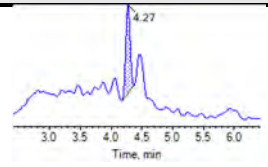
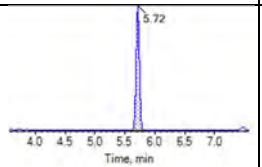
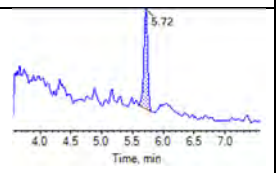
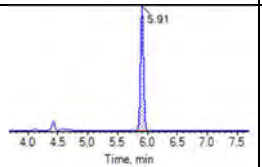
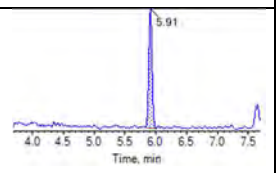
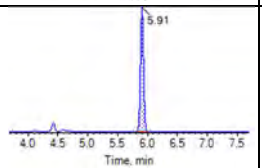
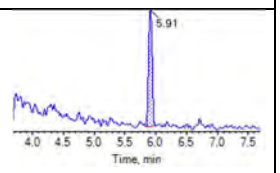
PFC103117104.wiff			
Sample Name	436488006	**Injection Vial**	37
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117104.wiff
Acquisition Date	11/2/2017 05:36:27	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117104.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	167200	13C4_PFBA	141000	N/A	168.3	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	142600	13C5_PFPeA	250700	N/A	132.2	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	74620	13C3_PFBS	176500	N/A	42.9	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	32230	13C3_PFBS	176500	N/A	41.3	N/A	0.43/ 0.45		

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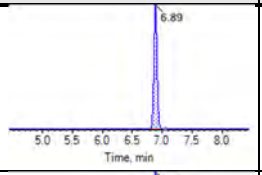
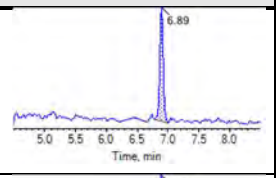
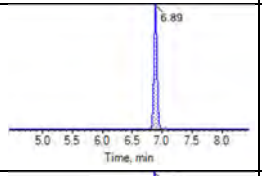
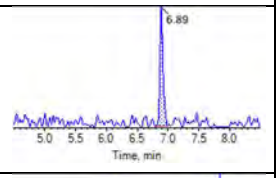
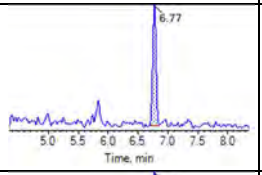
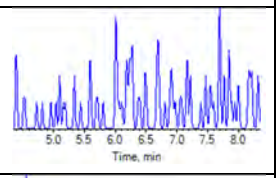
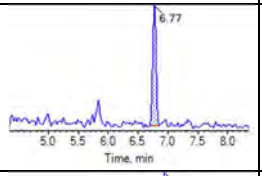
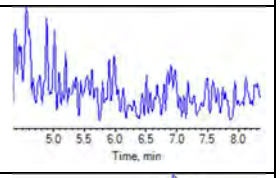
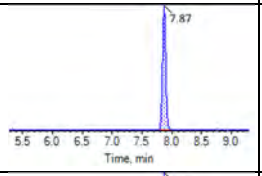
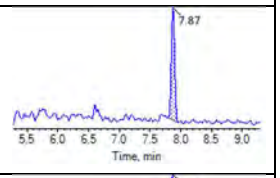
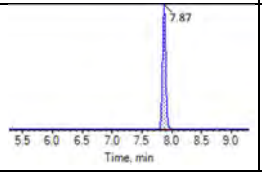
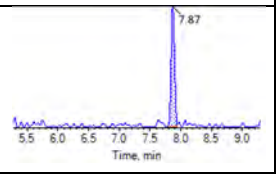
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	187800	13C5_PFHxA	294300	N/A	168.1	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	13330	13C5_PFHxA	294300	N/A	168.7	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	49100	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	49100	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	142400	13C4_PFHpA	235900	N/A	144.3	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	35270	13C4_PFHpA	235900	N/A	136.7	N/A	0.25/ 0.26		

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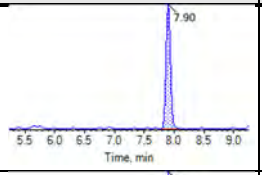
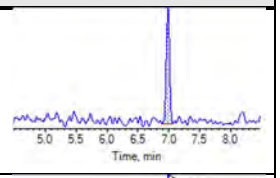
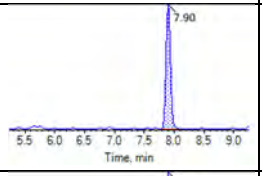
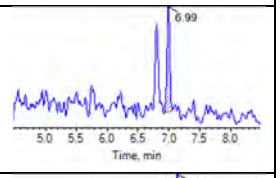
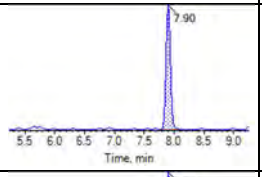
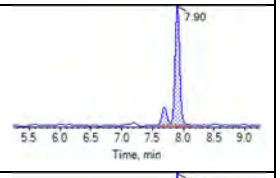
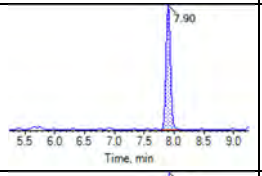
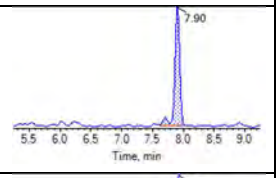
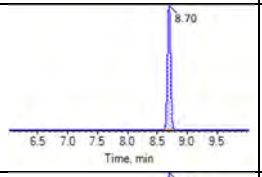
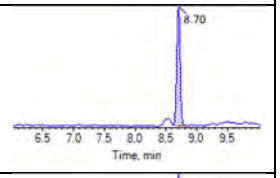
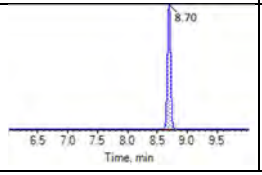
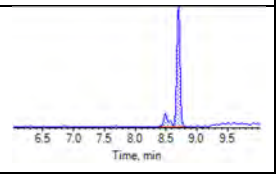
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	34810	13C3_PFHxS	84580	N/A	19.7	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	12330	13C3_PFHxS	84580	N/A	19.9	N/A	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	302400	13C3_PFHxS	84580	N/A	185.4	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	89120	13C3_PFHxS	84580	N/A	216.3	N/A	0.29/ 0.25		
PFOA	413.0 / 369.0	8.70 (8.75)	525400	13C8_PFOA	215300	N/A	578.4	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.70 (8.75)	240900	13C8_PFOA	215300	N/A	710.7	N/A	0.46/ 0.37		

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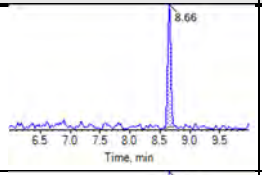
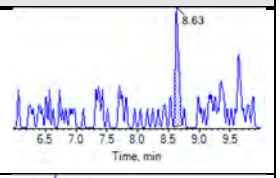
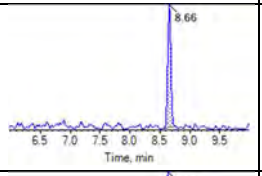
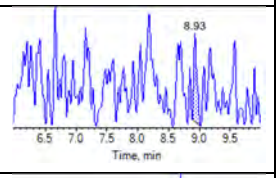
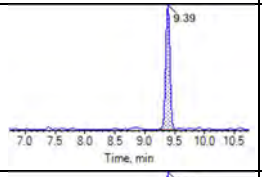
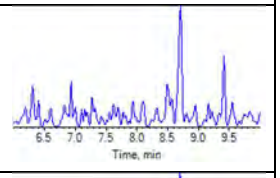
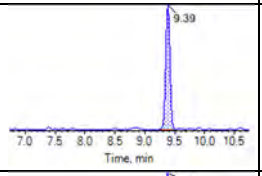
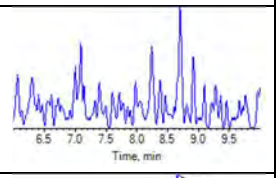
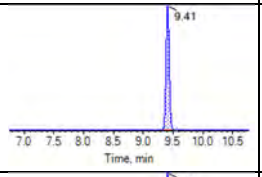
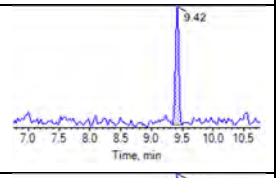
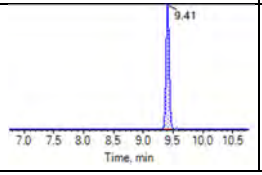
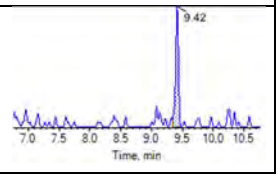
PFC103117104.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.63 (8.72)	3084	13C2_6:2 FTS	46670	N/A	12.5	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.93 (8.72)	2874	13C2_6:2 FTS	46670	N/A	13.0	N/A	0.93/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	9.42 (9.47)	47630	13C9_PFNA	207900	N/A	68.2	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	10060	13C9_PFNA	207900	N/A	59.7	N/A	0.21/ 0.24		

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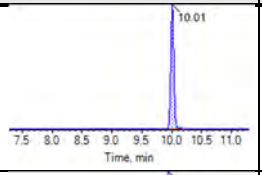
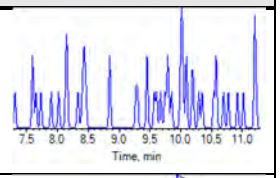
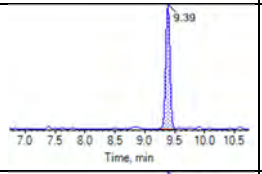
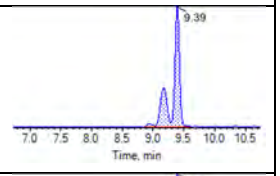
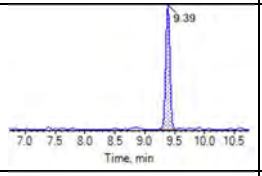
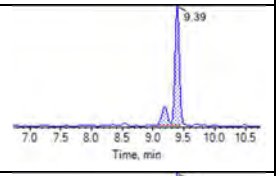
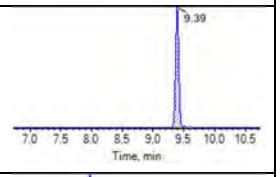
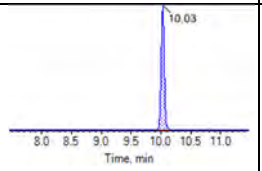
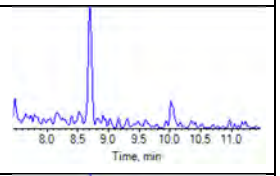
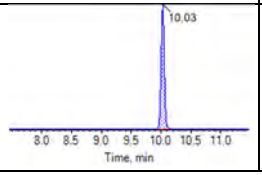
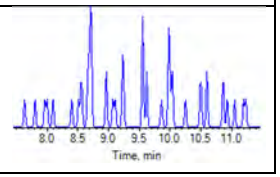
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	414400	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	1214000	13C8_PFOS	52700	N/A	1418.0	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	157000	13C8_PFOS	52700	N/A	1241.9	N/A	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1507000	N/A	N/A	N/A	898.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	131800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	131800	N/A	N/A	N/A	N/A/ 0.13		

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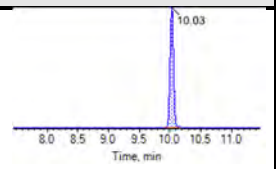
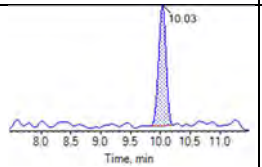
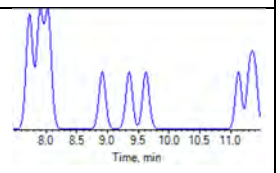
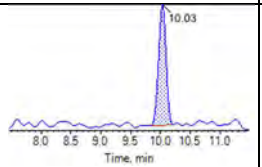
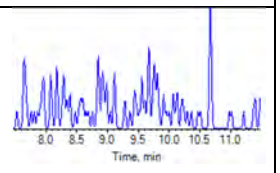
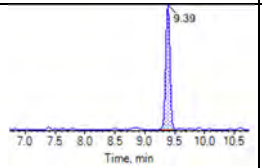
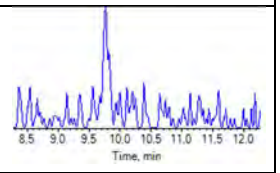
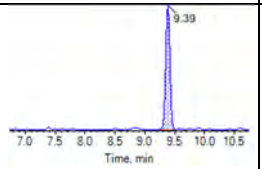
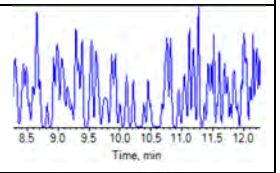
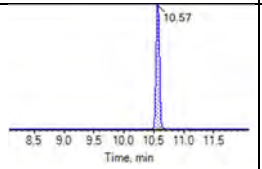
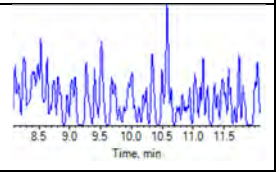
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.03 (10.02)	1025000	N/A	N/A	N/A	888.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24190	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24190	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	164500	N/A	N/A	N/A	N/A/ 1.00		

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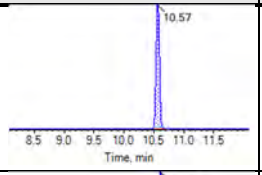
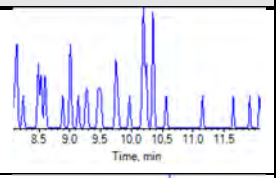
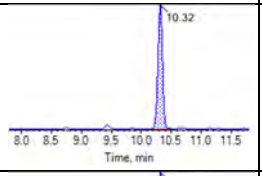
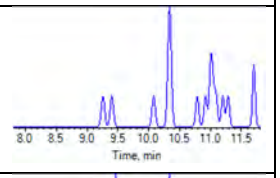
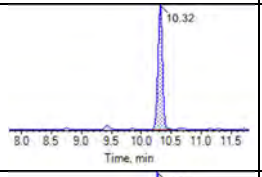
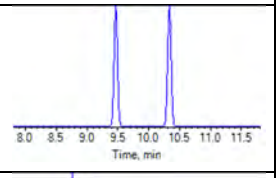
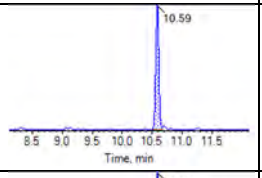
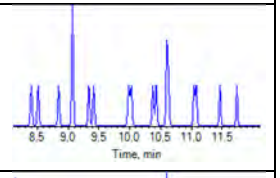
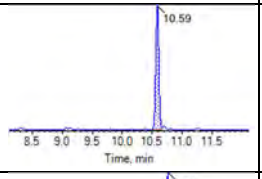
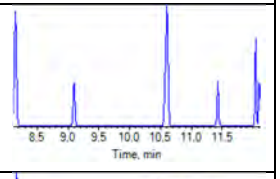
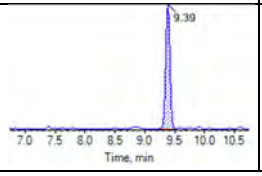
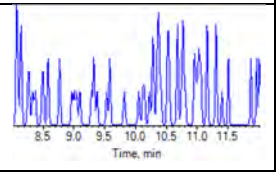
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	164500	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	49260	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	49260	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49740	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49740	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 1.00		

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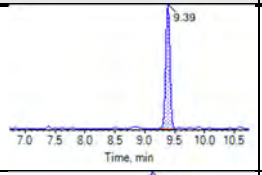
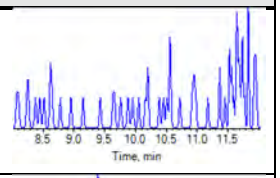
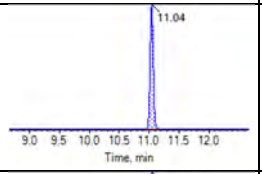
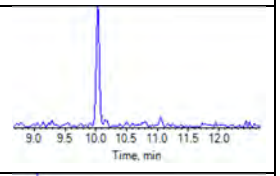
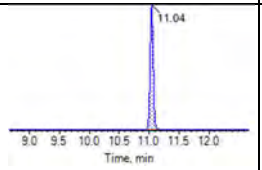
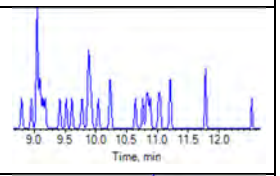
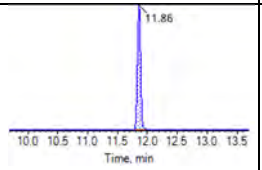
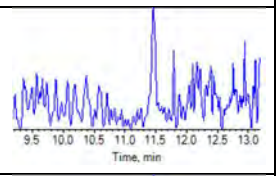
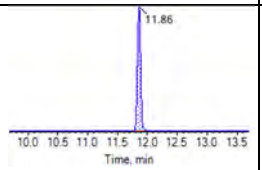
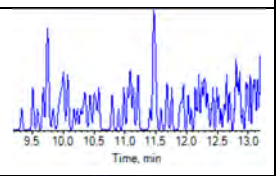
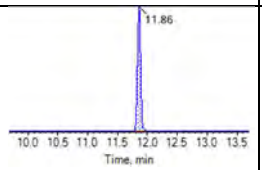
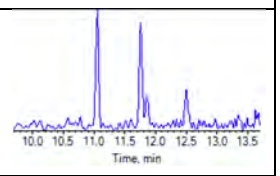
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	52700	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	160700	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	160700	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	116300	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	116300	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	116300	N/A	N/A	N/A	N/A/ 1.00		

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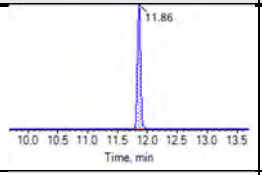
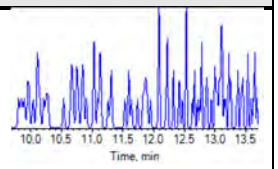
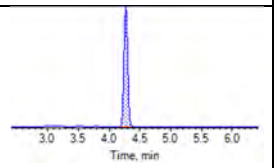
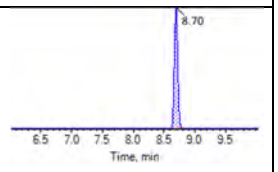
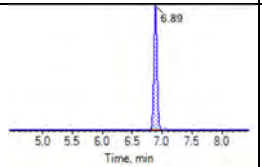
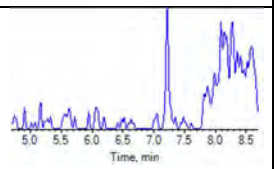
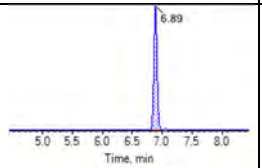
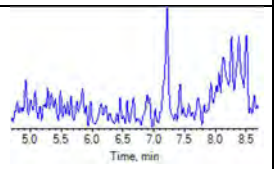
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	116300	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1501000	N/A	N/A	N/A	867.9	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1163000	N/A	N/A	N/A	944.9	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	294300	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	294300	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488007**	**Date Received:**	**10/27/2017 08:55**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**GW-102617FB**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 05:57**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**275.81 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117105.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00241	ug/L	0.0012	0.00241	0.00363
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00241	ug/L	0.0012	0.00241	0.00363
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00121	ug/L	0.000598	0.00121	0.00161
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00121	ug/L	0.000707	0.00121	0.00181
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00111	ug/L	0.000598	0.00111	0.00165
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00121	ug/L	0.000598	0.00121	0.00181
375-95-1	Perfluorononanoic acid (PFNA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.0012	ug/L	0.000598	0.0012	0.00181
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.0012	ug/L	0.000634	0.0012	0.00181
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.0012	ug/L	0.000598	0.0012	0.00181
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.0012	ug/L	0.000598	0.0012	0.00181

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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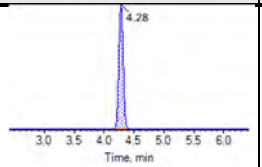
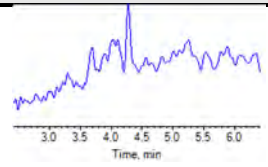
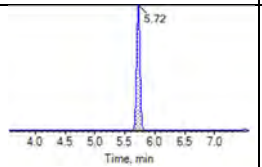
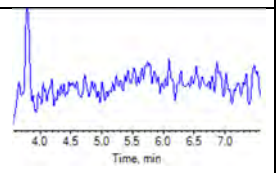
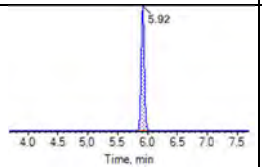
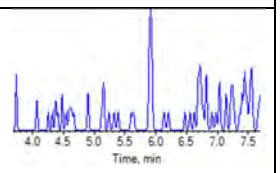
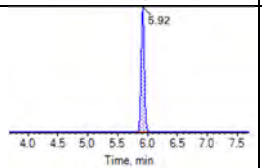
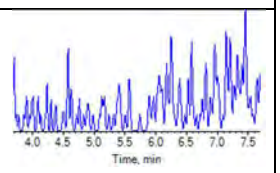
PFC103117105.wiff			
Sample Name	436488007	**Injection Vial**	38
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117105.wiff
Acquisition Date	11/2/2017 05:57:49	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117105.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	143900	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	247200	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	168500	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	168500	N/A	N/A	N/A	N/A/ 0.45		

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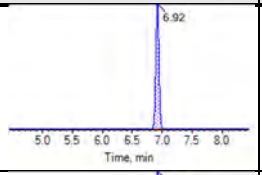
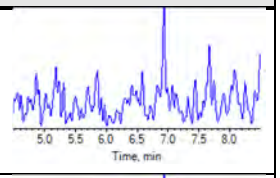
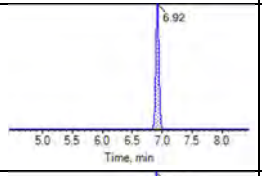
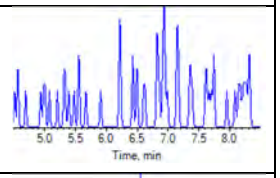
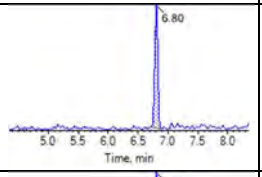
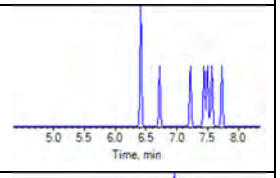
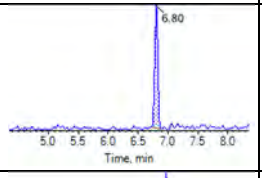
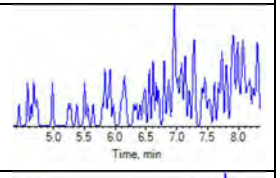
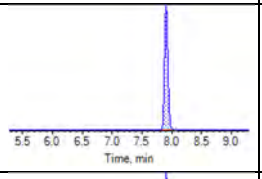
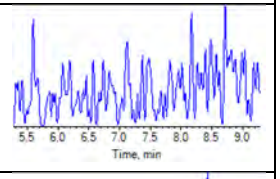
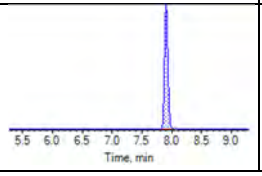
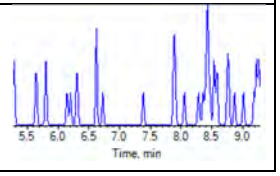
PFC103117105.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	309100	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	309100	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	36680	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	36680	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	233100	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	233100	N/A	N/A	N/A	N/A/ 0.26		

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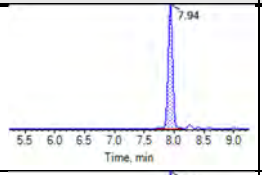
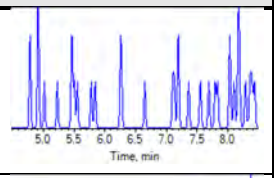
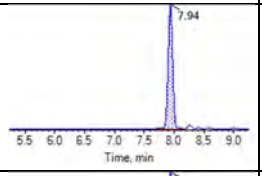
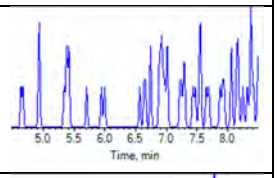
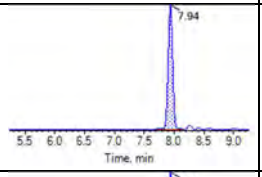
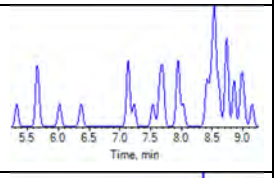
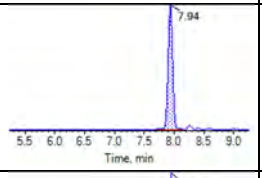
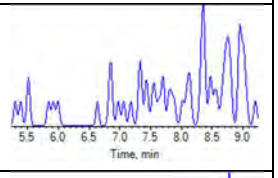
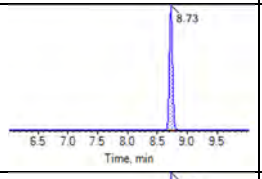
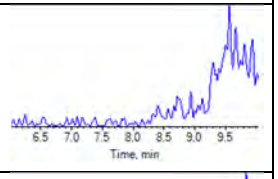
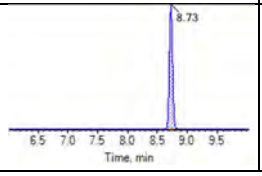
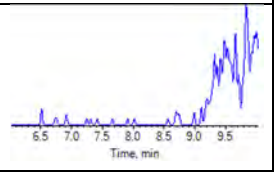
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	81830	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	81830	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	81830	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	81830	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	248900	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	248900	N/A	N/A	N/A	N/A/ 0.37		

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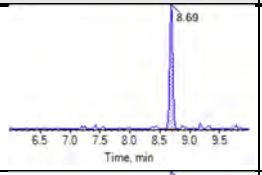
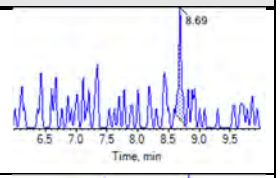
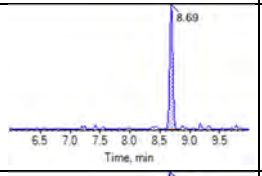
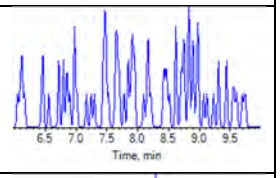
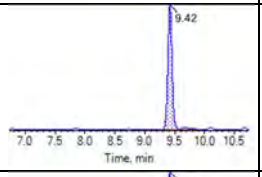
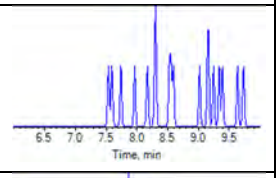
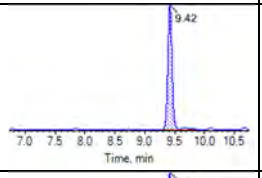
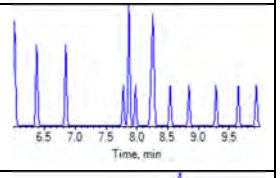
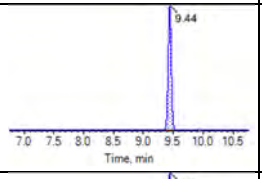
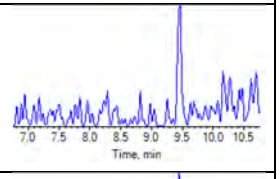
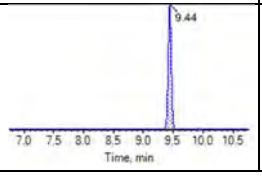
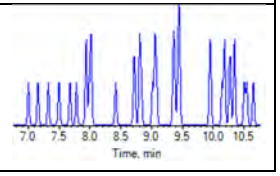
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.69 (8.72)	2466	13C2_6:2 FTS	40380	N/A	11.6	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	40380	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	258600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	258600	N/A	N/A	N/A	N/A/ 0.24		

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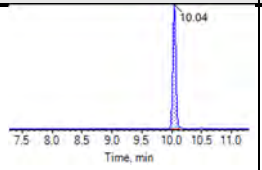
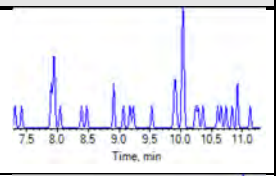
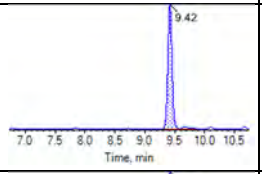
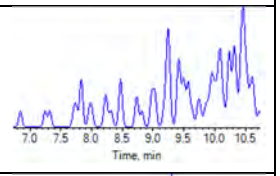
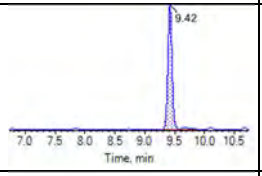
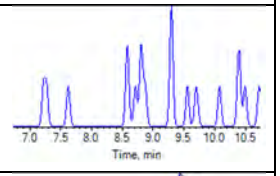
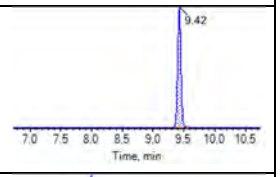
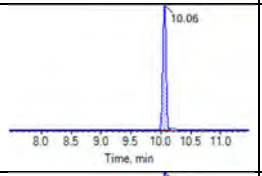
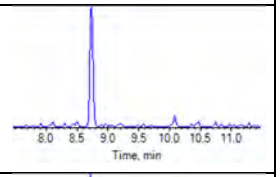
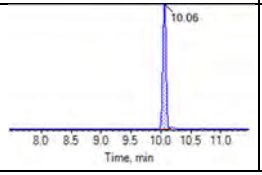
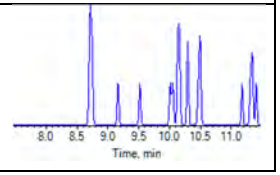
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	512100	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1505000	N/A	N/A	N/A	897.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	143000	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	143000	N/A	N/A	N/A	N/A/ 0.13		

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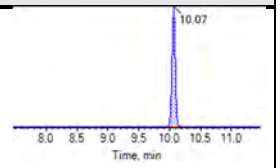
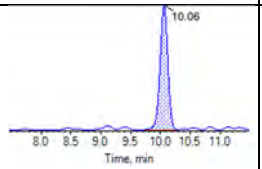
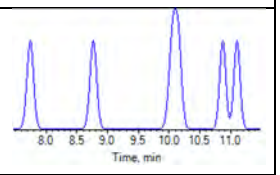
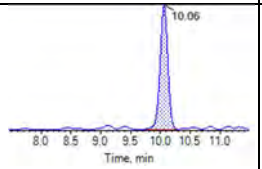
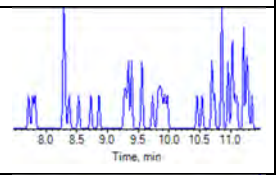
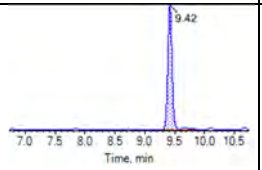
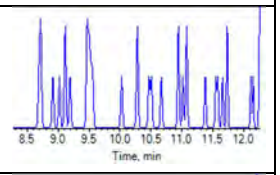
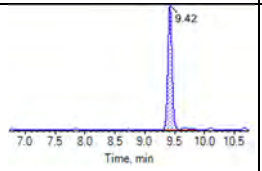
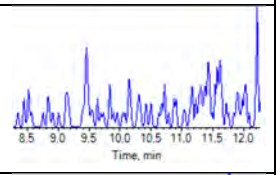
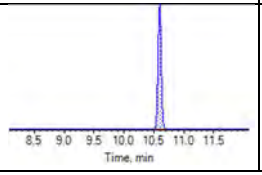
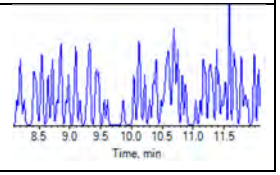
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1080000	N/A	N/A	N/A	936.2	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	31070	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	31070	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	210800	N/A	N/A	N/A	N/A/ 1.00		

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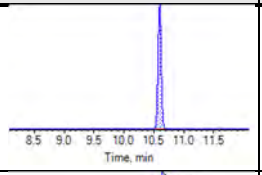
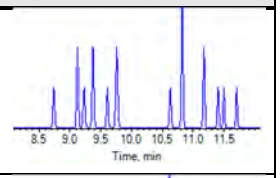
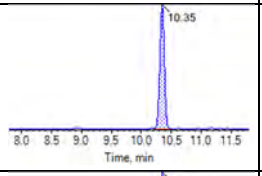
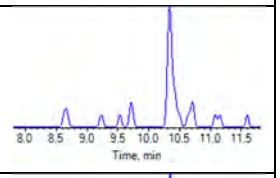
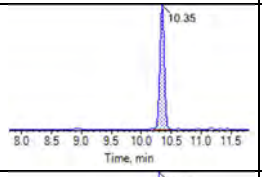
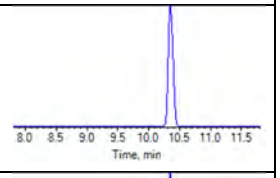
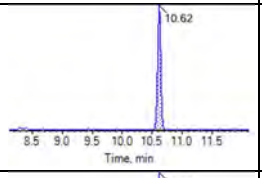
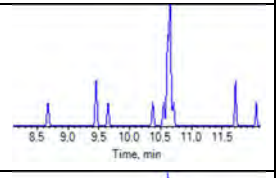
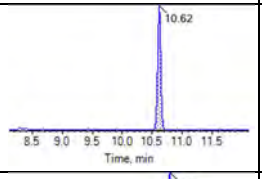
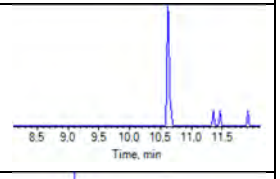
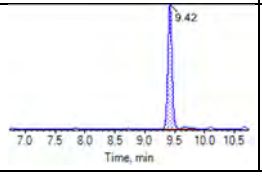
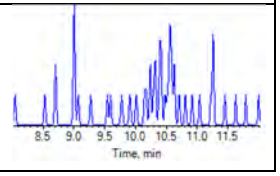
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	210800	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	49560	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	49560	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	57330	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	57330	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 1.00		

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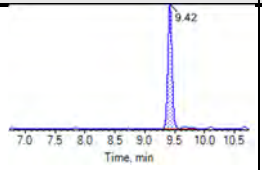
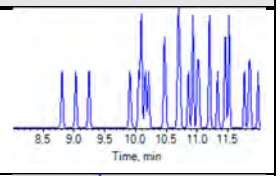
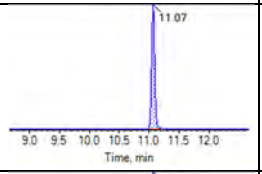
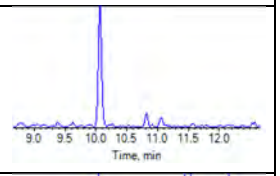
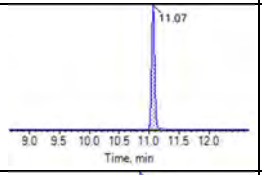
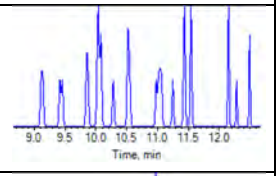
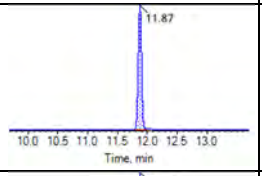
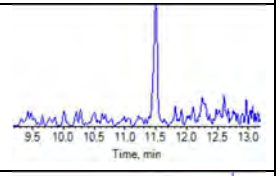
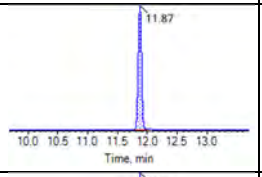
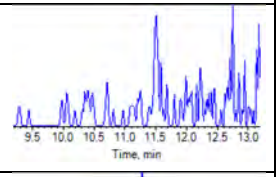
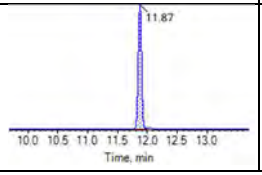
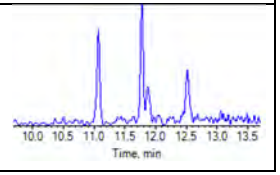
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	62980	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	177700	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	177700	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	126400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	126400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	126400	N/A	N/A	N/A	N/A/ 1.00		

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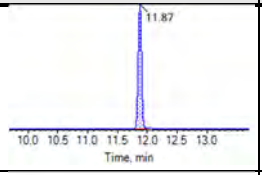
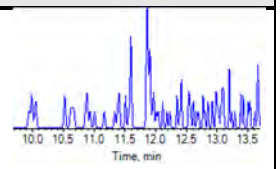
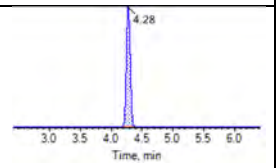
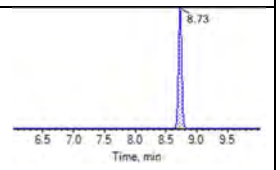
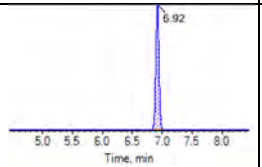
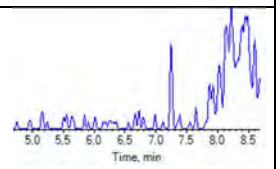
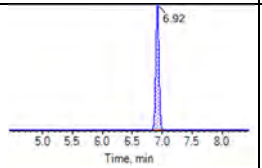
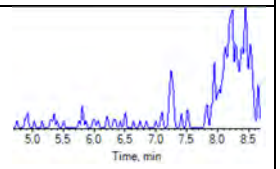
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	126400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1658000	N/A	N/A	N/A	958.4	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	1225000	N/A	N/A	N/A	995.6	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	309100	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	309100	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 14:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488002**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-11**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW11_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 14:09**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**279.07 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117128.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0457	ug/L	0.00591	0.0109	0.0163
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.185	ug/L	0.00591	0.0118	0.0179

JISB GC
11/06/2017 11/06/2017

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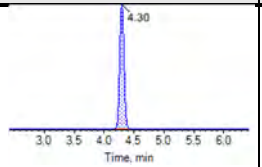
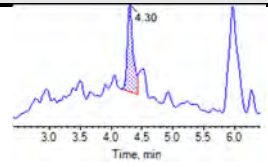
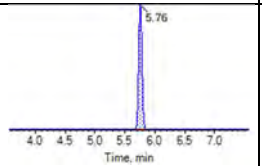
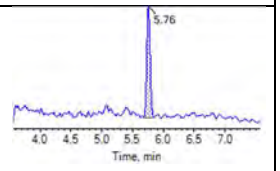
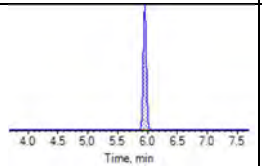
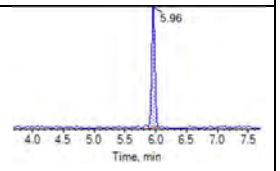
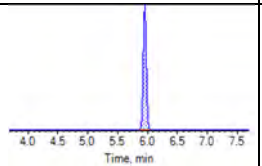
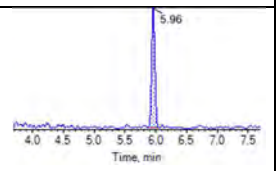
PFC103117128.wiff			
Sample Name	436488002	**Injection Vial**	6
Batch|Dilution|Analyst	1714407|10|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117128.wiff
Acquisition Date	11/2/2017 14:09:46	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117128.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	50060	13C4_PFBA	161500	N/A	44.0	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.76 (5.69)	68840	13C5_PFPeA	256900	N/A	62.3	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.96 (5.89)	49160	13C3_PFBS	197000	N/A	25.3	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.96 (5.89)	22430	13C3_PFBS	197000	N/A	25.7	N/A	0.46/ 0.45		

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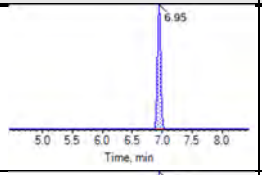
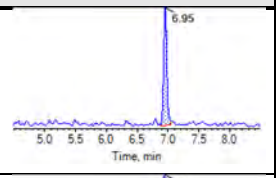
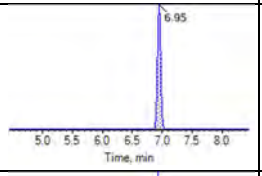
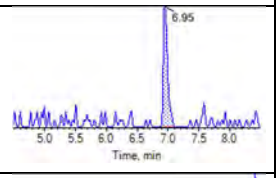
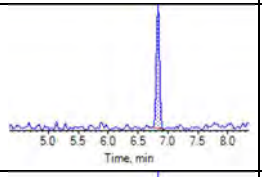
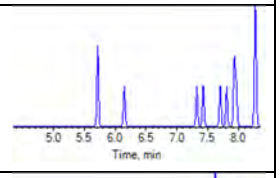
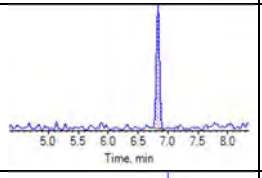
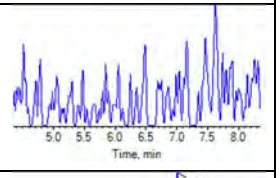
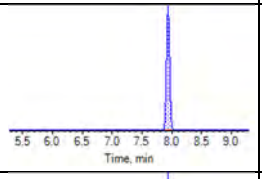
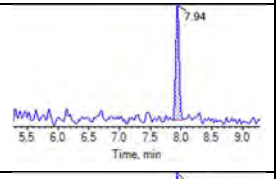
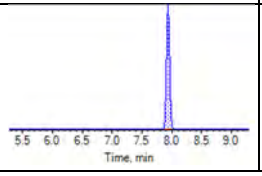
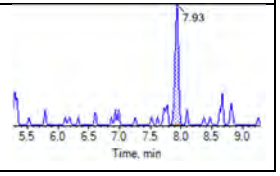
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	86600	13C5_PFHxA	315400	N/A	72.3	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	6736	13C5_PFHxA	315400	N/A	79.6	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	32460	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	32460	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.94 (7.93)	36810	13C4_PFHpA	298500	N/A	29.5	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	7908	13C4_PFHpA	298500	N/A	24.2	N/A	0.21/ 0.26		

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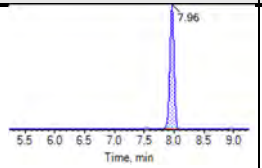
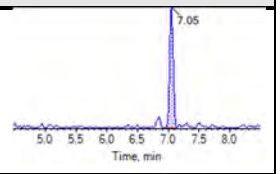
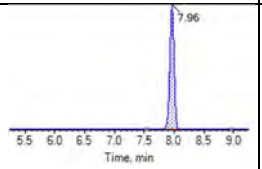
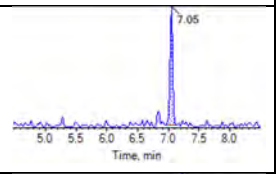
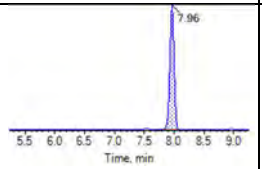
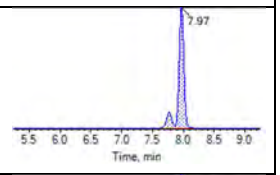
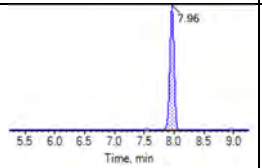
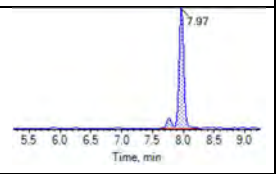
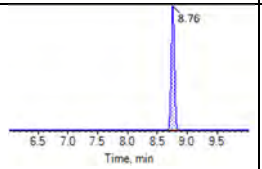
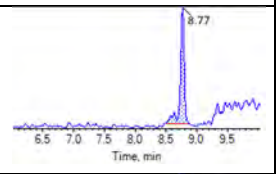
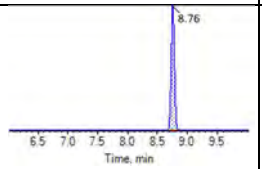
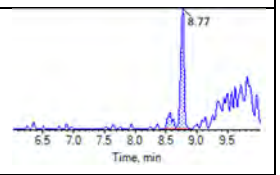
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.05 (7.02)	40180	13C3_PFHxS	87990	N/A	21.8	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.05 (7.02)	16170	13C3_PFHxS	87990	N/A	25.1	N/A	0.40/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	432400	13C3_PFHxS	87990	N/A	254.8	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	108900	13C3_PFHxS	87990	N/A	254.0	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	87150	13C8_PFOA	282500	N/A	73.1	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	26700	13C8_PFOA	282500	N/A	60.0	N/A	0.31/ 0.37		

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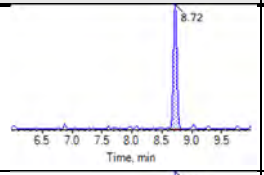
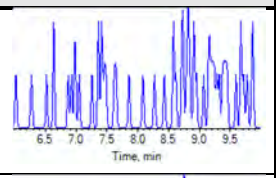
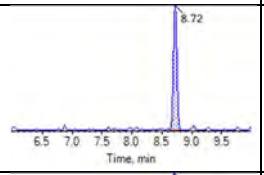
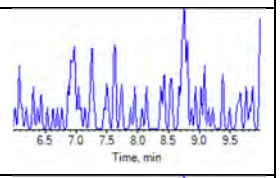
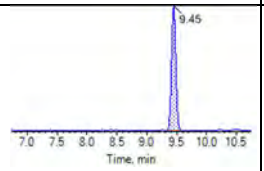
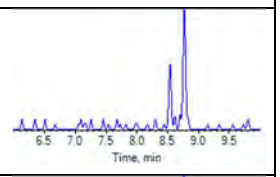
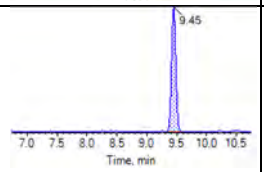
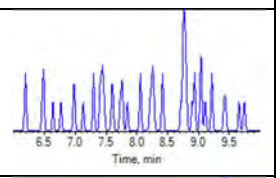
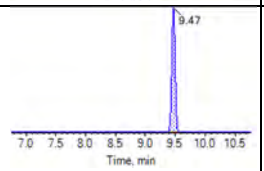
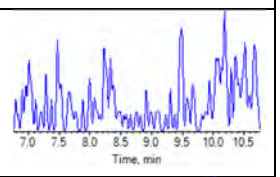
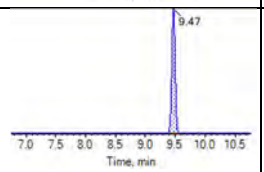
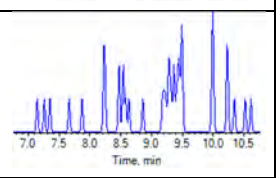
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	44300	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	44300	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	258300	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	258300	N/A	N/A	N/A	N/A/ 0.24		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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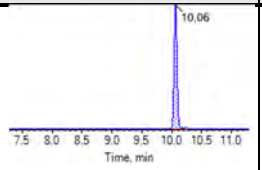
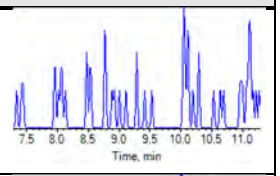
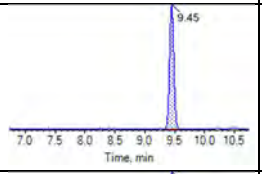
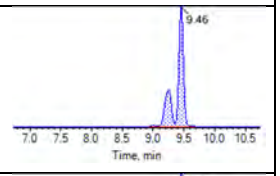
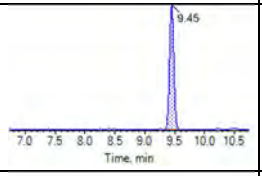
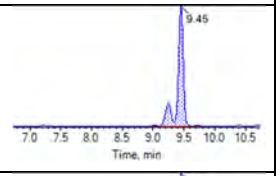
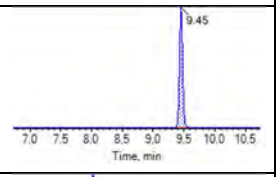
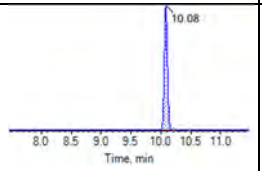
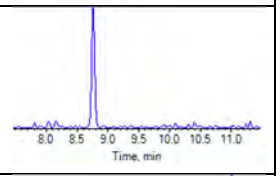
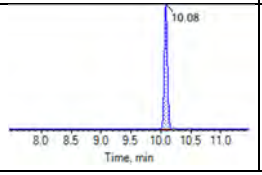
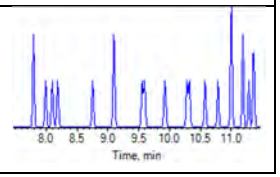
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	579200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1099000	13C8_PFOS	65350	N/A	1035.2	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.45 (9.45)	167300	13C8_PFOS	65350	N/A	1067.1	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1647000	N/A	N/A	N/A	982.3	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	152400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	152400	N/A	N/A	N/A	N/A/ 0.13		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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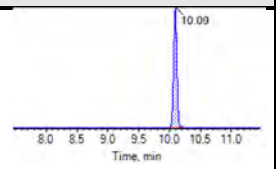
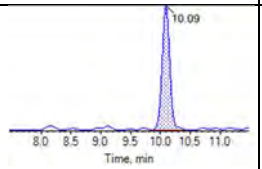
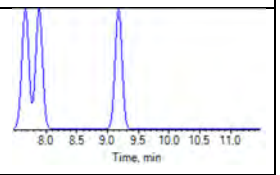
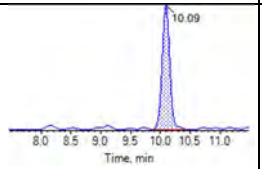
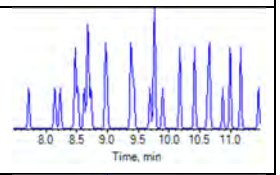
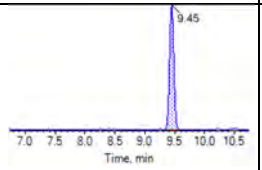
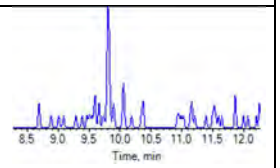
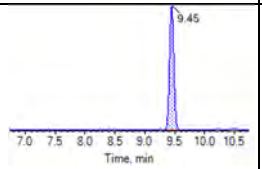
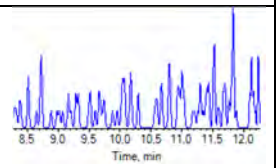
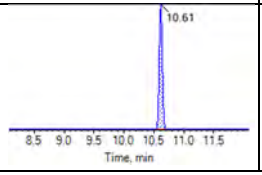
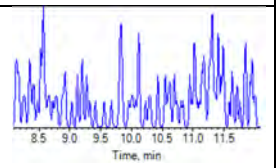
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1150000	N/A	N/A	N/A	996.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	33890	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	33890	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	195200	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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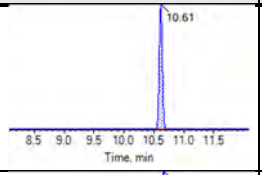
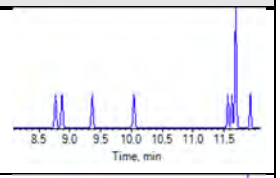
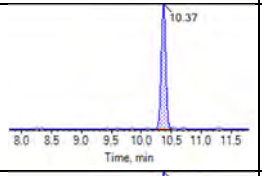
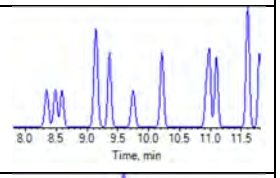
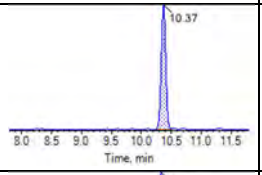
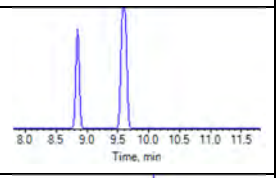
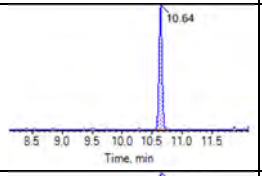
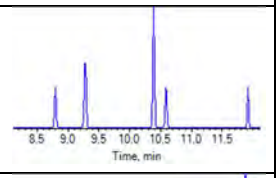
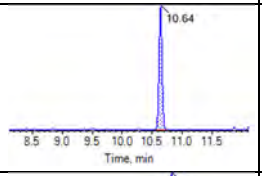
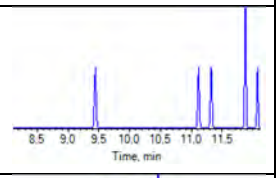
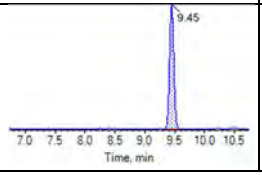
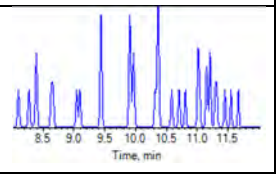
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	195200	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	57280	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	57280	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	62460	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	62460	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 1.00		

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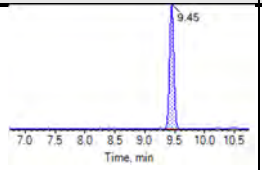
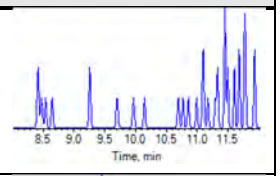
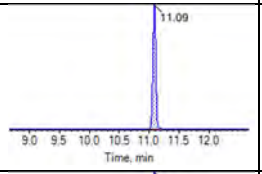
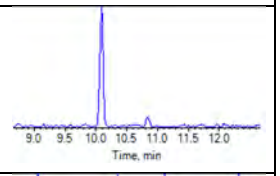
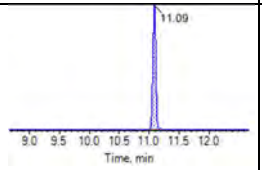
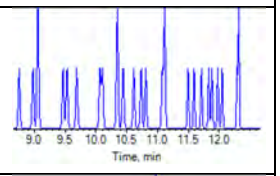
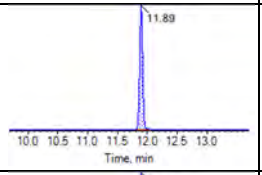
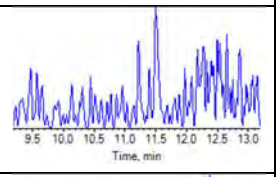
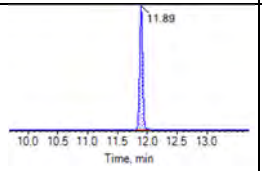
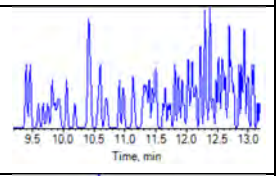
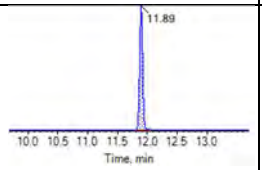
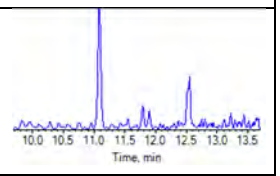
PFC103117128.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	65350	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	187600	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	187600	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	146800	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	146800	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	146800	N/A	N/A	N/A	N/A/ 1.00		

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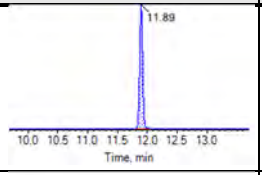
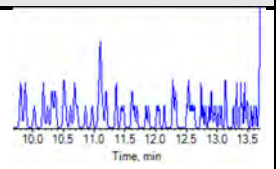
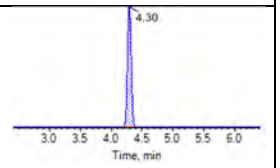
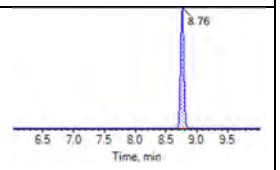
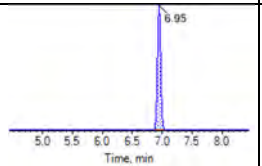
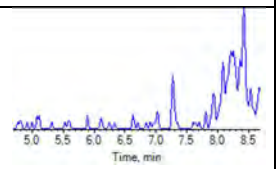
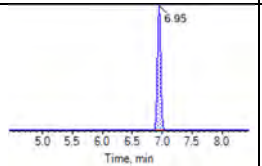
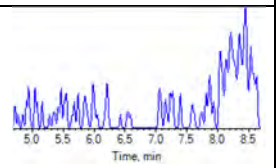
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	146800	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1776000	N/A	N/A	N/A	1026.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1279000	N/A	N/A	N/A	1039.7	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	315400	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	315400	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 13:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488003**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-15**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW15_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 14:31**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**281.56 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117129.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.121	ug/L	0.00586	0.0108	0.0162
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.291	ug/L	0.00586	0.0117	0.0178

JISB GC
11/06/2017 11/06/2017

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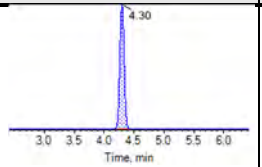
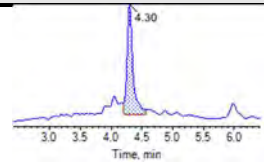
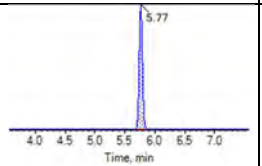
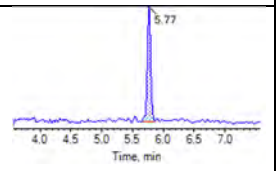
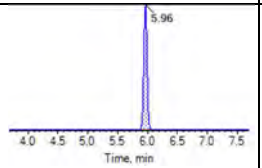
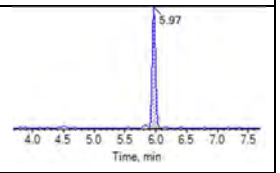
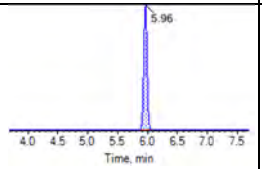
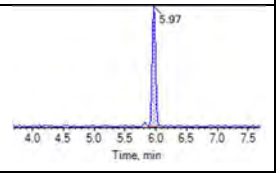
PFC103117129.wiff			
Sample Name	436488003	**Injection Vial**	7
Batch|Dilution|Analyst	1714407|10|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117129.wiff
Acquisition Date	11/2/2017 14:31:10	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117129.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	75130	13C4_PFBA	175800	N/A	60.6	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.77 (5.69)	98900	13C5_PFPeA	283400	N/A	81.1	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.97 (5.89)	115300	13C3_PFBS	165300	N/A	70.8	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.97 (5.89)	52920	13C3_PFBS	165300	N/A	72.4	N/A	0.46/ 0.45		

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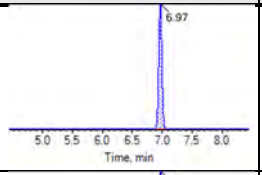
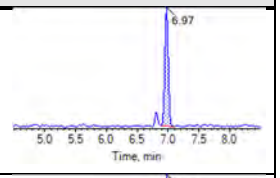
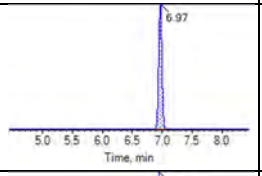
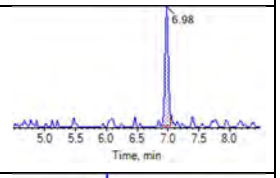
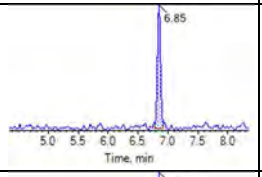
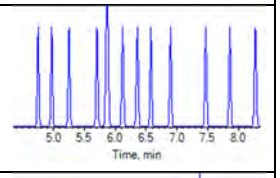
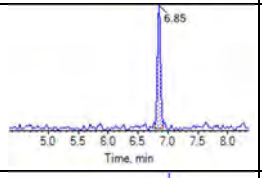
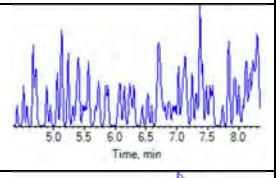
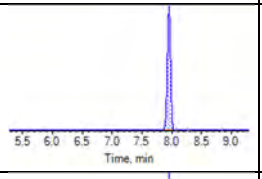
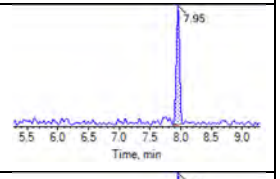
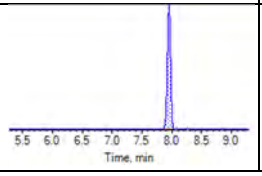
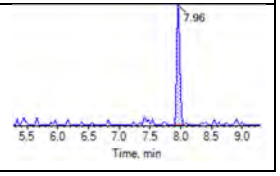
PFC103117129.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.97 (6.92)	140100	13C5_PFHxA	330800	N/A	111.5	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.98 (6.92)	10980	13C5_PFHxA	330800	N/A	123.7	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	33500	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	33500	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	72230	13C4_PFHpA	266800	N/A	64.7	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.96 (7.93)	19760	13C4_PFHpA	266800	N/A	67.7	N/A	0.27/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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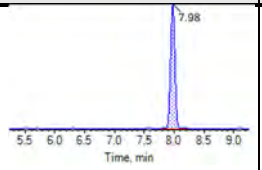
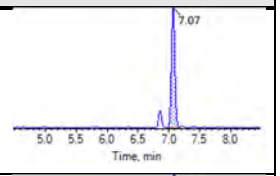
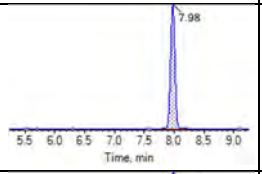
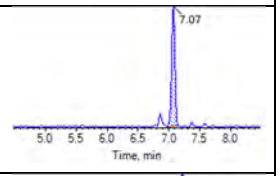
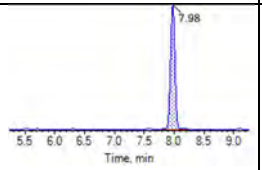
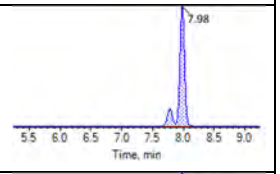
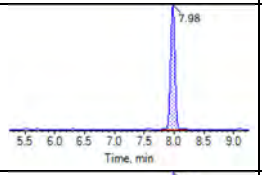
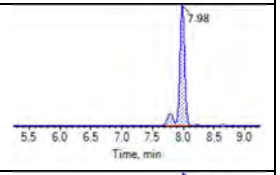
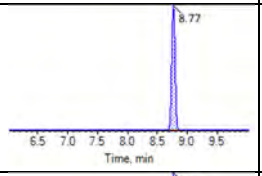
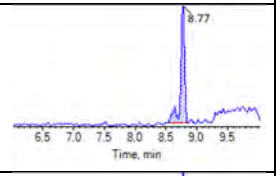
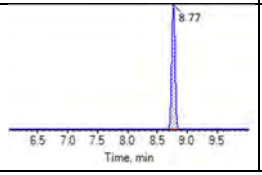
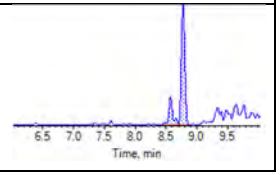
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.07 (7.02)	123200	13C3_PFHxS	99110	N/A	59.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.07 (7.02)	48760	13C3_PFHxS	99110	N/A	67.3	N/A	0.40/ 0.35		
PFHxS	399.0 / 80.0	7.98 (7.96)	1298000	13C3_PFHxS	99110	N/A	679.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.98 (7.96)	347200	13C3_PFHxS	99110	N/A	719.1	N/A	0.27/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	120500	13C8_PFOA	286000	N/A	99.8	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.78 (8.75)	58180	13C8_PFOA	286000	N/A	129.2	N/A	0.48/ 0.37		

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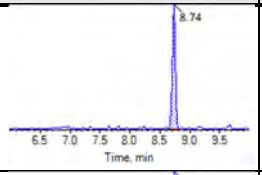
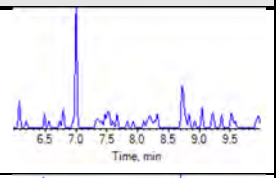
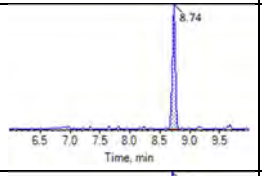
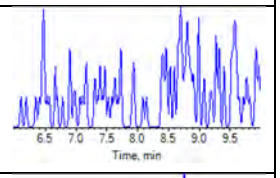
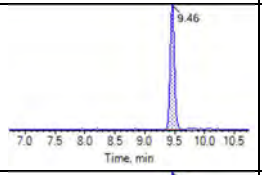
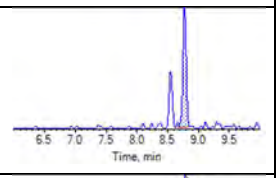
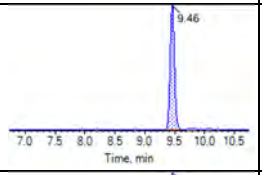
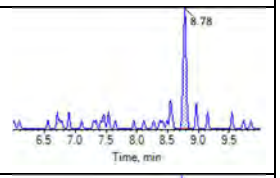
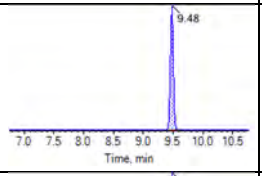
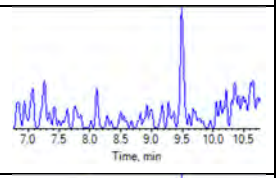
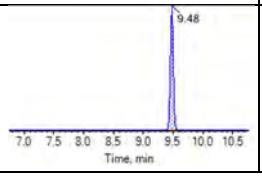
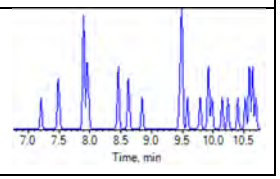
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	37840	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	37840	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	8.77 (8.76)	23980	13C8_PFOS	70300	N/A	17.5	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.78 (8.76)	6607	13C8_PFOS	70300	N/A	23.9	N/A	0.28/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	242700	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	242700	N/A	N/A	N/A	N/A/ 0.24		

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LCMSMS#6

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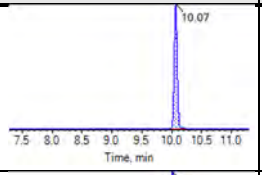
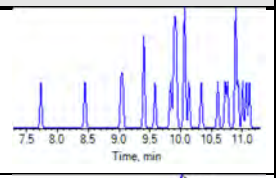
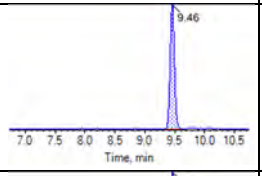
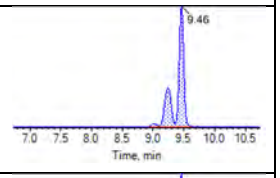
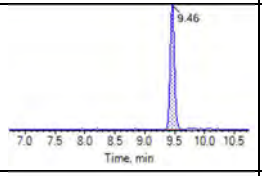
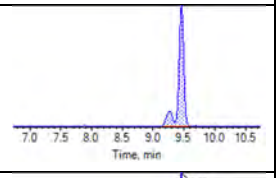
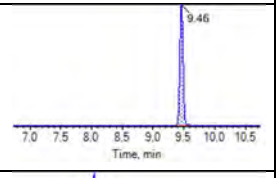
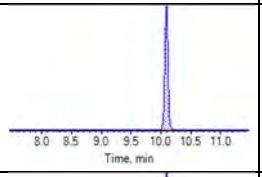
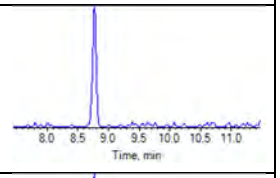
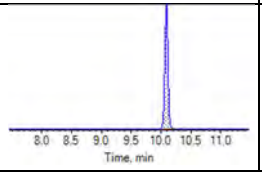
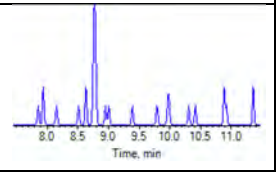
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	569000	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1869000	13C8_PFOS	70300	N/A	1636.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	260600	13C8_PFOS	70300	N/A	1544.8	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1648000	N/A	N/A	N/A	982.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	168800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	168800	N/A	N/A	N/A	N/A/ 0.13		

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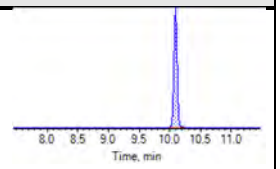
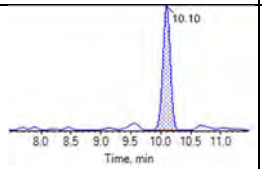
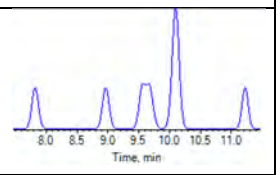
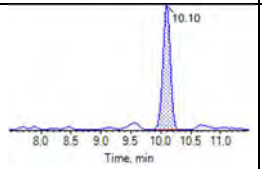
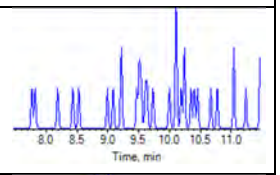
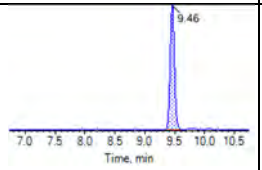
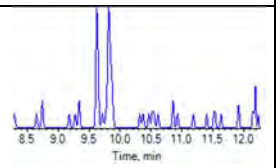
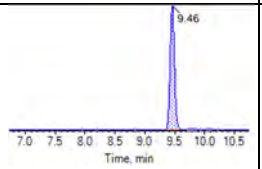
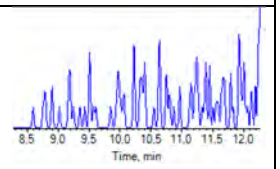
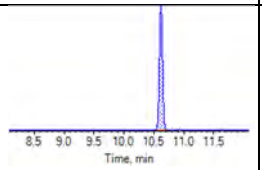
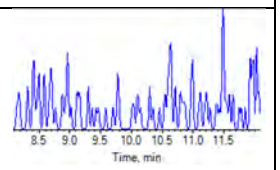
PFC103117129.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1128000	N/A	N/A	N/A	977.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	26180	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	26180	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	70300	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	70300	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	196300	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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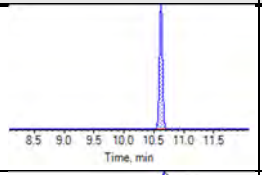
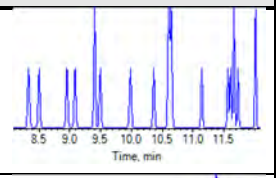
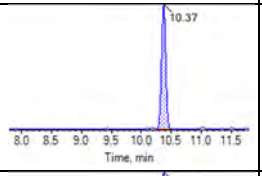
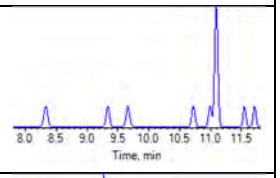
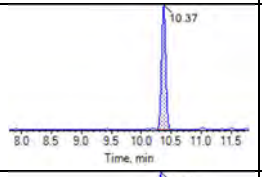
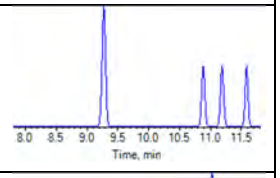
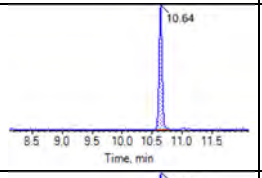
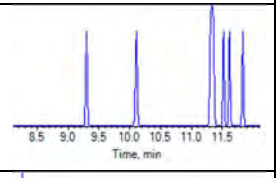
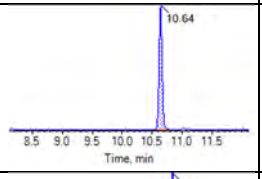
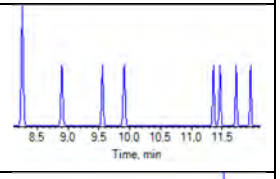
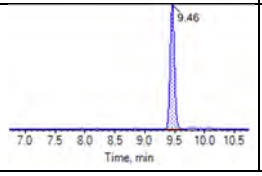
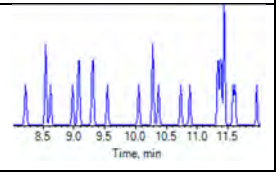
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	196300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	65750	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	65750	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	62800	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	62800	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	70300	N/A	N/A	N/A	N/A/ 1.00		

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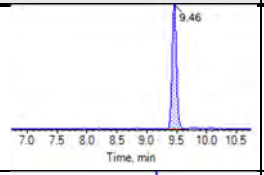
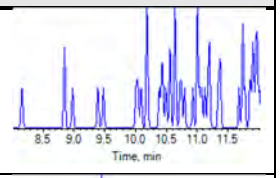
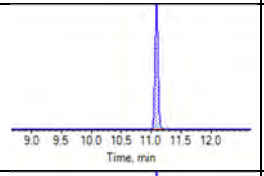
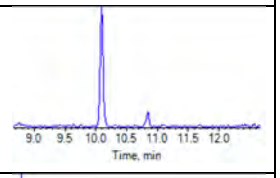
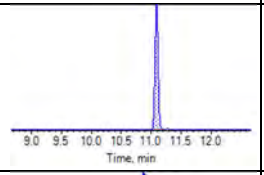
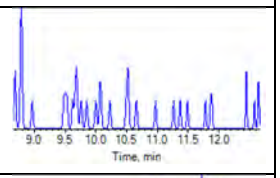
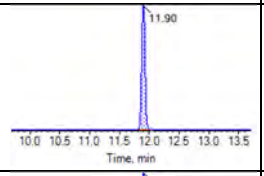
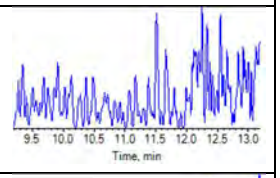
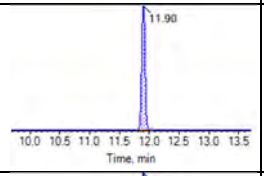
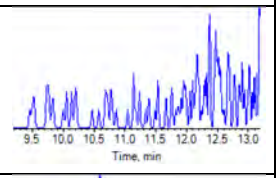
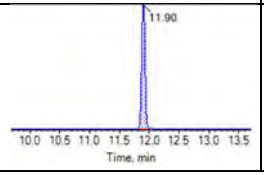
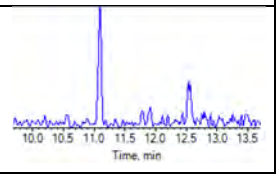
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	70300	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	188100	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	188100	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	146100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	146100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	146100	N/A	N/A	N/A	N/A/ 1.00		

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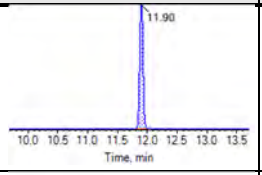
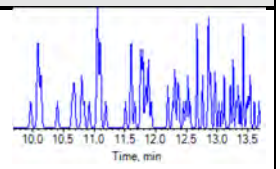
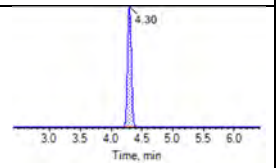
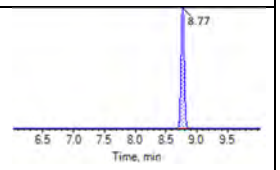
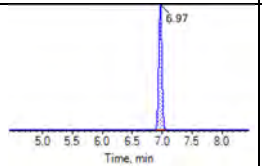
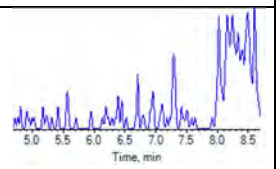
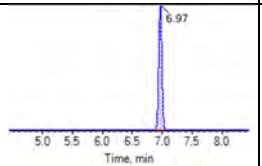
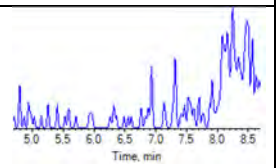
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	146100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1896000	N/A	N/A	N/A	1096.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1334000	N/A	N/A	N/A	1084.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	330800	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	330800	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 10:45**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436488004**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**16-MW-24**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW24_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**5**
Run Date:	**11/02/2017 14:52**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**271.73 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117130.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0572	ug/L	0.00304	0.00561	0.00837
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0485	ug/L	0.00304	0.00607	0.0092

JISB GC
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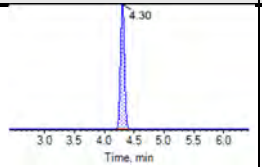
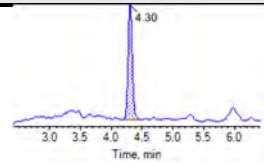
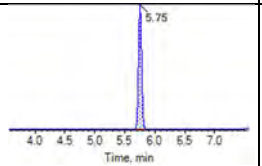
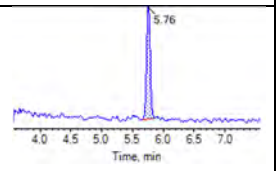
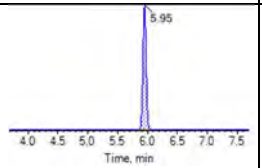
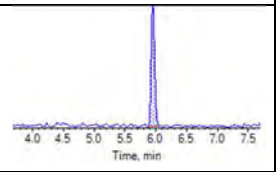
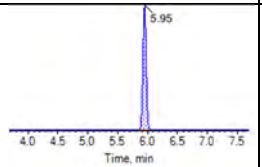
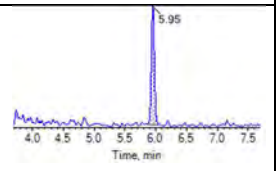
PFC103117130.wiff			
Sample Name	436488004	**Injection Vial**	8
Batch|Dilution|Analyst	1714407|5|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117130.wiff
Acquisition Date	11/2/2017 14:52:34	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117130.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	84860	13C4_PFBA	124400	N/A	96.8	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.76 (5.69)	85130	13C5_PFPeA	197600	N/A	100.2	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	37500	13C3_PFBS	127500	N/A	29.9	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.95 (5.89)	16670	13C3_PFBS	127500	N/A	29.6	N/A	0.44/ 0.45		

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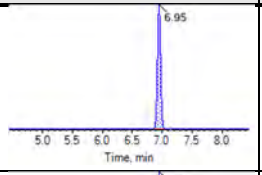
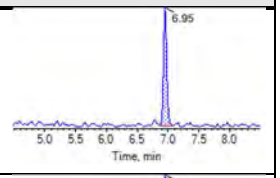
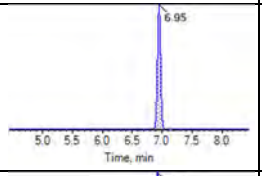
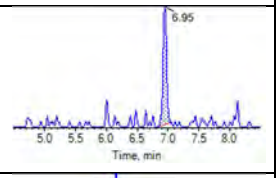
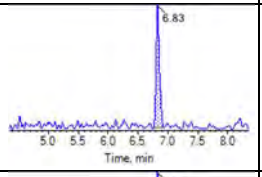
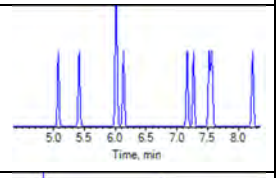
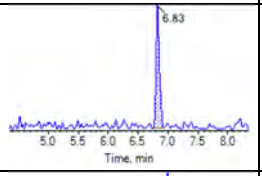
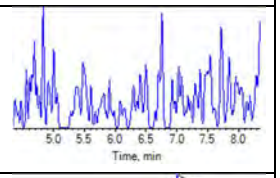
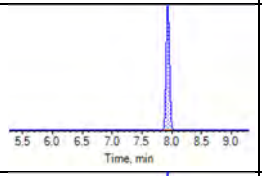
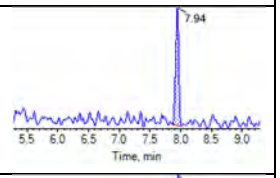
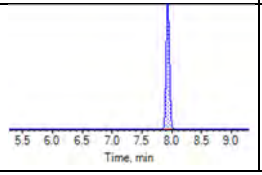
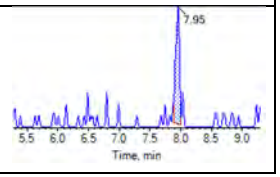
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	95130	13C5_PFHxA	242400	N/A	103.4	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	7548	13C5_PFHxA	242400	N/A	116.0	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	23400	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	23400	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.94 (7.93)	37110	13C4_PFHpA	201200	N/A	44.1	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.95 (7.93)	5857	13C4_PFHpA	201200	N/A	26.6	N/A	0.16/ 0.26		

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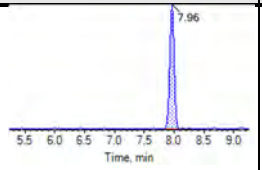
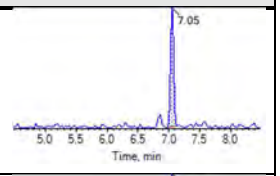
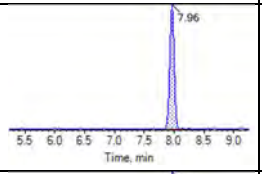
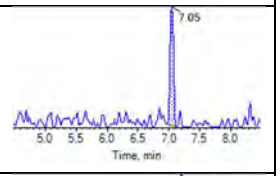
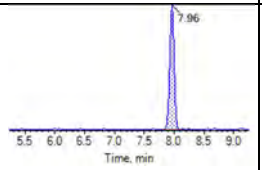
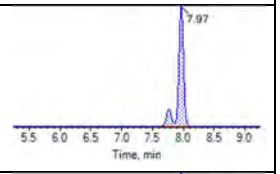
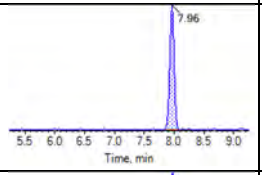
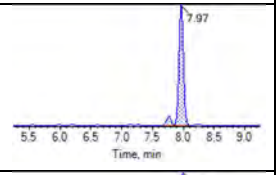
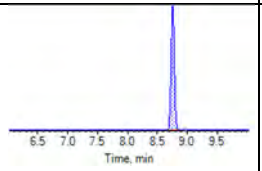
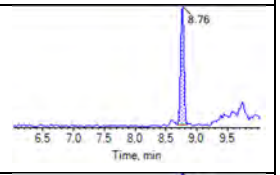
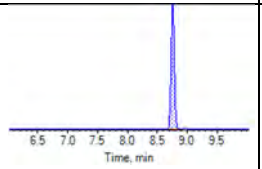
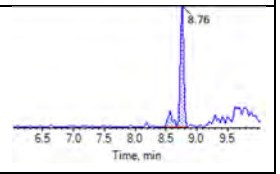
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.05 (7.02)	30190	13C3_PFHxS	60840	N/A	23.7	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.05 (7.02)	10520	13C3_PFHxS	60840	N/A	23.6	N/A	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	729500	13C3_PFHxS	60840	N/A	621.8	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	184800	13C3_PFHxS	60840	N/A	623.8	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	135400	13C8_PFOA	173500	N/A	185.0	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	60020	13C8_PFOA	173500	N/A	219.8	N/A	0.44/ 0.37		

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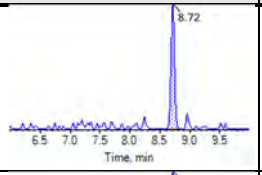
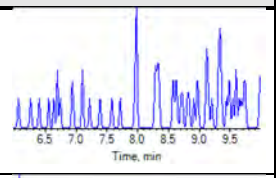
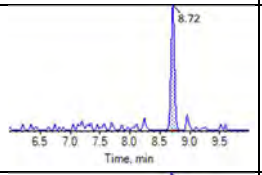
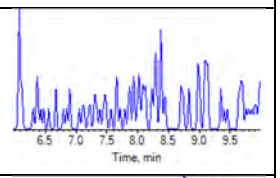
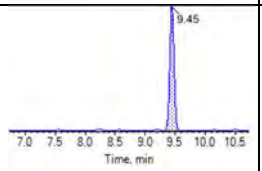
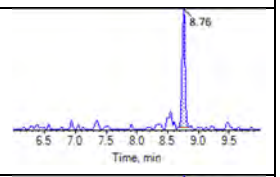
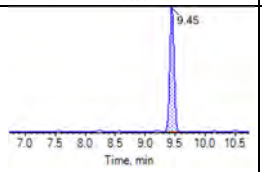
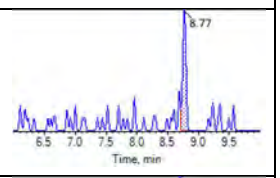
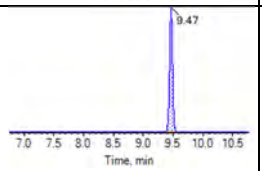
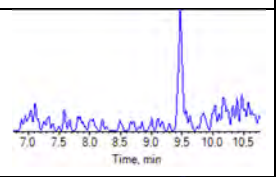
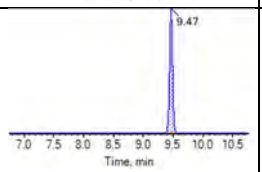
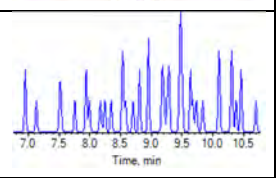
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	22200	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	22200	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	19960	13C8_PFOS	48860	N/A	21.0	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.77 (8.76)	4877	13C8_PFOS	48860	N/A	25.4	N/A	0.24/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	183100	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	183100	N/A	N/A	N/A	N/A/ 0.24		

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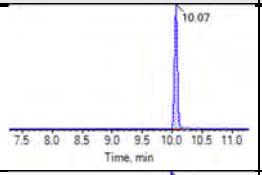
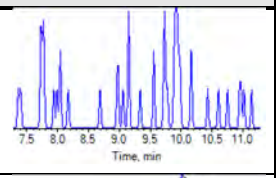
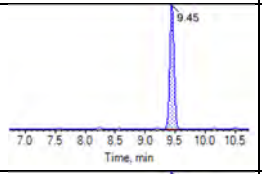
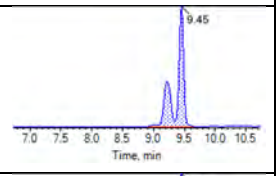
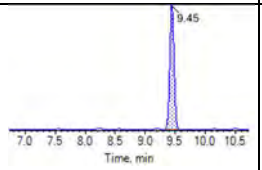
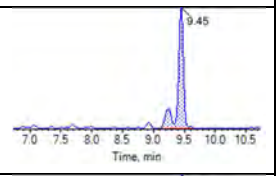
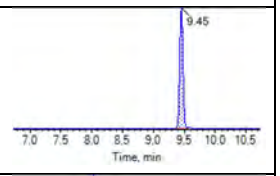
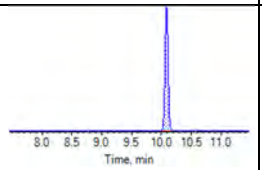
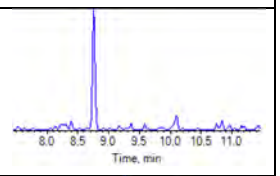
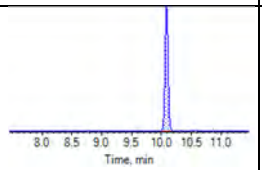
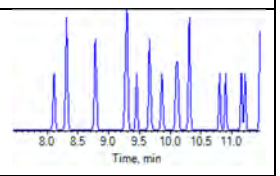
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	365800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	418200	13C8_PFOS	48860	N/A	526.8	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.45 (9.45)	53660	13C8_PFOS	48860	N/A	457.7	N/A	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1107000	N/A	N/A	N/A	660.0	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	98750	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	98750	N/A	N/A	N/A	N/A/ 0.13		

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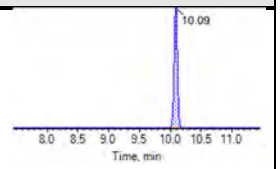
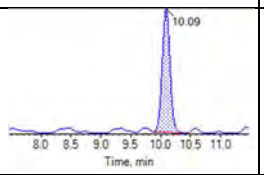
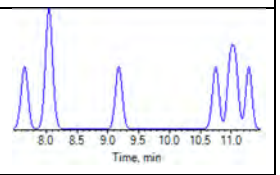
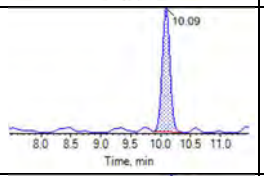
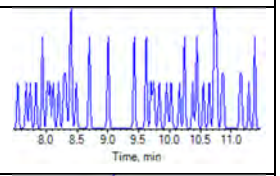
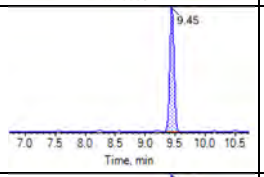
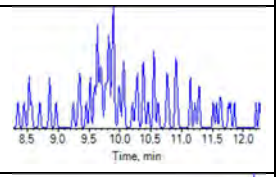
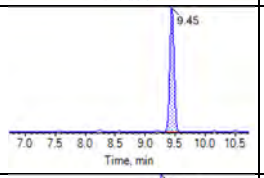
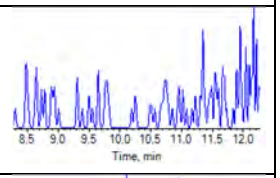
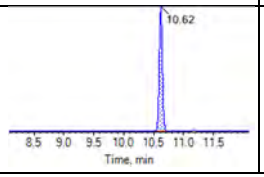
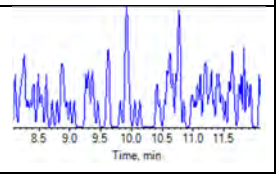
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	755200	N/A	N/A	N/A	654.6	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	22400	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	22400	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	125000	N/A	N/A	N/A	N/A/ 1.00		

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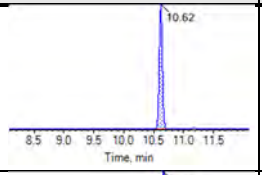
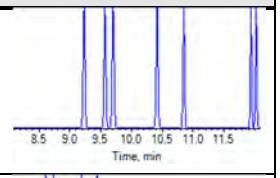
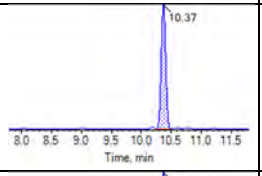
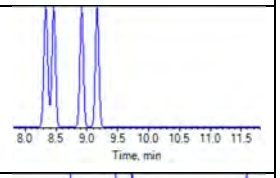
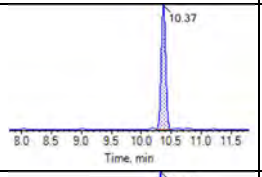
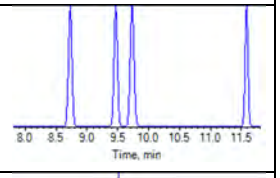
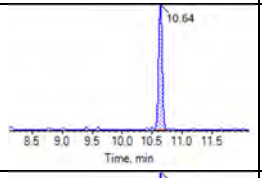
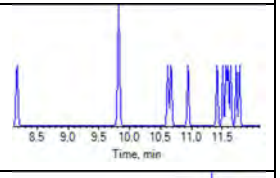
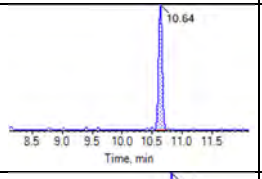
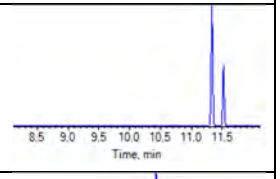
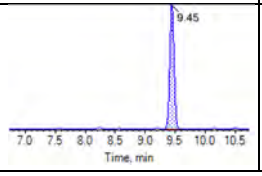
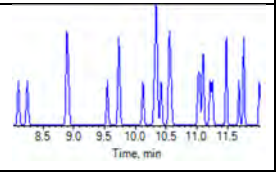
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	125000	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	39590	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	39590	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	34690	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	34690	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 1.00		

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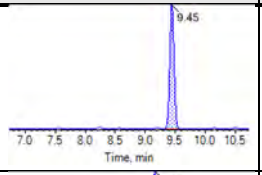
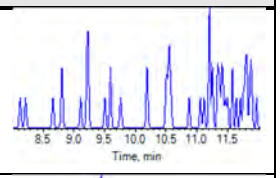
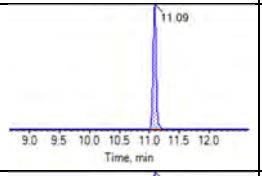
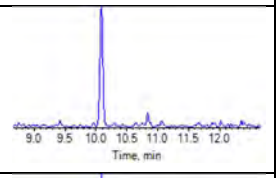
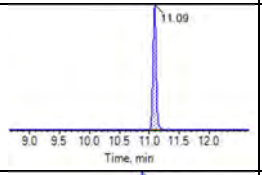
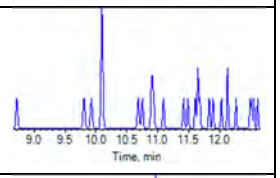
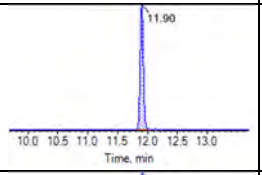
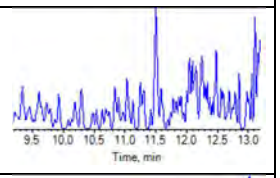
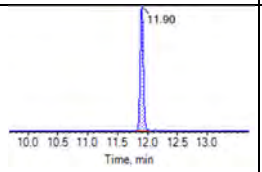
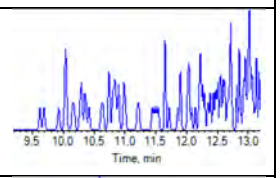
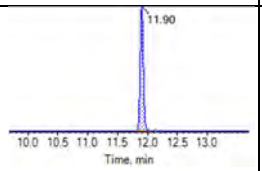
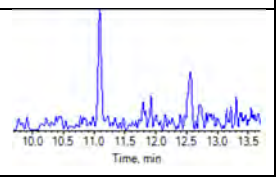
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	48860	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	120800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	120800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	83980	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	83980	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	83980	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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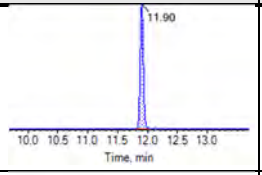
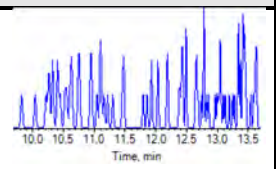
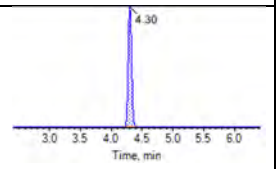
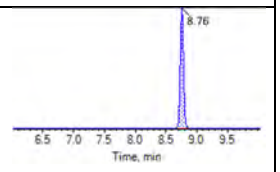
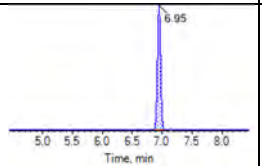
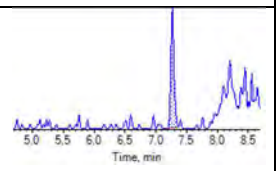
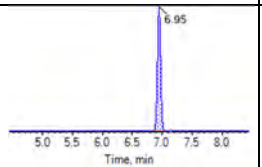
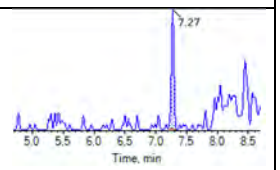
PFC103117130.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	83980	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1232000	N/A	N/A	N/A	712.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	851000	N/A	N/A	N/A	691.6	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.27 (7.26)	9179	13C5_PFHxA	242400	N/A	15.2	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.27 (7.26)	6336	13C5_PFHxA	242400	N/A	14.0	N/A	0.69/ 0.75		

Standards

Extraction ISTD Recoveries against ICAL

10/31/2017

	13C4_PFBA	13C5_PFPeA	13C4_PFHpA	13C8_PFOSA	d3-N-MeFOSAA	d5-N-EtFOSAA	13C2_PFDoA	13C8_PFOS	13C3_PFBS	13C2_4:2 FTS	13C5_PFHxA	13C3_PFHxS	13C2_6:2 FTS	13C8_PFOA	13C9_PFNA	13C2_8:2 FTS	13C6_PFDA	13C7_PFUdA	13C2_PFTeDA
WPF171018-01	158100	247400	261300	617800	56550	56960	180000	74460	173900	37890	331600	94830	37260	254000	291600	24490	158400	223700	146600
WPF171018-02	156000	238500	237600	522200	44720	50990	180800	70880	150600	31560	303300	74500	35810	273800	233000	22510	153100	192800	131300
WPF171018-03	143800	225300	228000	504200	42130	44930	181100	69320	157400	31670	280900	65190	36320	235000	234300	27340	141800	201900	125000
WPF171018-04	149800	231500	250700	562200	51150	47640	171500	69030	156800	33690	309400	74210	29030	236300	253400	23650	127300	203300	124300
WPF171018-05	142000	235000	260000	517000	49860	51440	192600	60240	145100	26660	287400	82910	28340	237800	240000	24270	156800	198300	123800
WPF171018-06	150400	237800	237500	588100	43350	56120	185200	71370	153900	33620	304900	64940	32970	252800	232700	26430	152400	189300	133400
WPF171018-07	145700	223300	239900	519300	42350	47710	182900	66190	152900	27160	294500	83220	29880	225600	223400	22570	138600	215200	124800
Avg	149400	234114.2857	245000	547257.1429	47158.57143	50827.14286	182014.2857	68784.28571	155800	31750	301714.2857	77114.28571	32801.42857	245042.8571	244057.1429	24465.71429	146914.2857	203500	129885.7143
50%	74700	117057.1429	122500	273628.5714	23579.28571	25413.57143	91007.14286	34392.14286	77900	15875	150857.1429	38557.14286	16400.71429	122521.4286	122028.5714	12232.85714	73457.14286	101750	64942.85714
150%	224100	351171.4286	367500	820885.7143	70737.85714	76240.71429	273021.4286	103176.4286	233700	47625	452571.4286	115671.4286	49202.14286	367564.2857	366085.7143	36698.57143	220371.4286	305250	194828.5714

Red Highlighting if > 150%

Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFBA	13C5_PFPeA	13C4_PFHpA	13C8_PFOSA	d3-N-MeFOSAA	d5-N-EtFOSAA	13C2_PFDoA	13C8_PFOS	13C3_PFBS	13C2_4:2 FTS	13C5_PFHxA	13C3_PFHxS	13C2_6:2 FTS	13C8_PFOA	13C9_PFNA	13C2_8:2 FTS	13C6_PFDA	13C7_PFUdA	13C2_PFTeDA
PFC103117001	PFCIBLK01	106.69%	111.61%	101.47%	106.20%	92.07%	91.11%	102.19%	99.59%	107.83%	134.83%	89.42%	110.33%	96.76%	84.60%	93.30%	118.37%	106.66%	100.39%	102.71%
PFC103117002	PFCIBLK01	112.32%	113.88%	108.04%	109.89%	125.53%	105.44%	113.40%	92.10%	115.15%	121.23%	102.25%	98.96%	122.65%	115.53%	111.24%	99.12%	103.94%	101.38%	117.03%
PFC103117003	WPF171018-01	105.82%	105.67%	106.65%	112.89%	119.91%	112.07%	98.89%	108.25%	111.62%	119.34%	109.91%	122.97%	113.59%	103.66%	119.48%	100.10%	107.82%	109.93%	112.87%
PFC103117004	WPF171018-02	104.42%	101.87%	96.98%	95.42%	94.83%	100.32%	99.33%	103.05%	96.66%	99.40%	100.53%	96.61%	109.17%	111.74%	95.47%	92.01%	104.21%	94.74%	101.09%
PFC103117005	WPF171018-03	96.25%	96.24%	93.06%	92.13%	89.34%	88.40%	99.50%	100.78%	101.03%	99.75%	93.10%	84.54%	110.73%	95.90%	96.00%	111.75%	96.52%	99.21%	96.24%
PFC103117006	WPF171018-04	100.27%	98.88%	102.33%	102.73%	108.46%	93.73%	94.22%	100.36%	100.64%	106.11%	102.55%	96.23%	88.50%	96.43%	103.83%	96.67%	86.65%	99.90%	95.70%
PFC103117007	WPF171018-05	95.05%	100.38%	106.12%	94.47%	105.73%	101.21%	105.82%	87.58%	93.13%	83.97%	95.26%	107.52%	86.40%	97.04%	98.34%	99.20%	106.73%	97.44%	95.31%
PFC103117008	WPF171018-06	100.67%	101.57%	96.94%	107.46%	91.92%	110.41%	101.75%	103.76%	98.78%	105.89%	101.06%	84.21%	100.51%	103.17%	95.35%	108.03%	103.73%	93.02%	102.71%
PFC103117009	WPF171018-07	97.52%	95.38%	97.92%	94.89%	89.80%	93.87%	100.49%	96.23%	98.14%	85.54%	97.61%	107.92%	91.09%	92.07%	91.54%	92.25%	94.34%	105.75%	96.08%
PFC103117010	WPF171018-08ISC	108.70%	107.13%	104.16%	113.27%	127.34%	121.18%	109.94%	91.31%	110.33%	109.57%	97.74%	111.99%	110.27%	102.39%	105.96%	126.95%	98.42%	105.95%	107.63%
PFC103117011	WPF171018-11ISC	106.69%	103.24%	100.86%	112.16%	128.88%	96.09%	111.42%	100.02%	104.43%	112.13%	98.74%	120.74%	123.35%	105.94%	103.09%	126.38%	104.69%	97.74%	102.47%
PFC103117012	WPF171018-09ICV	96.65%	98.11%	95.76%	96.21%	90.88%	104.53%	87.58%	91.71%	95.12%	103.84%	99.43%	92.36%	95.30%	91.21%	88.34%	103.16%	95.63%	83.83%	99.47%
PFC103117013	Technical PFOA	5.27%	0.07%	0.11%	0.21%	0.57%	0.74%	0.61%	0.45%	0.13%	4.53%	0.11%	1.02%	3.16%	0.22%	0.35%	#VALUE!	0.39%	0.32%	0.35%
PFC103117014	Carry Over Std	95.18%	93.84%	94.33%	89.43%	106.75%	92.73%	95.49%	95.52%	97.43%	90.33%	88.59%	97.60%	90.51%	98.55%	93.30%	112.57%	97.06%	92.43%	102.32%
PFC103117015	PFCIBLK02	116.00%	111.91%	117.43%	119.65%	124.56%	120.51%	115.71%	119.18%	122.21%	123.75%	114.58%	114.47%	107.56%	105.45%	112.10%	87.39%	112.17%	110.61%	121.72%
PFC103117016	1203907522	99.67%	104.86%	108.16%	96.99%	107.47%	103.31%	98.84%	100.72%	99.81%	94.68%	90.32%	99.94%	105.39%	103.82%	107.02%	111.99%	108.77%	93.46%	107.63%
PFC103117017	1203907523	101.00%	103.45%	95.80%	102.09%	134.46%	115.33%	108.01%	104.88%	102.82%	91.37%	96.61%	103.65%	121.67%	107.65%	98.50%	105.25%	97.95%	101.52%	103.24%
PFC103117018	436205001	6.59%	0.07%	0.22%	0.05%	0.57%	0.42%	0.41%	26.47%	348.01%	3.55%	0.11%	0.37%	37.19%	0.11%	0.12%	#VALUE!	0.21%	0.79%	0.19%
PFC103117019	1203907526	6.96%	0.06%	0.11%	0.06%	1.13%	1.25%	0.25%	28.76%	359.50%	4.96%	0.05%	1.82%	33.14%	0.11%	0.11%	#VALUE!	0.63%	1.37%	0.08%
PFC103117020	1203907529	6.29%	0.06%	0.12%	0.11%	0.69%	0.42%	0.30%	19.50%	323.62%	5.92%	0.11%	1.41%	32.13%	#VALUE!	#VALUE!	#VALUE!	0.20%	0.79%	0.05%
PFC103117021	1203907529	104.15%	104.05%	88.90%	67.77%	102.78%	104.87%	106.26%	69.03%	115.08%	132.22%	97.97%	104.04%	98.59%	91.09%	56.38%	59.59%	31.78%	102.56%	101.55%
PFC103117022	436205002	6.51%	0.07%	#VALUE!	0.05%	#VALUE!	0.42%	0.15%	7.44%	0.30%	4.39%	0.10%	0.46%	46.37%	0.11%	0.11%	#VALUE!	0.20%	0.20%	0.27%
PFC103117023	1203907527	6.18%	0.13%	0.12%	0.05%	#VALUE!	0.88%	0.10%	5.38%	0.13%	5.75%	0.11%	2.92%	55.15%	0.11%	0.11%	#VALUE!	0.64%	0.11%	0.17%
PFC103117024	1203907530	5.92%	0.05%	#VALUE!	0.05%	1.89%	1.25%	0.10%	5.12%	0.13%	2.18%	0.05%	1.30%	52.74%	0.12%	0.11%	#VALUE!	#VALUE!	#VALUE!	0.02%
PFC103117025	1203907530	99.93%	102.13%	91.67%	49.41%	105.05%	109.71%	87.96%	70.18%	104.94%	119.02%	93.86%	92.73%	117.37%	76.23%	55.93%	53.05%	24.19%	91.45%	98.16%
PFC103117026	WPF171018-09CCV	98.66%	104.14%	100.29%	102.11%	107.34%	98.71%	96.86%	92.54%	98.33%	105.45%	98.74%	99.22%	107.80%	89.33%	100.55%	86.53%	96.79%	94.30%	95.31%
PFC103117027	PFCIBLK03	133.47%	140.27%	121.27%	142.69%	153.10%	142.01%	133.51%	122.11%	134.15%	117.17%	130.72%	146.15%	151.91%	136.67%	132.31%	142.98%	140.56%	146.68%	137.81%
PFC103117028	436205003	6.05%	0.04%	0.11%	0.10%	1.20%	1.68%	0.18%	2.32%	0.09%	4.79%	0.16%	1.02%	56.80%	0.11%	0.11%	#VALUE!	0.40%	0.32%	0.37%
PFC103117029	1203907525	6.14%	0.10%	0.12%	0.05%	1.12%	0.83%	0.15%	2.61%	0.10%	3.09%	0.16%	3.87%	52.25%	0.11%	0.11%	#VALUE!	0.40%	0.11%	0.08%
PFC103117030	1203907528	5.93%	0.08%	0.11%	0.05%	0.63%	0.76%	0.15%	6.57%	0.04%	2.49%	0.16%	4.08%	57.89%	0.11%	#VALUE!	#VALUE!	0.23%	#VALUE!	0.04%
PFC103117031	1203907528	104.62%	101.45%	102.12%	30.37%	111.31%	82.50%	89.33%	52.18%	104.04%	112.79%	100.92%	87.00%	112.34%	81.82%	48.51%	54.93%	21.03%	99.41%	107.48%
PFC103117032	BLANK	97.05%	93.89%	88.65%	99.55%	94.28%	115.80%	100.54%	94.32%	94.22%	107.34%	93.70%	104.17%	90.61%	104.35%	105.88%	102.35%	91.14%	94.55%	98.16%
PFC103117033	BLANK	99.67%	100.21%	90.82%	98.33%	120.95%	106.56%	92.69%	92.84%	100.00%	124.63%	99.03%	99.27%	108.93%	105.86%	94.24%	120.25%	92.43%	92.53%	105.86%
PFC103117034	436205001	103.35%	106.14%	96.86%	65.29%	113.89%	115.78%	114.44%	72.40%	106.16%	141.17%	100.72%	111.68%	110.27%	95.37%	57.12%	52.97%	39.79%	109.19%	106.56%
PFC103117035	1203907526	102.54%	108.66%	102.00%	64.47%	110.18%	118.66%	114.11%	79.10%	114.44%	121.07%	98.67%	109.89%	116.58%	94.19%	58.35%	71.20%	38.14%	106.93%	108.40%
PFC103117036	1203907529	100.54%	110.84%	101.27%	61.20%	113.57%	122.47%	115.38%	84.84%	102.63%	127.91%	100.29%	114.10%	100.88%	86.19%	59.54%	61.80%	43.93%	96.07%	100.32%
PFC103117037	436205002	105.49%	103.37%	102.53%	49.94%	112.41%	90.31%	102.68%	71.91%	100.39%	112.76%	98.57%	91.73%	120.12%	90.60%	53.72%	48.35%	31.71%	95.53%	103.01%
PFC103117038	1203907527	102.48%	107.51%	107.88%	50.18%	92.37%	102.05%	94.88%	57.69%	100.77%	129.80%	103.61%	98.57%	97.59%	86.27%	55.93%	77.17%	31.92%	96.95%	105.25%
PFC103117039	1203907530	99.80%	102.39%	87.71%	47.66%	121.57%	118.97%	89.72%	69.54%	101.60%	99.84%	92.34%	103.38%	117.01%	78.03%	51.59%	47.00%	27.38%	94.50%	101.24%
PFC103117040	WPF171018-09CCV	94.58%	96.92%	97.84%	95.82%	110.92%	91.66%	95.21%	89.86%	94.87%	99.31%	86.74%	106.45%	88.44%	96.35%	88.50%	87.02%	94.14%	95.77%	95.85%
PFC103117041	PFCIBLK04	96.99%	99.57%	92.33%	100.15%	113.64%	98.31%	95.87%	87.21%	91.14%	90.46%	90.15%	99.23%	103.14%	96.31%	93.67%	89.31%	95.57%	93.76%	105.94%
PFC103117042	436205003	101.61%	100.46%	88.65%	27.59%	104.52%	114.58%	90.16%	70.67%	97.75%	111.28%	100.16%	105.27%	87.83%	76.35%	44.17%	52.48%	21.75%	90.42%	99.40%
PFC103117043	1203907525	98.46%	97.22%	88.45%	27.86%	102.21%	94.06%	88.40%	53.38%	99.61%	93.29%	96.42%	105.77%	77.86%	81.17%	43.02%	47.29%	11.20%	94.64%	96.85%
PFC103117044	1203907528	95.98%	95.77%	87.59%	29.07%	109.61%	94.60%	84.55%	57.51%	103.79%	66.99%	93.40%	99.66%	106.79%	77.01%	45.97%	39.43%	20.00%	84.18%	93.00%
PFC103117045	1203906756	105.56%	103.20%	108.37%	104.54%	114.72%	104.71%	95.60%	113.24%	104.56%	95.06%	88.93%	116.39%	75.18%	100.39%	101.41%	100.06%	94.54%	101.03%	103.24%
PFC103117046	1203906757	92.30%	96.41%	96.94%	95.48%	124.33%	103.31%	93.01%	93.97%	91.72%	74.43%	86.94%	104.29%	103.38%	101.00%	92.48%	92.70%	93.86%	96.95%	93.31%
PFC103117047	435984002	104.22%	101.57%	99.96%	106.07%	120.40%	104.81%	99.50%	103.45%	105.13%	89.10%	100.59%	100.72%	105.91%	97.29%	99.16%	99.65%	101.96%	106.44%	108.33%
PFC103117048	435984003	100.87%	97.43%	99.63%	100.23%	92.01%	95.97%	91.26%	103.00%	92.62%	86.52%	94.23%	102.08%	102.40%	95.90%	87.73%	91.76%	95.36%	95.72%	98.09%
PFC103117049	435706001	89.76%	95.00%	77.18%	80.77%	99.94%	110.04%	80.10%	69.94%	88.06%	91.21%	77.92%	77.69%	99.93%	81.37%	75.35%	70.71%	73.44%	102.70%	102.55%
PFC103117050	435706002	91.03%	90.64%	80.16%	81.28%	93.79%	101.26%	84.94%	84.21%	92.23%	93.04%	78.58%	89.32%	113.41%	76.93%	74.24%	69.20%	86.38%	107.17%	94.78%
PFC103117051	435706003	93.44%	95.51%	79.63%	87.69%	107.49%	92.98%	83.35%	80.82%	90.82%	77.01%	85.88%	96.86%	85.03%	86.19%	94.28%	78.85%	84.95%	76.61%	82.46%
PFC103117052	WPF171018-09CCV	93.98%	91.15%	91.80%	95.46%	119.83%	86.67%	83.45%	90.98%	93.00%	78.71%	94.00%	108.62%	88.29%	89.45%	78.92%	93.80%	88.96%	85.16%	90.70%
PFC103117053	PFCIBLK07	93.37%	100.89%	96.65%	95.66%	101.66%	102.90%	89.72%	98.86%	95.12%	81.80%	90.18%	100.28%	70.00%	94.96%	91.37%	85.22%	90.46%	90.42%	89.85%

Extraction ISTD Recoveries against ICAL

PFC103117054	435706004	86.55%	87.99%	80.78%	79.58%	135.25%	111.24%	81.70%	65.03%	89.47%	86.33%	77.99%	74.02%	79.60%	64.52%	80.10%	79.62%	81.54%	90.86%	97.86%
PFC103117055	1203906758	83.73%	83.76%	85.76%	80.64%	114.00%	97.07%	88.45%	75.93%	85.11%	92.54%	84.62%	79.36%	74.72%	65.29%	79.65%	95.73%	75.49%	101.72%	96.78%
PFC103117056	1203906759	87.01%	85.51%	81.39%	76.87%	94.83%	106.20%	84.28%	71.06%	88.45%	81.13%	73.75%	87.36%	84.14%	67.70%	74.49%	87.39%	74.47%	92.78%	86.69%
PFC103117057	436205001	101.14%	98.54%	89.55%	56.65%	97.71%	88.52%	103.18%	70.67%	116.30%	118.20%	95.98%	94.39%	103.26%	85.37%	60.64%	63.84%	35.82%	99.36%	102.09%
PFC103117058	436205002	102.34%	103.92%	98.65%	41.97%	122.67%	89.24%	92.14%	74.07%	105.46%	85.80%	89.99%	102.16%	106.49%	81.33%	55.19%	59.31%	28.40%	79.85%	94.93%
PFC103117059	436205003	101.20%	102.22%	99.31%	23.08%	91.99%	99.61%	86.70%	65.12%	105.84%	79.02%	91.11%	98.58%	114.87%	75.95%	47.78%	53.71%	17.96%	84.28%	100.09%
PFC103117060	1203907529	103.68%	103.33%	103.71%	51.58%	114.76%	117.89%	106.53%	80.03%	127.15%	137.92%	100.33%	112.53%	96.52%	88.47%	60.85%	61.76%	38.76%	98.18%	100.78%
PFC103117061	1203907530	103.88%	104.82%	92.29%	40.42%	119.28%	111.87%	91.70%	81.82%	97.95%	86.20%	95.16%	101.30%	104.42%	80.60%	57.94%	56.86%	35.12%	90.96%	103.40%
PFC103117062	1203907528	101.20%	108.88%	95.18%	21.27%	110.18%	98.31%	86.48%	73.84%	110.14%	95.28%	95.79%	96.82%	109.69%	81.21%	46.01%	26.01%	21.62%	92.58%	102.47%
PFC103117063	WPF171018-09CCV	99.53%	104.78%	101.80%	97.72%	111.62%	114.90%	97.96%	103.77%	95.89%	82.99%	93.93%	96.07%	76.89%	96.96%	93.38%	89.59%	95.84%	93.46%	94.01%
PFC103117064	PFCIBLK08	104.42%	99.44%	105.18%	101.03%	104.48%	98.81%	90.43%	98.51%	96.53%	119.87%	93.63%	102.72%	88.11%	102.10%	94.77%	77.62%	90.87%	91.40%	92.00%
PFC103117065	1203907530	104.02%	102.68%	94.61%	45.35%	109.86%	107.05%	91.31%	64.88%	101.54%	99.84%	99.43%	97.31%	121.43%	79.99%	54.45%	64.87%	32.22%	90.96%	98.16%
PFC103117066	1203907528	100.07%	104.14%	99.76%	21.56%	122.71%	106.24%	88.40%	67.66%	102.25%	96.41%	98.54%	98.92%	106.98%	80.43%	48.23%	56.65%	25.80%	87.86%	98.16%
PFC103117067	436205002	99.20%	99.78%	88.00%	66.35%	103.25%	99.18%	89.94%	77.10%	93.20%	93.73%	96.18%	110.60%	111.40%	87.41%	72.77%	79.46%	61.91%	91.74%	95.16%
PFC103117068	1203907527	102.54%	101.06%	105.80%	66.46%	99.98%	97.11%	98.29%	68.66%	94.09%	91.75%	96.58%	103.03%	115.45%	90.47%	78.83%	79.25%	58.63%	91.40%	98.63%
PFC103117069	1203907530	97.86%	99.61%	102.61%	66.71%	130.67%	90.86%	97.46%	91.34%	100.51%	96.63%	89.79%	102.04%	97.22%	86.27%	77.44%	81.62%	51.86%	86.19%	89.08%
PFC103117070	1203907528	96.45%	100.55%	102.45%	52.63%	103.35%	102.48%	88.12%	78.11%	95.89%	97.89%	100.66%	116.09%	93.81%	88.23%	70.89%	58.90%	42.22%	92.68%	95.39%
PFC103117071	1203907525	100.67%	95.34%	93.71%	55.37%	107.95%	92.27%	95.43%	74.86%	100.58%	96.88%	92.44%	98.81%	105.21%	85.50%	69.90%	59.47%	46.12%	84.52%	92.47%
PFC103117072	436205003	95.31%	94.06%	101.35%	54.60%	116.88%	108.54%	84.99%	78.56%	91.72%	95.84%	91.94%	88.65%	80.21%	88.60%	72.28%	67.73%	47.08%	86.09%	89.23%
PFC103117073	WPF171018-09CCV	96.45%	92.09%	101.02%	89.81%	100.36%	122.06%	92.63%	86.87%	88.38%	79.75%	84.15%	83.50%	113.59%	86.23%	93.05%	107.42%	89.98%	82.01%	94.93%
PFC103117074	PFCIBLK09	109.77%	112.72%	115.06%	110.77%	128.42%	131.33%	109.99%	103.02%	117.27%	122.80%	111.46%	112.57%	108.84%	120.02%	111.29%	98.38%	103.33%	102.16%	119.49%
PFC103117075	436205001	108.10%	99.48%	100.29%	24.83%	134.44%	128.99%	121.09%	74.23%	114.96%	177.39%	99.10%	85.06%	102.40%	74.35%	56.26%	52.85%	26.46%	120.59%	106.25%
PFC103117076	1203907526	109.57%	100.25%	86.04%	86.91%	103.33%	118.03%	125.92%	39.05%	145.57%	155.81%	96.65%	113.49%	123.90%	65.50%	58.96%	45.33%	26.42%	97.00%	103.63%
PFC103117077	1203907529	107.50%	106.79%	90.94%	56.99%	109.42%	112.48%	113.67%	39.81%	137.80%	144.72%	97.14%	89.05%	98.78%	82.03%	37.30%	32.51%	26.31%	108.21%	101.09%
PFC103117078	436205002	104.42%	101.70%	82.33%	29.44%	102.80%	93.32%	88.40%	45.45%	96.34%	105.20%	94.23%	93.30%	118.99%	59.50%	32.96%	50.93%	12.10%	85.45%	99.47%
PFC103117079	1203907527	105.09%	103.88%	85.55%	24.89%	109.59%	89.20%	93.23%	50.74%	100.39%	104.50%	85.35%	90.67%	138.47%	61.42%	33.58%	39.69%	18.06%	85.36%	100.24%
PFC103117080	1203907530	107.03%	114.47%	86.73%	24.72%	105.05%	109.23%	88.89%	52.96%	107.25%	106.80%	109.28%	99.51%	103.04%	57.17%	38.46%	41.28%	20.96%	100.54%	100.78%
PFC103117081	436205003	106.22%	101.02%	87.59%	7.85%	93.09%	107.07%	78.46%	46.91%	101.03%	105.39%	93.37%	83.99%	133.62%	56.97%	28.05%	30.05%	14.77%	86.78%	98.09%
PFC103117082	1203907525	104.89%	100.89%	76.16%	6.92%	107.34%	95.80%	79.33%	50.48%	91.98%	113.76%	87.14%	79.95%	93.62%	54.19%	30.09%	30.35%	13.18%	84.62%	98.09%
PFC103117083	1203907528	102.68%	96.49%	76.57%	7.71%	98.24%	83.70%	76.15%	56.99%	96.66%	98.71%	88.06%	84.19%	94.45%	47.67%	29.88%	39.34%	14.83%	82.65%	90.39%
PFC103117084	Blank	95.85%	94.53%	105.27%	86.25%	89.74%	89.95%	100.65%	93.22%	94.93%	103.62%	98.27%	100.57%	90.51%	97.41%	94.53%	64.99%	101.42%	92.04%	98.24%
PFC103117085	Blank	97.79%	93.12%	97.39%	96.83%	107.34%	101.21%	90.60%	85.70%	101.03%	96.82%	94.69%	95.16%	118.14%	92.88%	94.81%	103.16%	87.60%	91.30%	93.85%
PFC103117086	WPF171018-09CCV	95.45%	95.59%	99.10%	97.30%	102.40%	112.91%	92.41%	85.31%	97.63%	95.69%	90.12%	93.95%	89.17%	95.86%	87.60%	84.44%	86.24%	91.89%	96.47%
PFC103117087	PFCIBLK10	93.11%	91.66%	99.02%	95.22%	93.73%	99.14%	92.47%	89.47%	94.93%	87.87%	81.80%	100.27%	111.00%	97.98%	84.37%	100.30%	105.30%	86.54%	101.70%
PFC103117088	1203908641	92.97%	103.58%	114.53%	81.72%	96.55%	94.34%	86.92%	105.26%	108.54%	106.96%	103.61%	104.99%	114.42%	105.21%	108.17%	105.58%	95.50%	97.25%	100.24%
PFC103117089	1203908642	102.41%	110.03%	119.63%	90.67%	104.71%	99.53%	91.92%	100.74%	112.26%	122.80%	108.25%	117.57%	107.65%	111.49%	105.67%	109.46%	113.26%	95.82%	97.09%
PFC103117090	436081001	104.02%	107.90%	107.47%	104.38%	107.34%	94.34%	99.44%	109.84%	103.02%	102.58%	94.82%	113.91%	107.31%	95.04%	109.85%	113.59%	110.20%	97.59%	103.94%
PFC103117091	1203908643	107.36%	106.91%	100.86%	96.21%	123.22%	118.83%	105.38%	98.50%	108.86%	103.06%	103.97%	93.15%	110.30%	110.76%	110.51%	103.53%	107.00%	101.52%	104.32%
PFC103117092	1203908645	107.70%	110.54%	115.47%	107.35%	118.45%	105.89%	107.13%	91.30%	108.73%	106.30%	102.18%	110.90%	121.37%	109.33%	106.37%	101.41%	113.60%	98.08%	109.56%
PFC103117093	436081002	109.30%	107.38%	123.35%	105.43%	126.74%	122.49%	106.42%	121.44%	102.76%	103.56%	102.28%	118.75%	123.90%	105.12%	115.46%	115.35%	118.30%	95.63%	105.25%
PFC103117094	436081003	110.37%	109.39%	114.20%	111.10%	115.69%	108.33%	116.47%	108.64%	102.95%	99.02%	104.11%	101.67%	88.32%	96.51%	108.58%	111.09%	92.23%	103.14%	109.02%
PFC103117095	436488001	92.24%	105.72%	100.16%	69.53%	75.55%	85.07%	72.91%	71.03%	107.83%	156.69%	96.95%	110.71%	129.48%	91.29%	86.78%	96.13%	81.27%	79.61%	68.54%
PFC103117096	1203908644	88.22%	104.09%	101.02%	79.63%	95.87%	72.13%	77.91%	79.52%	105.91%	143.69%	93.00%	96.14%	113.56%	99.90%	94.20%	103.00%	86.24%	83.39%	77.76%
PFC103117097	1203908646	89.22%	101.45%	106.86%	81.55%	99.03%	91.19%	75.27%	79.13%	105.58%	165.04%	99.03%	109.37%	115.21%	100.72%	91.99%	102.35%	90.32%	81.62%	80.30%
PFC103117098	WPF171018-09CCV	102.61%	100.04%	101.14%	95.28%	111.03%	98.73%	92.79%	86.10%	101.09%	97.26%	91.38%	92.41%	100.82%	99.82%	95.26%	84.98%	100.13%	100.54%	99.32%
PFC103117099	PFCIBLK11	99.73%	102.77%	104.08%	96.35%	107.34%	97.29%	96.97%	98.86%	95.89%	86.36%	100.16%	95.13%	122.25%	91.82%	98.75%	91.43%	94.75%	98.23%	92.70%
PFC103117100	436488002	83.33%	102.22%	100.33%	82.23%	106.77%	86.29%	86.26%	84.13%	106.61%	139.43%	96.18%	102.61%	125.60%	104.80%	93.99%	112.61%	88.35%	78.77%	90.16%
PFC103117101	436488003	96.32%	108.84%	95.96%	89.23%	109.67%	93.49%	93.62%	103.40%	115.60%	141.64%	101.49%	105.86%	129.26%	100.92%	97.03%	104.96%	94.27%	88.21%	97.86%
PFC103117102	436488004	88.55%	98.84%	102.33%	63.74%	74.73%	89.16%	74.06%	78.20%	101.60%	117.76%	90.65%	98.48%	107.13%	95.49%	89.86%	78.11%	95.23%	75.63%	52.48%
PFC103117103	436488005	108.43%	107.30%	101.35%	86.08%	92.01%	95.46%	86.81%	83.07%	111.42%	115.02%	100.66%	107.81%	125.36%	110.63%	105.71%	123.68%	96.45%	84.72%	95.47%
PFC103117104	436488006	94.38%	107.08%	96.29%	75.72%	104.46%	97.86%	88.29%	76.62%	113.29%	154.65%	97.54%	109.68%	142.28%	87.86%	85.18%	98.87%	89.71%	80.84%	89.54%
PFC103117105	436488007	96.32%	105.59%	95.14%	93.58%	105.09%	112.79%	97.63%	91.56%	108.15%	115.53%	102.45%	106.12%	123.10%	101.57%	105.96%	126.99%	97.34%	103.59%	97.32%
PFC103117106	436518001	92.64%	107.17%	110.00%	82.69%	90.91%	101.42%	94.17%	83.14%	108.99%	158.49%	98.11%	91.40%	117.56%	98.31%	90.06%	74.23%	96.45%	87.27%	86.00%
PFC103117107	436518002	97.19%	80.56%	88.57%	87.22%	99.39%	90.37%	86.70%	94.98%	116.17%	134.65%	79.55%	90.70%	710.64%	83.50%	88.42%	141.01%	89.24%	83.00%	55.26%
PFC103117108	436518003	96.32%	102.09%	108.16%	80.46%	103.35%	77.50%	90.32%	93.61%	110.01%	136.09%	101.42%	106.19%	110.73%	98.47%	88.05%	80.03%	82.16%	81.72%	89.23%
PFC103117109	436518004	104.55%	107.08%	96.53%	87.66%	85.75%	85.15%	91.31%	78.20%	109.31%	115.84%	98.93%	115.94%	114.51%	106.43%	98.87%	95.73%	88.76%	77.49%	95.24%
PFC103117110	WPF171018-09CCV	96.45%	89.23%	90.29%	88.28%	118.77%	97.86%	92.63%	80.61%	98.27%	97.86%	90.98%	97.19%	119.69%	93.94%	83.42%	68.83%	89.17%	76.66%	92.31%
PFC103117111	PFCIBLK12	96.52%	95.25%	98.57%	92.68%	111.33%	105.79%	92.58%	78.56%	95.57%	108.76%	92.47%	91.24%	101.73%	93.37%	108.83%	91.39%	91.35%	83.83%	100.40%
PFC103117112	436518005	93.71%	101.75%	104.29%	84.02%	110.18%	87.55%	92.74%	98.19%	104.81%	118.08%	106.69%	97.62%	104.57%	100.15%	107.39%	107.87%	95.84%	93.37%	96.32%
PFC103117113	436518006	73.76%	109.31%	95.35%	91.82%	134.95%	98.25%	97.74%	80.09%	104.36%	145.89%	100.63%	96.53%	119.60%	103.57%	101.62%	123.60%	105.98%	90.07%	92.39%
PFC103117114	436081001	101.47%	109.60%	82.61%	95.73%	120.95%	108.11%	104.17%	83.04%	107.96%	128.82%	88.86%	100.50%	162.13%	101.08%	91.04%	107.46%	98.63%	89.43%	96.32%
PFC103117115	1203908643	98.26%	103.97%	92.41%	92.57%	118.68%	97.90%	98.78%	85.34%	108.22%	122.74%	88.93%	96.12%	126.85%	97.86%	85.72%	95.44%	90.60%	98.18%	89.77%
PFC103117116	1203908645	100.54%	102.51%	92.24%	87.24%	100.51%	114.35%	89.33%	90.22%	108.34%	122.46%	90.42%	83.89%	136.24%	99.13%	91.62%	96.34%	84.81%	85.21%	87.85%
PFC103117117	436081002	100.74%	96.02%	83.27%	100.41%	100.60%	105.40%	97.25%	107.13%	95.96%	91.62%	83.89%	78.68%	176.79%	86.56%	84.45%	108.11%	103.12%	96.41%	98.16%
PFC103117118	436081003	101.27%	94.95%	87.84%	100.30%	106.81%	95.34%	88.56%	101.87%	104.17%	108.03%	83.85%	70.96%	171.85%	91.29%	95.06%	117.02%	93.93%	83.93%	89.08%
PFC103117119	Blank	95.25%	94.74%	102.78%	93.96%	101.08%	98.96%	87.41%	97.36%	93.84%	82.99%	89.42%	92.07%	71.77%	82.35%	86.09%	80.19%	97.68%	92.04%	88.62%
PFC103117120	Blank	92.50%	92.90%	90.82%	92.33%	110.18%	104.59%	97.63%	88.62%	95.83%	87.78%	95.19%	93.45%	102.37%	88.60%	100.35%	100.34%	90.73%	89.04%	94.39%
PFC103117121	WPF171018-09CCV	96.05%	92.48%	94.78%	88.09%	124.09%	99.63%	87.58%	84.58%	91.66%	98.68%	87.57%	101.02%	111.61%	96.23%	93.13%	87.84%	93.73%	85.45%	94.01%
PFC103117122	PFCIBLK13	74.50%	72.23%	74.12%	62.22%	80.03%	78.32%	66.59%	60.92%	70.73%	68.72%	68.61%	76.63%	73.78%	69.91%	60.72%	57.84%	61.60%	60.98%	62.54%
PFC103117123	436081001	104.89%	98.58%	102.24%	96.81%	104.01%	101.25%	93.34%	84.21%	99.49%	104.13%	98.70%	100.92%	120.21%	97.25%	99.77%	99.61%	93.05%	95.14%	95.93%
PFC103117124	1203908643	97.72%	86.07%	94.37%	80.58%	89.68%	107.46%	85.93%	84.34%	93.32%	78.71%	89.02%	94.28%	96.15%	91.94%	85.51%	71.16%	89.03%	86.54%	84.61%
PFC103117125	1203908645	113.65%	116.27%	115.63%	104.05%	115.84%	113.38%	108.89%	105.24%	105.91%	94.27%	106.19%	122.22%	123.50%	108.14%	111.53%	125.44%	103.80%	99.95%	105.86%

Extraction ISTD Recoveries against ICAL

PFC103117126	436081002	121.49%	122.89%	123.35%	122.15%	118.15%	139.55%	123.56%	113.89%	119.83%	113.76%	115.54%	125.53%	103.90%	125.57%	113.05%	114.00%	119.25%	105.60%	119.72%
PFC103117127	436081003	104.82%	104.09%	97.63%	97.16%	108.97%	107.05%	98.18%	88.96%	107.32%	105.39%	97.64%	107.33%	93.47%	96.31%	100.10%	81.54%	97.88%	90.86%	92.16%
PFC103117128	436488002	108.10%	109.73%	121.84%	105.84%	121.46%	122.89%	103.07%	95.01%	126.44%	102.24%	104.54%	114.10%	135.06%	115.29%	105.84%	138.52%	103.73%	95.92%	113.02%
PFC103117129	436488003	117.67%	121.05%	108.90%	103.97%	139.42%	123.56%	103.34%	102.20%	106.10%	105.51%	109.64%	128.52%	115.36%	116.71%	99.44%	107.01%	114.90%	96.46%	112.48%
PFC103117130	436488004	83.27%	84.40%	82.12%	66.84%	83.95%	68.25%	66.37%	71.03%	81.84%	73.70%	80.34%	78.90%	67.68%	70.80%	75.02%	91.56%	67.22%	61.43%	64.66%
PFC103117131	436518001	82.86%	78.68%	81.02%	69.24%	89.74%	89.72%	69.66%	75.90%	77.02%	88.25%	73.58%	77.42%	79.63%	73.99%	78.92%	84.61%	74.94%	66.00%	69.61%
PFC103117132	436518002	78.11%	73.17%	73.59%	70.77%	80.60%	76.00%	68.40%	68.42%	75.74%	75.28%	72.95%	72.96%	103.62%	74.84%	72.36%	76.88%	62.78%	60.39%	64.96%
PFC103117133	WPF171018-09CCV	101.74%	105.55%	98.04%	106.04%	106.17%	110.87%	96.97%	101.51%	103.66%	98.58%	105.30%	99.94%	108.53%	98.59%	103.54%	109.25%	98.42%	95.18%	104.78%
PFC103117134	PFCIBLK14	107.30%	108.28%	120.82%	104.01%	127.21%	114.58%	104.06%	101.65%	107.51%	108.69%	103.87%	107.53%	126.95%	104.92%	108.58%	128.06%	104.55%	102.95%	105.09%
PFC103117135	436518003	90.56%	84.36%	80.41%	72.98%	90.86%	79.19%	67.47%	73.67%	85.88%	96.06%	78.09%	75.95%	74.42%	77.82%	70.80%	68.38%	75.89%	72.63%	71.97%
PFC103117136	436518003	82.80%	91.54%	87.59%	66.79%	85.24%	66.58%	69.06%	72.55%	100.06%	131.84%	84.48%	96.67%	99.29%	93.78%	77.40%	102.39%	66.40%	74.35%	71.90%
PFC103117137	Blank	95.92%	99.78%	90.49%	91.82%	116.39%	105.32%	89.83%	92.42%	90.50%	86.43%	89.89%	84.50%	94.66%	88.92%	96.74%	91.47%	92.98%	80.74%	87.31%
PFC103117138	436205001	105.76%	108.92%	115.18%	83.85%	122.65%	132.72%	101.20%	97.67%	117.65%	115.84%	99.60%	95.40%	108.14%	101.08%	86.13%	78.52%	71.81%	97.99%	97.16%
PFC103117139	1203907526	83.33%	82.44%	77.59%	62.88%	85.22%	67.80%	67.25%	74.16%	88.45%	89.39%	84.29%	88.18%	67.22%	79.58%	64.41%	56.81%	60.55%	77.25%	73.49%
PFC103117140	1203907529	122.29%	120.54%	126.37%	97.36%	137.47%	132.47%	119.28%	84.58%	140.63%	132.41%	117.73%	132.27%	139.17%	109.33%	96.29%	70.38%	75.28%	122.41%	119.80%
PFC103117141	436205001	117.07%	106.49%	104.94%	26.02%	135.71%	151.32%	133.84%	66.38%	134.34%	210.39%	110.83%	101.82%	117.16%	90.19%	53.39%	59.55%	24.12%	116.61%	114.49%
PFC103117142	1203907526	109.17%	101.70%	101.71%	30.33%	123.35%	129.97%	121.09%	67.73%	123.88%	204.91%	107.12%	88.91%	107.28%	73.29%	52.32%	54.73%	24.68%	115.23%	106.79%
PFC103117143	1203907529	122.22%	114.69%	109.55%	29.51%	144.34%	138.39%	134.39%	76.46%	145.12%	278.83%	114.15%	127.89%	112.62%	92.96%	54.99%	49.38%	23.84%	122.31%	115.49%
PFC103117144	WPF171018-09CCV	103.68%	99.40%	106.04%	90.23%	100.53%	103.76%	102.52%	92.84%	116.62%	100.54%	98.30%	95.40%	113.14%	97.74%	99.32%	105.62%	83.11%	92.19%	93.31%
PFC103117145	PFCIBLK15	101.61%	102.56%	106.86%	91.11%	117.94%	100.81%	86.75%	76.31%	105.01%	99.34%	98.97%	97.43%	111.76%	85.66%	87.32%	126.09%	98.97%	98.08%	92.00%
PFC103117146	1203910649	81.86%	93.67%	92.37%	72.63%	114.15%	84.58%	80.21%	78.87%	90.05%	92.82%	89.99%	84.04%	94.36%	85.33%	85.43%	95.85%	91.89%	67.22%	74.44%
PFC103117147	1203910650	80.52%	92.05%	95.67%	71.10%	88.00%	74.15%	73.90%	76.54%	88.51%	89.20%	88.43%	81.72%	76.34%	85.90%	91.13%	84.81%	94.27%	68.26%	73.66%
PFC103117148	436646001	81.39%	82.22%	75.76%	75.43%	73.81%	87.91%	74.88%	72.94%	91.91%	72.82%	75.63%	92.08%	85.64%	75.09%	76.29%	66.50%	69.50%	75.14%	70.89%
PFC103117149	1203910651	69.08%	72.96%	72.73%	70.55%	76.10%	76.30%	60.00%	65.63%	80.42%	64.06%	66.75%	80.14%	58.63%	78.11%	66.42%	55.67%	63.81%	59.31%	58.62%
PFC103117150	1203910652	70.75%	74.15%	78.49%	71.50%	70.15%	69.55%	66.86%	68.42%	77.92%	51.46%	64.03%	89.32%	70.21%	68.52%	63.10%	71.57%	63.27%	63.24%	62.79%
PFC103117151	1203911346	85.54%	99.27%	93.43%	77.81%	98.33%	73.92%	87.19%	78.08%	89.60%	89.07%	99.83%	90.81%	85.06%	96.43%	83.34%	91.23%	84.74%	76.02%	75.65%
PFC103117152	Filter Paper MB	75.30%	89.14%	99.80%	66.75%	76.00%	72.07%	65.65%	63.44%	78.88%	95.87%	75.17%	79.41%	103.17%	87.70%	75.43%	96.75%	77.87%	70.37%	64.73%
PFC103117153	1203911347	84.47%	91.24%	95.02%	70.24%	94.72%	69.55%	71.09%	60.60%	99.94%	105.10%	92.87%	83.76%	88.14%	84.60%	95.80%	92.46%	69.84%	74.55%	72.21%
PFC103117154	1203911348	84.14%	89.87%	94.00%	74.12%	87.00%	79.17%	75.21%	82.36%	89.92%	97.17%	91.15%	82.19%	87.13%	95.45%	84.57%	77.05%	69.43%	75.04%	73.83%
PFC103117155	435984001	88.62%	99.82%	102.73%	79.54%	88.68%	79.25%	82.08%	78.56%	94.99%	104.85%	104.20%	95.14%	110.54%	95.78%	100.71%	92.50%	87.47%	70.81%	81.84%
PFC103117156	436427004	83.87%	92.73%	95.88%	68.74%	91.46%	73.11%	82.58%	74.49%	88.58%	105.04%	95.82%	90.46%	97.89%	87.82%	87.19%	82.77%	75.28%	74.20%	71.37%
PFC103117157	WPF171018-09CCV	86.01%	86.92%	91.96%	81.37%	88.32%	78.72%	83.89%	82.33%	80.62%	94.65%	89.92%	90.11%	85.15%	87.82%	83.91%	78.52%	70.18%	71.74%	82.46%
PFC103117158	PFCIBLK16	93.17%	93.03%	94.29%	93.48%	84.08%	87.08%	87.19%	87.21%	94.74%	94.93%	91.41%	97.74%	78.38%	88.15%	94.61%	75.04%	88.28%	87.57%	84.92%
PFC103117159	Rinse	80.32%	86.03%	0.23%	49.28%	71.86%	64.83%	0.10%	1.01%	0.19%	3.98%	0.11%	0.93%	4.51%	0.12%	#VALUE!	#VALUE!	#VALUE!	58.97%	66.38%
PFC103117160	PFCIBLK17	92.50%	84.79%	84.86%	74.74%	71.02%	63.51%	71.04%	75.16%	89.99%	178.68%	86.07%	97.04%	106.70%	76.60%	82.32%	71.77%	70.72%	66.14%	76.37%
PFC103117161	WPF171018-08DISC	116.87%	117.85%	127.84%	116.71%	110.65%	83.42%	108.34%	115.23%	123.17%	163.37%	116.87%	122.74%	121.95%	103.33%	111.90%	138.52%	99.79%	85.50%	110.64%
PFC103117162	PFCIBLK18	116.06%	118.87%	116.65%	108.21%	94.17%	93.85%	112.57%	115.48%	121.89%	135.81%	107.35%	118.51%	128.77%	106.84%	101.45%	105.49%	98.97%	94.79%	111.71%
PFC103117163	1203911346	106.83%	107.98%	124.45%	101.49%	103.88%	84.52%	95.49%	103.40%	113.29%	148.50%	105.99%	110.90%	115.39%	102.76%	100.18%	110.07%	92.09%	90.02%	94.78%
PFC103117164	Filter Paper MB	105.02%	99.18%	110.12%	99.00%	111.35%	78.78%	95.93%	106.78%	103.15%	159.34%	101.19%	103.37%	122.56%	88.80%	96.33%	82.81%	82.50%	85.26%	99.24%
PFC103117165	1203911347	106.63%	95.17%	103.10%	98.09%	101.17%	86.43%	99.44%	92.08%	117.20%	136.31%	102.98%	105.71%	107.22%	94.55%	94.45%	110.85%	94.82%	81.67%	97.86%
PFC103117166	1203911348	105.49%	106.74%	109.76%	99.57%	77.89%	91.66%	98.73%	99.22%	114.51%	127.72%	102.25%	106.40%	119.75%	97.90%	99.28%	108.15%	83.59%	86.24%	101.94%
PFC103117167	435984001	105.96%	99.57%	124.12%	95.38%	99.94%	92.41%	105.05%	100.75%	122.53%	138.49%	104.27%	124.30%	114.42%	98.02%	99.85%	103.94%	88.62%	98.28%	99.32%
PFC103117168	436427004	95.92%	92.86%	99.31%	94.07%	90.72%	89.99%	95.76%	83.45%	96.53%	109.35%	89.99%	108.33%	88.41%	86.39%	81.25%	91.07%	87.74%	84.08%	91.93%
PFC103117169	WPF171018-09CCV	101.54%	102.86%	105.55%	94.18%	103.67%	85.49%	95.43%	86.08%	110.78%	124.25%	95.26%	103.34%	82.77%	97.41%	90.27%	103.08%	78.69%	81.72%	89.16%
PFC103117170	PFCIBLK19	111.85%	116.05%	120.86%	105.89%	114.61%	96.98%	113.95%	101.13%	118.36%	146.02%	120.21%	119.28%	86.89%	99.08%	107.35%	100.75%	100.67%	97.89%	117.95%
PFC103117171	1203905293	95.38%	102.98%	96.29%	79.07%	92.01%	84.78%	81.86%	90.60%	107.57%	140.25%	95.16%	96.53%	92.13%	90.88%	91.66%	97.48%	94.82%	83.49%	94.31%
PFC103117172	1203905294	96.59%	103.37%	100.90%	77.97%	88.98%	88.81%	89.44%	100.39%	114.06%	133.92%	99.63%	103.87%	104.60%	96.02%	100.51%	89.06%	75.15%	81.38%	82.53%
PFC103117173	1203905295	100.33%	100.16%	105.96%	74.59%	98.86%	84.64%	88.18%	79.70%	111.75%	155.87%	105.83%	111.54%	112.16%	87.70%	96.45%	108.31%	90.26%	83.05%	83.92%
PFC103117174	435706005	99.46%	97.82%	104.24%	76.47%	95.25%	80.41%	93.95%	89.64%	108.99%	143.65%	104.77%	113.58%	117.01%	90.56%	88.75%	114.45%	87.87%	82.11%	90.85%
PFC103117175	435983002	93.78%	101.57%	108.04%	87.16%	98.82%	75.47%	87.25%	73.23%	104.17%	141.01%	94.73%	109.11%	119.35%	97.82%	89.41%	107.99%	91.55%	82.80%	88.77%
PFC103117176	435983003	94.98%	102.26%	118.04%	79.14%	90.04%	75.63%	89.61%	92.11%	116.62%	140.54%	101.32%	107.78%	105.79%	93.25%	89.61%	101.20%	89.44%	87.22%	94.78%
PFC103117177	436081001	110.91%	97.82%	108.98%	101.05%	107.93%	84.58%	102.41%	75.19%	106.74%	119.18%	108.51%	123.95%	111.09%	98.68%	95.26%	146.12%	99.58%	92.83%	102.40%
PFC103117178	436081002	111.11%	102.94%	104.65%	96.35%	125.85%	91.25%	99.17%	102.23%	113.67%	137.17%	106.76%	101.24%	104.14%	103.04%	94.73%	91.76%	92.23%	97.35%	97.01%
PFC103117179	436081003	113.79%	108.24%	95.35%	104.94%	100.02%	97.82%	103.07%	106.03%	112.13%	118.71%	102.08%	110.02%	112.28%	102.72%	105.51%	98.22%	106.80%	103.73%	104.78%
PFC103117180	436081005	98.80%	100.63%	97.92%	84.91%	84.01%	80.45%	88.23%	100.39%	106.74%	121.01%	95.12%	95.53%	111.52%	99.04%	90.47%	101.00%	102.51%	90.42%	95.70%
PFC103117181	WPF171018-09CCV	106.63%	98.50%	107.71%	94.73%	98.82%	98.63%	95.71%	88.73%	107.38%	112.16%	96.65%	93.04%	107.77%	91.09%	99.03%	99.69%	90.46%	90.76%	94.54%
PFC103117182	PFCIBLK20	117.14%	113.06%	121.55%	108.67%	106.79%	99.95%	114.22%	101.56%	119.77%	129.54%	119.19%	123.15%	122.22%	112.84%	103.75%	106.88%	105.71%	100.34%	111.79%
PFC103117183	436081006	95.98%	102.17%	96.37%	81.73%	106.49%	88.69%	92.08%	98.54%	98.78%	145.57%	100.23%	119.52%	120.67%	87.41%	97.93%	100.14%	84.33%	91.15%	98.16%
PFC103117184	436081001	105.42%	102.64%	92.98%	101.74%	96.63%	93.69%	98.45%	86.18%	103.40%	136.22%	95.52%	109.10%	102.83%	101.86%	95.59%	109.09%	93.39%	87.32%	99.09%
PFC103117185	436081002	112.45%	108.32%	97.14%	103.13%	101.08%	102.48%	94.88%	95.11%	113.86%	120.25%	92.94%	105.54%	108.84%	97.53%	94.61%	98.06%	97.81%	95.38%	103.24%
PFC103117186	436081003	107.50%	106.10%	103.27%	94.36%	103.93%	86.27%	101.70%	104.14%	116.37%	113.10%	108.88%	117.57%	122.56%	92.02%	102.31%	130.47%	105.98%	87.76%	99.86%
PFC103117187	436081001	68.01%	81.97%	58.12%	86.49%	98.29%	87.14%	81.81%	74.48%	87.36%	125.61%	65.23%	58.00%	221.30%	71.91%	64.21%	86.57%	78.28%	74.55%	63.16%
PFC103117188	436081002	61.53%	64.71%	52.82%	78.98%	104.56%	87.87%	86.09%	76.41%	64.25%	103.09%	47.89%	43.09%	384.13%	63.17%	59.33%	99.20%	71.81%	77.89%	72.79%
PFC103117189	436081003	64.32%	67.10%	51.59%	79.23%	94.66%	69.33%	80.76%	53.12%	69.51%	99.69%	46.90%	31.64%	340.84%	60.23%	66.21%	84.49%	86.58%	76.66%	71.66%
PFC103117190	BLANK	117.80%	111.10%	104.90%	107.99%	96.33%	107.88%	97.90%	107.52%	113.80%	124.47%	114.58%	120.06%	113.01%	97.04%	112.80%	111.58%	100.81%	95.68%	111.41%
PFC103117191	BLANK	112.85%	111.48%	112.98%	99.02%	97.12%	106.69%	99.39%	118.08%	110.27%	138.55%	110.63%	109.12%	98.93%	111.49%	106.57%	125.11%	107.34%	103.93%	102.09%
PFC103117192	436518002	115.13%	114.22%	100.04%	95.33%	97.63%	112.54%	103.29%	97.41%	121.31%	133.10%	100.06%	120.85%	186.61%	105.08%	105.67%	108.85%	96.11%	96.41%	103.17%
PFC103117193	BLANK	113.52%	111.78%	118.33%	104.45%	106.79%	102.90%	106.37%	90.24%	108.28%	128.09%	104.67%	119.61%	136.67%	104.96%	100.59%	94.91%	80.73%	104.32%	114.02%
PFC103117194	WPF171018-09CCV	118.21%	112.51%	105.84%	102.71%	117.37%	103.47%	100.71%	108.32%	120.60%	142.39%	115.77%	117.28%	100.76%	114.84%	112.97%	109.79%	109.18%	107.76%	111.79%
PFC103117195	PFCIBLK21	121.95%	114.77%	121.84%	117.17%	122.12%	124.19%	115.87%	107.55%	117.20%	120.88%	117.99%	124.72%	139.26%	111.61%	117.80%	120.17%	105.16%	101.97%	121.88%
PFC103117196	436205001	101.74%	102.86%	98.61%	94.45%	95.38%	96.88%	95.43%	78.84%	109.95%	113.64%	98.27%	98.05%	108.53%	96.35%	71.91%	78.93%	59.22%	87.08%	99.55%
PFC103117197	1203907526	111.71%	99.65%	104.69%	88.92%	106.77%	94.20%	97.46%	84.16%	112.90%	137.32%	95.59%	106.21%	102.86%	97.21%	81.70%	96.63%	65.62%	99.46%	104.25%

Extraction ISTD Recoveries against ICAL

PFC103117198	1203907529	103.55%	95.04%	109.51%	92.11%	100.49%	97.51%	106.42%	79.47%	110.72%	133.29%	103.48%	114.23%	130.36%	97.00%	74.24%	78.52%	72.08%	98.33%	108.17%
PFC103117199	436205002	107.43%	106.40%	99.67%	83.00%	97.69%	113.34%	94.88%	77.90%	103.79%	128.72%	102.18%	103.64%	116.46%	99.57%	74.37%	63.56%	62.78%	102.85%	98.16%
PFC103117200	1203907527	104.55%	103.20%	101.14%	88.81%	102.40%	91.25%	106.31%	85.75%	110.33%	101.26%	106.76%	101.87%	123.71%	98.68%	80.84%	73.04%	62.61%	88.99%	108.79%
PFC103117201	1203907530	110.17%	103.71%	96.65%	89.52%	112.43%	108.74%	98.07%	90.67%	113.48%	106.46%	99.07%	107.49%	105.39%	101.29%	70.23%	78.35%	55.79%	84.91%	101.78%
PFC103117202	436205003	108.90%	110.63%	112.04%	82.32%	98.37%	107.32%	98.29%	90.69%	111.42%	124.25%	103.14%	111.92%	88.38%	98.64%	68.22%	63.56%	45.84%	96.36%	100.78%
PFC103117203	1203907525	106.76%	104.69%	105.63%	84.49%	115.84%	87.43%	95.65%	83.11%	104.94%	104.19%	95.95%	85.77%	111.03%	83.74%	72.81%	66.54%	46.46%	85.11%	99.47%
PFC103117204	1203907528	105.76%	109.69%	105.47%	80.05%	106.17%	78.32%	97.41%	79.38%	100.83%	116.69%	102.08%	108.80%	110.82%	94.47%	75.31%	71.81%	48.70%	92.97%	96.78%
PFC103117205	WPF171018-09CCV	99.67%	97.77%	104.73%	97.18%	95.19%	83.62%	97.14%	96.30%	97.50%	115.84%	94.03%	113.71%	120.12%	85.29%	88.50%	94.01%	83.18%	98.53%	89.46%
PFC103117206	PFCIBLK22	114.46%	108.62%	100.94%	92.39%	134.97%	128.34%	110.10%	95.85%	116.05%	137.26%	116.17%	107.17%	117.07%	103.57%	96.41%	105.49%	89.98%	104.86%	103.09%

Injection ISTD Recoveries against Calibration Midpoint

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-05	1668000	1105000	1680000	1289000

Red Highlighting if >	150%	Yellow Highlighting if <	50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117001	PFCIBLK01	99.52%	103.62%	101.61%	91.62%
PFC103117002	PFCIBLK01	99.04%	111.86%	107.44%	96.28%
PFC103117003	WPF171018-01	103.66%	114.93%	109.52%	102.25%
PFC103117004	WPF171018-02	98.50%	105.07%	107.08%	90.30%
PFC103117005	WPF171018-03	98.08%	105.97%	103.39%	90.69%
PFC103117006	WPF171018-04	103.78%	106.24%	104.11%	95.27%
PFC103117007	WPF171018-05	100.00%	100.00%	100.00%	100.00%
PFC103117008	WPF171018-06	99.70%	100.54%	97.74%	98.14%
PFC103117009	WPF171018-07	100.12%	97.92%	99.05%	91.54%
PFC103117010	WPF171018-08ISC	105.10%	115.48%	107.86%	93.10%
PFC103117011	WPF171018-11ISC	105.28%	107.87%	104.29%	101.55%
PFC103117012	WPF171018-09ICV	90.47%	97.01%	96.43%	85.88%
PFC103117013	Technical PFOA	99.64%	106.61%	97.86%	96.28%
PFC103117014	Carry Over Std	92.81%	90.77%	96.01%	85.26%
PFC103117015	PFCIBLK02	116.61%	113.57%	113.99%	110.63%
PFC103117016	1203907522	96.04%	95.02%	97.20%	88.36%
PFC103117017	1203907523	99.64%	101.72%	97.14%	93.56%
PFC103117018	436205001	42.09%	13.33%	106.90%	44.10%
PFC103117019	1203907526	41.10%	12.32%	101.43%	45.80%
PFC103117020	1203907529	40.83%	12.71%	105.00%	45.83%
PFC103117021	1203907529	65.05%	40.57%	97.98%	86.73%
PFC103117022	436205002	27.31%	10.37%	100.00%	28.83%
PFC103117023	1203907527	26.31%	9.81%	103.75%	27.01%
PFC103117024	1203907530	24.50%	10.28%	101.96%	28.14%
PFC103117025	1203907530	64.63%	30.39%	98.04%	79.91%
PFC103117026	WPF171018-09CCV	96.46%	96.83%	99.76%	95.58%
PFC103117027	PFCIBLK03	126.26%	133.21%	136.19%	124.05%
PFC103117028	436205003	22.31%	7.90%	101.96%	24.54%
PFC103117029	1203907525	22.81%	8.56%	101.85%	27.39%
PFC103117030	1203907528	21.49%	7.90%	98.63%	26.28%
PFC103117031	1203907528	58.62%	18.92%	98.27%	73.27%
PFC103117032	BLANK	101.32%	101.00%	104.23%	100.70%
PFC103117033	BLANK	99.28%	97.65%	104.23%	96.12%
PFC103117034	436205001	69.18%	40.47%	104.58%	87.51%
PFC103117035	1203907526	71.22%	39.86%	96.79%	88.13%
PFC103117036	1203907529	73.68%	40.11%	99.40%	86.42%
PFC103117037	436205002	63.91%	28.92%	92.92%	75.79%
PFC103117038	1203907527	67.33%	29.33%	97.68%	76.98%
PFC103117039	1203907530	67.09%	29.98%	101.01%	79.91%
PFC103117040	WPF171018-09CCV	96.76%	90.24%	95.18%	87.35%
PFC103117041	PFCIBLK04	95.92%	101.00%	97.98%	95.50%
PFC103117042	436205003	58.70%	20.05%	98.04%	73.80%
PFC103117043	1203907525	54.84%	19.86%	91.61%	71.80%
PFC103117044	1203907528	58.08%	19.41%	90.24%	71.56%
PFC103117045	1203906756	92.15%	82.73%	93.10%	80.45%
PFC103117046	1203906757	99.64%	95.93%	91.96%	90.38%

PFC103117047	435984002	90.53%	97.38%	93.33%	82.39%
PFC103117048	435984003	94.06%	96.47%	93.21%	85.73%
PFC103117049	435706001	91.13%	106.43%	107.14%	94.41%
PFC103117050	435706002	91.01%	90.14%	99.17%	77.45%
PFC103117051	435706003	94.18%	98.37%	100.95%	83.94%
PFC103117052	WPF171018-09CCV	92.99%	92.49%	95.24%	84.79%
PFC103117053	PFCIBLK07	97.66%	87.38%	97.02%	85.73%
PFC103117054	435706004	89.03%	97.01%	98.93%	77.53%
PFC103117055	1203906758	85.37%	87.82%	94.52%	68.25%
PFC103117056	1203906759	79.38%	90.68%	97.38%	67.46%
PFC103117057	436205001	63.01%	38.24%	93.45%	67.30%
PFC103117058	436205002	68.23%	29.16%	91.90%	74.03%
PFC103117059	436205003	56.98%	19.54%	95.30%	68.20%
PFC103117060	1203907529	65.83%	37.57%	92.80%	71.37%
PFC103117061	1203907530	66.85%	29.93%	95.36%	76.80%
PFC103117062	1203907528	61.03%	20.69%	92.68%	68.99%
PFC103117063	WPF171018-09CCV	98.50%	100.00%	100.18%	84.95%
PFC103117064	PFCIBLK08	97.96%	107.33%	106.61%	90.54%
PFC103117065	1203907530	63.43%	28.05%	95.71%	76.52%
PFC103117066	1203907528	61.93%	18.96%	97.02%	73.79%
PFC103117067	436205002	84.23%	57.95%	93.39%	84.72%
PFC103117068	1203907527	81.83%	57.97%	99.94%	85.34%
PFC103117069	1203907530	85.13%	58.39%	93.51%	89.76%
PFC103117070	1203907528	82.91%	42.37%	94.29%	84.48%
PFC103117071	1203907525	76.14%	46.42%	97.74%	80.99%
PFC103117072	436205003	79.44%	46.47%	96.37%	83.71%
PFC103117073	WPF171018-09CCV	89.39%	95.02%	95.18%	82.31%
PFC103117074	PFCIBLK09	108.69%	107.15%	113.57%	106.13%
PFC103117075	436205001	65.11%	20.58%	92.02%	65.00%
PFC103117076	1203907526	41.20%	29.58%	124.58%	84.10%
PFC103117077	1203907529	51.01%	36.88%	147.14%	104.81%
PFC103117078	436205002	65.89%	32.53%	167.92%	105.35%
PFC103117079	1203907527	69.90%	31.64%	161.37%	98.91%
PFC103117080	1203907530	44.66%	17.25%	102.92%	59.45%
PFC103117081	436205003	59.80%	16.02%	137.62%	79.13%
PFC103117082	1203907525	66.61%	19.16%	154.52%	88.98%
PFC103117083	1203907528	101.92%	25.19%	200.89%	117.53%
PFC103117084	Blank	90.95%	94.30%	95.24%	90.30%
PFC103117085	Blank	94.66%	95.29%	95.42%	84.17%
PFC103117086	WPF171018-09CCV	95.38%	98.10%	100.12%	91.08%
PFC103117087	PFCIBLK10	89.57%	100.45%	92.62%	90.92%
PFC103117088	1203908641	94.48%	102.99%	102.56%	92.32%
PFC103117089	1203908642	95.74%	99.55%	101.90%	96.43%
PFC103117090	436081001	98.44%	101.27%	97.20%	91.54%
PFC103117091	1203908643	96.64%	91.40%	101.43%	93.25%
PFC103117092	1203908645	97.06%	97.92%	99.46%	97.44%
PFC103117093	436081002	100.90%	107.60%	102.86%	93.48%
PFC103117094	436081003	94.30%	96.47%	96.61%	88.91%
PFC103117095	436488001	90.35%	92.22%	85.95%	91.93%
PFC103117096	1203908644	94.78%	90.86%	84.17%	88.29%
PFC103117097	1203908646	91.19%	96.20%	85.06%	99.69%
PFC103117098	WPF171018-09CCV	98.62%	100.81%	103.57%	100.00%
PFC103117099	PFCIBLK11	93.05%	96.38%	98.04%	84.33%
PFC103117100	436488002	92.57%	97.83%	83.27%	99.22%
PFC103117101	436488003	87.89%	104.98%	92.56%	91.70%

PFC103117102	436488004	94.48%	96.47%	88.81%	101.24%
PFC103117103	436488005	93.94%	95.11%	98.87%	96.20%
PFC103117104	436488006	90.35%	92.76%	89.35%	90.22%
PFC103117105	436488007	90.23%	97.74%	98.69%	95.03%
PFC103117106	436518001	92.93%	89.54%	89.46%	93.72%
PFC103117107	436518002	90.05%	91.95%	95.77%	86.81%
PFC103117108	436518003	89.69%	98.91%	87.38%	91.54%
PFC103117109	436518004	92.87%	95.48%	99.64%	94.18%
PFC103117110	WPF171018-09CCV	94.36%	97.29%	103.15%	96.74%
PFC103117111	PFCIBLK12	102.16%	106.88%	98.81%	98.60%
PFC103117112	436518005	94.18%	94.30%	99.76%	91.16%
PFC103117113	436518006	94.54%	99.64%	97.02%	89.68%
PFC103117114	436081001	92.39%	104.07%	98.04%	98.68%
PFC103117115	1203908643	85.07%	98.91%	98.99%	91.31%
PFC103117116	1203908645	94.00%	100.09%	100.24%	85.03%
PFC103117117	436081002	93.23%	96.56%	101.85%	87.20%
PFC103117118	436081003	86.15%	97.65%	93.45%	85.49%
PFC103117119	Blank	88.13%	94.75%	94.82%	84.56%
PFC103117120	Blank	90.17%	91.76%	92.50%	88.60%
PFC103117121	WPF171018-09CCV	98.20%	103.53%	102.44%	93.48%
PFC103117122	PFCIBLK13	67.21%	69.20%	78.27%	65.27%
PFC103117123	436081001	84.05%	86.67%	86.25%	86.89%
PFC103117124	1203908643	76.98%	77.48%	88.75%	80.45%
PFC103117125	1203908645	89.45%	97.29%	97.20%	95.27%
PFC103117126	436081002	105.76%	112.31%	103.69%	100.70%
PFC103117127	436081003	86.15%	92.76%	93.04%	85.73%
PFC103117128	436488002	98.74%	104.07%	105.71%	99.22%
PFC103117129	436488003	98.80%	102.08%	112.86%	103.49%
PFC103117130	436488004	66.37%	68.34%	73.33%	66.02%
PFC103117131	436518001	67.39%	71.96%	75.60%	69.52%
PFC103117132	436518002	60.31%	61.15%	72.56%	62.82%
PFC103117133	WPF171018-09CCV	103.00%	103.62%	107.86%	95.35%
PFC103117134	PFCIBLK14	102.40%	106.43%	110.83%	105.97%
PFC103117135	436518003	65.65%	74.60%	77.50%	66.45%
PFC103117136	436518003	70.80%	71.44%	76.96%	75.86%
PFC103117137	Blank	83.93%	85.21%	95.06%	85.88%
PFC103117138	436205001	75.48%	65.78%	93.10%	87.74%
PFC103117139	1203907526	64.93%	53.88%	77.38%	67.39%
PFC103117140	1203907529	101.50%	77.38%	116.49%	106.52%
PFC103117141	436205001	67.03%	23.67%	104.70%	70.16%
PFC103117142	1203907526	62.95%	22.67%	102.14%	72.16%
PFC103117143	1203907529	71.22%	23.21%	111.55%	81.46%
PFC103117144	WPF171018-09CCV	98.38%	96.47%	103.51%	91.23%
PFC103117145	PFCIBLK15	95.50%	100.81%	103.69%	97.98%
PFC103117146	1203910649	78.06%	76.41%	81.31%	80.06%
PFC103117147	1203910650	74.94%	80.07%	83.39%	76.87%
PFC103117148	436646001	78.54%	79.17%	83.39%	75.84%
PFC103117149	1203910651	78.18%	75.92%	80.18%	75.67%
PFC103117150	1203910652	72.42%	76.60%	86.13%	76.45%
PFC103117151	1203911346	77.28%	81.35%	85.24%	80.29%
PFC103117152	Filter Paper MB	70.38%	76.05%	78.04%	68.99%
PFC103117153	1203911347	75.72%	78.13%	83.45%	72.23%
PFC103117154	1203911348	74.46%	75.54%	80.48%	73.93%
PFC103117155	435984001	81.00%	88.29%	90.89%	82.39%
PFC103117156	436427004	77.22%	86.84%	80.00%	78.28%

PFC103117157	WPF171018-09CCV	82.25%	81.93%	85.71%	84.95%
PFC103117158	PFCIBLK16	91.43%	91.31%	95.95%	87.28%
PFC103117159	Rinse	0.03%	0.02%	0.01%	0.02%
PFC103117160	PFCIBLK17	69.54%	62.98%	82.44%	67.43%
PFC103117161	WPF171018-08DISC	101.56%	102.44%	119.29%	101.01%
PFC103117162	PFCIBLK18	91.37%	93.03%	105.54%	96.28%
PFC103117163	1203911346	96.16%	92.85%	101.49%	90.69%
PFC103117164	Filter Paper MB	95.68%	95.84%	109.17%	91.39%
PFC103117165	1203911347	98.86%	96.74%	103.81%	88.21%
PFC103117166	1203911348	90.77%	92.58%	102.68%	90.77%
PFC103117167	435984001	95.68%	90.22%	105.89%	94.49%
PFC103117168	436427004	94.66%	96.47%	103.63%	92.24%
PFC103117169	WPF171018-09CCV	100.72%	97.19%	106.55%	89.22%
PFC103117170	PFCIBLK19	95.62%	99.46%	103.93%	89.45%
PFC103117171	1203905293	92.75%	90.14%	99.70%	83.01%
PFC103117172	1203905294	94.96%	89.19%	105.24%	87.04%
PFC103117173	1203905295	97.54%	100.63%	108.57%	92.86%
PFC103117174	435706005	94.48%	102.26%	105.00%	87.28%
PFC103117175	435983002	89.93%	95.20%	105.12%	93.33%
PFC103117176	435983003	98.68%	100.18%	108.27%	89.29%
PFC103117177	436081001	104.50%	105.43%	116.01%	91.31%
PFC103117178	436081002	97.66%	98.10%	106.01%	88.36%
PFC103117179	436081003	96.70%	97.38%	107.68%	91.23%
PFC103117180	436081005	93.71%	98.01%	105.83%	86.73%
PFC103117181	WPF171018-09CCV	107.91%	100.18%	111.90%	93.17%
PFC103117182	PFCIBLK20	98.86%	100.27%	107.26%	89.37%
PFC103117183	436081006	92.87%	103.44%	105.30%	91.08%
PFC103117184	436081001	94.48%	98.37%	108.15%	82.47%
PFC103117185	436081002	106.53%	104.80%	114.17%	93.10%
PFC103117186	436081003	94.72%	93.21%	104.40%	84.95%
PFC103117187	436081001	66.55%	83.55%	84.35%	72.34%
PFC103117188	436081002	61.33%	94.30%	79.82%	64.84%
PFC103117189	436081003	64.75%	92.49%	79.52%	62.75%
PFC103117190	BLANK	91.97%	96.38%	102.20%	81.54%
PFC103117191	BLANK	96.04%	92.40%	105.77%	87.20%
PFC103117192	436518002	88.49%	95.93%	104.35%	80.29%
PFC103117193	BLANK	96.76%	96.47%	104.70%	85.18%
PFC103117194	WPF171018-09CCV	114.93%	112.94%	127.44%	102.72%
PFC103117195	PFCIBLK21	97.18%	105.97%	110.89%	87.20%
PFC103117196	436205001	87.11%	80.57%	109.76%	89.22%
PFC103117197	1203907526	85.01%	67.38%	103.04%	79.21%
PFC103117198	1203907529	87.17%	73.91%	110.77%	89.91%
PFC103117199	436205002	81.83%	65.25%	105.42%	82.23%
PFC103117200	1203907527	83.87%	69.63%	107.62%	88.52%
PFC103117201	1203907530	83.75%	63.30%	104.88%	88.36%
PFC103117202	436205003	83.69%	56.20%	113.63%	87.74%
PFC103117203	1203907525	78.06%	55.57%	110.00%	90.46%
PFC103117204	1203907528	80.46%	55.96%	108.99%	83.09%
PFC103117205	WPF171018-09CCV	97.96%	102.26%	107.32%	90.46%
PFC103117206	PFCIBLK22	91.25%	95.38%	102.44%	90.07%

Injection ISTD Recoveries against initial Daily CCV

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-08DISC	1.69E+06	1.13E+06	2.00E+06	1.30E+06

Red Highlighting if > 150% Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117160	PFCIBLK17	68.48%	93.90%	71.31%	98.69%
PFC103117161	WPF171018-08DISC	100.00%	100.00%	100.00%	100.00%
PFC103117162	PFCIBLK18	89.96%	90.81%	88.47%	95.31%
PFC103117163	1203911346	94.69%	90.64%	85.08%	89.78%
PFC103117164	Filter Paper MB	94.21%	93.55%	91.52%	90.48%
PFC103117165	1203911347	97.34%	94.43%	87.03%	87.33%
PFC103117166	1203911348	89.37%	90.37%	86.08%	89.86%
PFC103117167	435984001	94.21%	88.07%	88.77%	93.55%
PFC103117168	436427004	93.21%	94.17%	86.88%	91.32%
PFC103117169	WPF171018-09CCV	99.17%	94.88%	89.32%	88.33%
PFC103117170	PFCIBLK19	94.16%	97.08%	87.13%	88.56%
PFC103117171	1203905293	91.32%	87.99%	83.58%	82.18%
PFC103117172	1203905294	93.51%	87.06%	88.22%	86.18%
PFC103117173	1203905295	96.04%	98.23%	91.02%	91.94%
PFC103117174	435706005	93.03%	99.82%	88.02%	86.41%
PFC103117175	435983002	88.55%	92.93%	88.12%	92.40%
PFC103117176	435983003	97.17%	97.79%	90.77%	88.40%
PFC103117177	436081001	102.89%	102.92%	97.26%	90.40%
PFC103117178	436081002	96.16%	95.76%	88.87%	87.48%
PFC103117179	436081003	95.22%	95.05%	90.27%	90.32%
PFC103117180	436081005	92.27%	95.67%	88.72%	85.87%
PFC103117181	WPF171018-09CCV	106.26%	97.79%	93.81%	92.24%
PFC103117182	PFCIBLK20	97.34%	97.88%	89.92%	88.48%
PFC103117183	436081006	91.44%	100.97%	88.27%	90.17%
PFC103117184	436081001	93.03%	96.02%	90.67%	81.64%
PFC103117185	436081002	104.90%	102.30%	95.71%	92.17%
PFC103117186	436081003	93.27%	90.99%	87.52%	84.10%
PFC103117187	436081001	65.53%	81.55%	70.71%	71.61%
PFC103117188	436081002	60.39%	92.05%	66.92%	64.19%
PFC103117189	436081003	63.75%	90.28%	66.67%	62.12%
PFC103117190	BLANK	90.55%	94.08%	85.68%	80.72%
PFC103117191	BLANK	94.57%	90.19%	88.67%	86.33%
PFC103117192	436518002	87.13%	93.64%	87.48%	79.49%
PFC103117193	BLANK	95.28%	94.17%	87.77%	84.33%
PFC103117194	WPF171018-09CCV	113.16%	110.25%	106.84%	101.69%
PFC103117195	PFCIBLK21	95.69%	103.45%	92.96%	86.33%
PFC103117196	436205001	85.77%	78.65%	92.02%	88.33%
PFC103117197	1203907526	83.71%	65.78%	86.38%	78.42%
PFC103117198	1203907529	85.83%	72.15%	92.86%	89.02%
PFC103117199	436205002	80.58%	63.69%	88.37%	81.41%
PFC103117200	1203907527	82.59%	67.97%	90.22%	87.63%
PFC103117201	1203907530	82.47%	61.79%	87.92%	87.48%
PFC103117202	436205003	82.41%	54.86%	95.26%	86.87%

Injection ISTD Recoveries against initial Daily CCV

PFC103117203	1203907525	76.86%	54.25%	92.22%	89.55%
PFC103117204	1203907528	79.22%	54.63%	91.37%	82.26%
PFC103117205	WPF171018-09CCV	96.46%	99.82%	89.97%	89.55%
PFC103117206	PFCIBLK22	89.85%	93.11%	85.88%	89.17%

PFC Initial Calibration

Lab Name: GEL Laboratories LLC **GEL Job No:** 436488

Lab Code: GEL **Run Date:** 31-OCT-17

LCMSMS Instrument ID: LCMSMS6 **Method:** EPA 537 Modified **Column:** Gemini 3u C-18

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	7	Ave RF	RSD	Q
Data File:	PFC103117003.w	PFC103117004.w	PFC103117005.w	PFC103117006.w	PFC103117007.w	PFC103117008.w	PFC103117009.w			
Parmname										
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propano	.5849668	.6198483	.7141331	.6031028	.6394398	.6007434	.5904075	.62180597	7.1794	
Fluorotelomer sulfonate 4:2 (4:2 FTS)	1.390177	1.458897	1.423942	1.374597	1.751106	1.304821	1.771538	1.4964397	12.503	
Fluorotelomer sulfonate 6:2 (6:2 FTS)	1.378648	1.026985	1.161315	1.438318	1.538647	1.357960	1.327679	1.3185074	13.050	
Fluorotelomer sulfonate 8:2 (8:2 FTS)	1.465309	1.487186	1.234455	1.210947	1.106261	1.232948	1.281892	1.2884282	10.799	
N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	1.124912	.9550892	1.072891	1.053736	.9525661	.9414350	1.003458	1.0148698	6.9658	
N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA	.9363395	.9059146	1.016971	.9116976	.9376254	1.059592	1.172078	.99145982	9.8771	
Perfluoro-n-[1,2-13C2] decanoic acid	1270	1161	1171	1174	1105	1111	1082	1153.4286	5.4492	
Perfluoro-n-[1,2-13C2] octanoic acid	1318	1164	1169	1228	1289	1265	1180	1230.4286	5.0455	
Perfluoro-n-[2,3,4-13C3] butanoic acid	1840	1799	1737	1749	1680	1642	1664	1730.1429	4.2086	
Perfluorobutanesulfonate (PFBS)	2.266060	2.563194	2.449766	2.377109	2.700261	2.372710	2.518170	2.4638958	5.8278	
Perfluorobutyric acid (PFBA)	1.771031	1.835737	1.797983	1.706720	1.809859	1.650044	1.761325	1.7618142	3.6226	
Perfluorodecanesulfonate (PFDS)	5.020604	4.733242	4.471266	4.826316	5.638069	4.230066	4.775074	4.8135200	9.2339	
Perfluorodecanoic acid (PFDA)	1.124684	1.354507	1.285966	1.511129	1.139190	1.292651	1.310426	1.2883647	10.196	
Perfluorododecanoic acid (PFDoA)	.9456944	.9243639	.9445058	1.010884	.9226376	.9359251	.9069163	.94156109	3.5611	
Perfluoroheptanesulfonate (PFHpS)	4.803003	4.730011	4.671698	4.607201	5.818830	4.441888	5.047272	4.8742718	9.3399	
Perfluoroheptanoic acid (PFHpA)	.9806736	1.150568	1.070395	1.013961	1.011538	1.037895	1.054606	1.0456624	5.2742	
Perfluorohexanesulfonate (PFHxS)	3.650924	5.000442	5.596832	5.166506	4.400645	5.487522	4.448484	4.8216220	14.366	
Perfluorohexanoic acid (PFHxA)	.9597407	1.023739	.9962620	.9021763	.9298887	.8915491	.9401528	.94907263	5.0627	
Perfluorononanesulfonate (PFNS)	3.717740	3.944093	3.668073	4.134676	4.599657	3.634230	3.926512	3.9464258	8.5792	
Perfluorononanoic acid (PFNA)	1.589721	1.067328	.6541827	.5574849	.5830208	.5277539	.5238362	.78618961	10.554	
Perfluorooctanesulfonamide (PFOSA)	.8298735	1.005853	1.054888	.9071343	.9650281	.8681089	.9165395	.93534655	8.3910	
Perfluorooctanesulfonate (PFOS)	3.965216	4.167255	3.884882	3.854363	4.834827	3.769091	3.956413	4.0617210	8.9417	
Perfluorooctanoic acid (PFOA)	1.137795	.9810993	1.112340	1.038228	1.090202	.9401371	1.083223	1.0547178	6.8325	
Perfluoropentanesulfonate (PFPeS)	4.414394	5.228117	6.220769	5.485678	4.696197	5.730877	4.860866	5.2338426	12.034	
Perfluoropentanoic acid (PFPeA)	1.135812	1.081761	1.085220	1.091145	1.063298	.9966358	1.075347	1.0756027	3.8576	
Perfluorotetradecanoic acid (PFTeDA)	.8799454	.8878522	.8844	.9581657	.9664782	.8407046	.8864183	.90056636	5.0226	
Perfluorotridecanoic acid (PFTrDA)	1.213506	1.273800	1.2596	1.249665	1.268578	1.175787	1.163862	1.2292570	3.676	
Perfluoroundecanoic acid (PFUdA)	.7665400	1.078190	.8883110	.8534186	.9305345	.8734812	.8410781	.89022191	10.896	
Sodium perfluoro-1-[1,2,3,4-13C4]octanesulfonate	1729	1643	1636	1731	1668	1663	1670	1677.1429	2.2741	

Q column used to flag RSD value outside of Limit : (>20%)

* Value outside of QC Limit

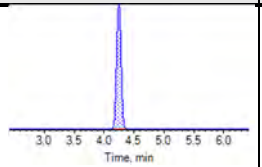
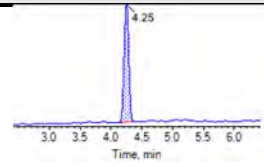
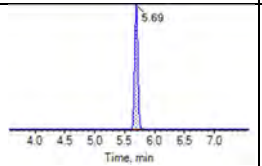
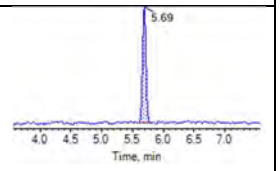
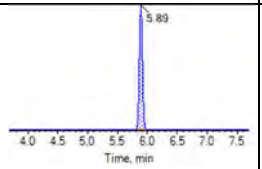
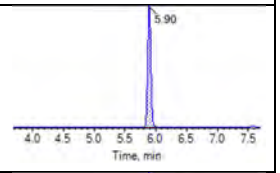
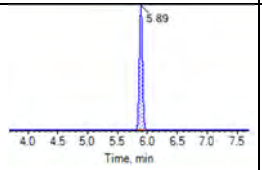
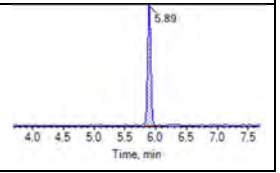
GC
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 10:34:00

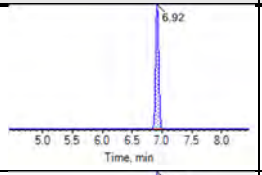
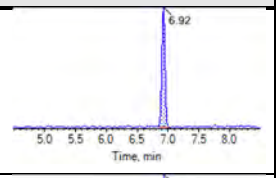
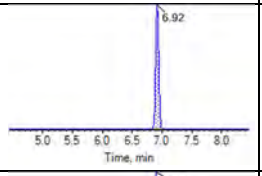
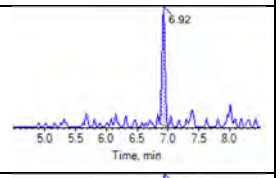
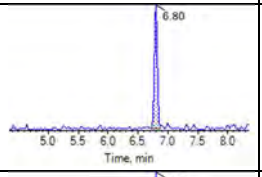
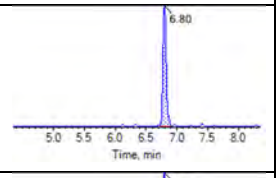
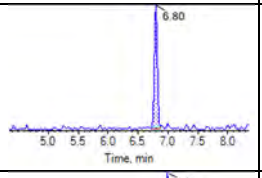
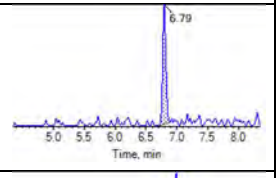
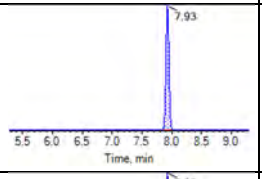
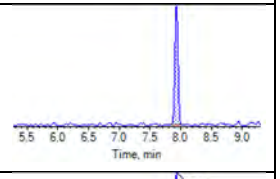
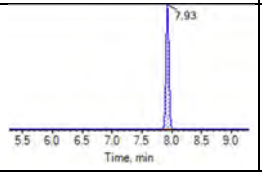
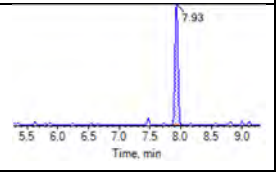
PFC103117003.wiff			
Sample Name	WPF171018-01	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117003.wiff
Acquisition Date	10/31/2017 16:55:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117003.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	112000	13C4_PFBA	158100	100.0	100.5	100.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	112400	13C5_PFPeA	247400	100.0	105.6	105.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	139500	13C3_PFBS	173900	88.5	81.4	92.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	64330	13C3_PFBS	173900	88.5	83.6	94.5	0.46/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 10:34:00

PFC103117003.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	127300	13C5_PFHxA	331600	100.0	101.2	101.2	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	8116	13C5_PFHxA	331600	100.0	91.2	91.2	0.06/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	19700	13C2_4:2 FTS	37890	93.5	86.8	92.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	11290	13C2_4:2 FTS	37890	93.5	69.3	74.1	0.57/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	102500	13C4_PFHpA	261300	100.0	93.8	93.8	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	29820	13C4_PFHpA	261300	100.0	104.4	104.4	0.29/ 0.26		

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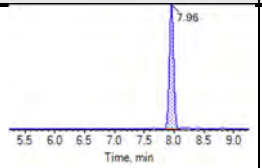
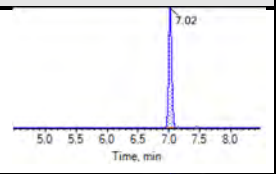
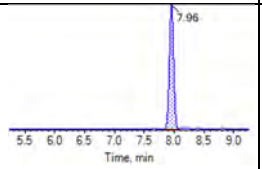
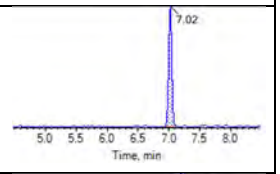
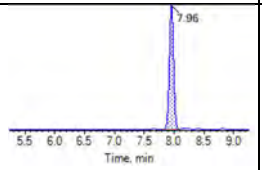
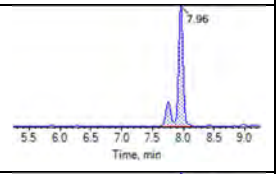
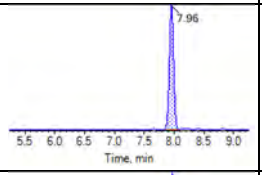
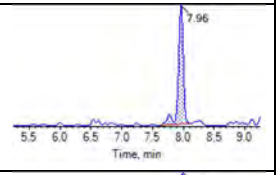
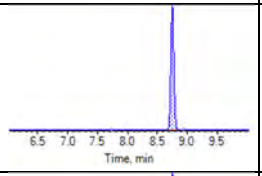
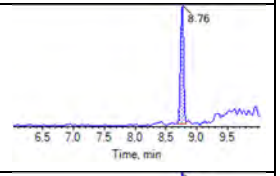
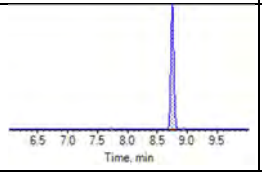
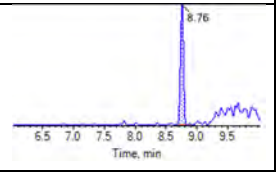
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	157400	13C3_PFHxS	94830	94.0	79.3	84.4	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	52340	13C3_PFHxS	94830	94.0	75.5	80.3	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	126300	13C3_PFHxS	94830	91.2	69.1	75.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31640	13C3_PFHxS	94830	91.2	68.5	75.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	115600	13C8_PFOA	254000	100.0	107.9	107.9	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	47060	13C8_PFOA	254000	100.0	117.7	117.7	0.41/ 0.37		

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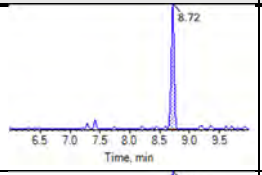
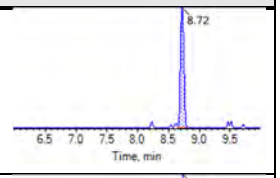
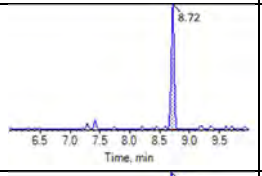
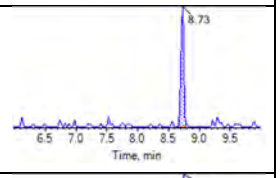
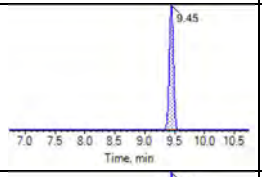
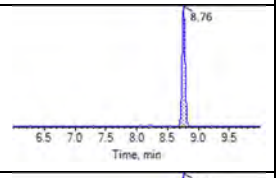
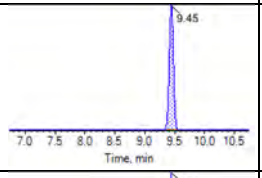
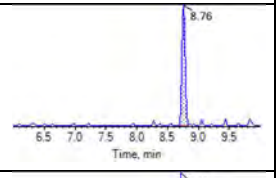
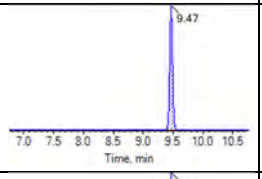
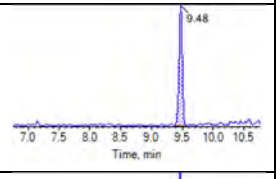
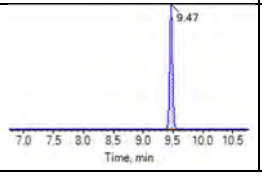
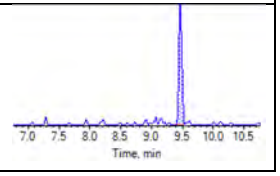
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	19520	13C2_6:2 FTS	37260	95.0	99.3	104.6	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	15470	13C2_6:2 FTS	37260	95.0	87.7	92.3	0.79/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	135900	13C8_PFOS	74460	95.0	93.6	98.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	25560	13C8_PFOS	74460	95.0	87.5	92.1	0.19/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	79250	13C9_PFNA	291600	100.0	80.9	80.9	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	19530	13C9_PFNA	291600	100.0	82.6	82.6	0.25/ 0.24		

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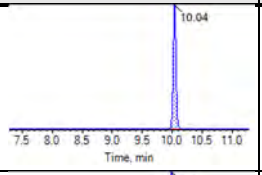
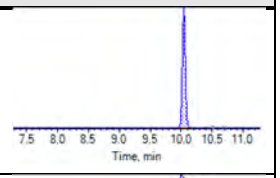
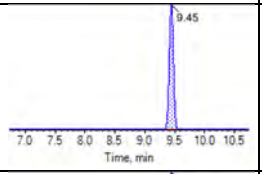
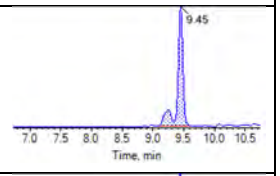
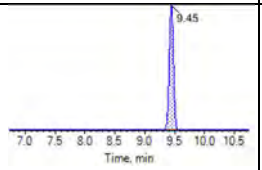
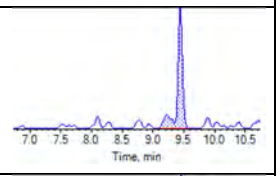
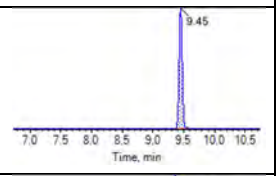
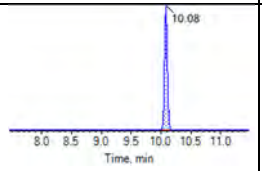
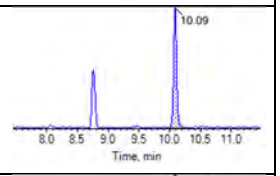
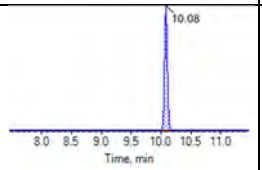
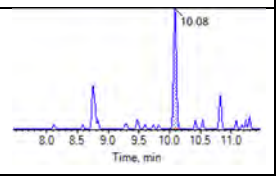
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	189800	13C8_PFOSA	617800	92.6	82.1	88.7	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	118100	13C8_PFOS	74460	100.0	97.6	97.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	17170	13C8_PFOS	74460	100.0	96.1	96.1	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1729000	N/A	N/A	1000.0	1030.7	103.1	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	71260	13C6_PFDA	158400	100.0	87.3	87.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	11790	13C6_PFDA	158400	100.0	115.3	115.3	0.17/ 0.13		

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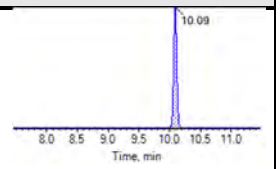
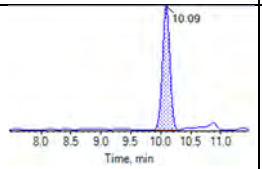
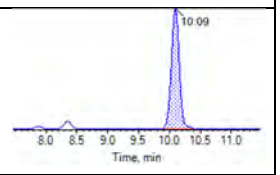
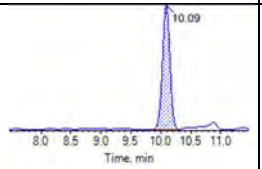
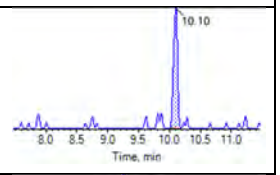
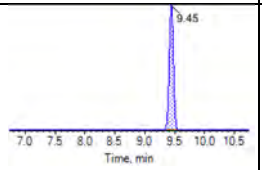
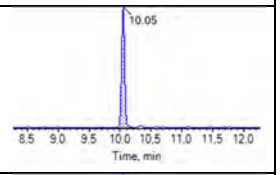
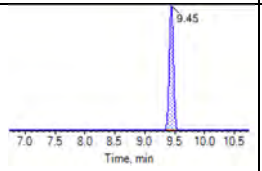
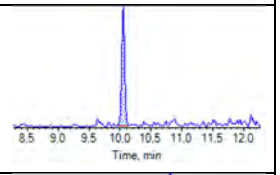
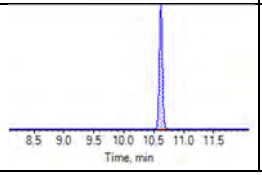
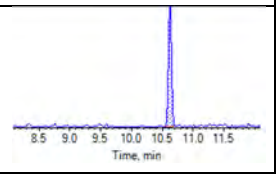
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1270000	N/A	N/A	1000.0	1101.2	110.1	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	13780	13C2_8:2 FTS	24490	96.0	109.2	113.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	12570	13C2_8:2 FTS	24490	96.0	102.8	107.1	0.91/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	106300	13C8_PFOS	74460	96.0	90.4	94.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	20110	13C8_PFOS	74460	96.0	93.9	97.8	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	68590	13C7_PFUdA	223700	100.0	86.1	86.1	1.00/ 1.00		

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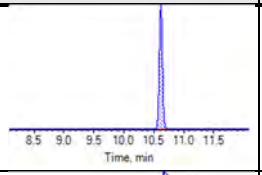
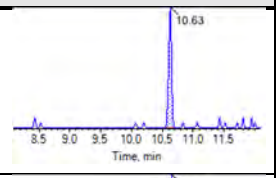
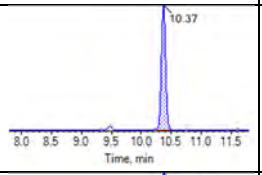
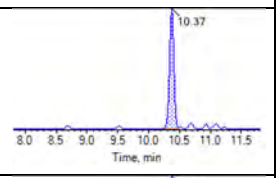
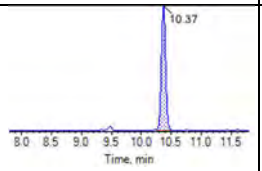
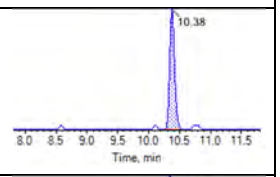
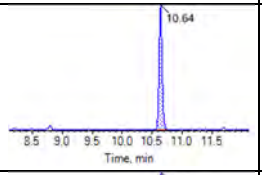
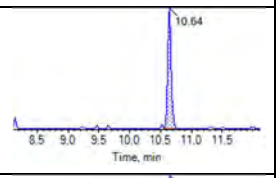
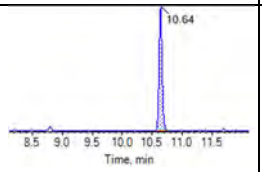
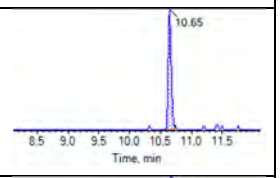
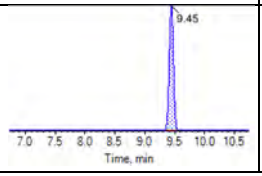
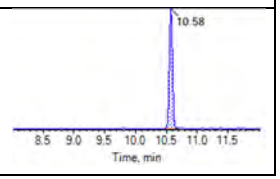
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	8116	13C7_PFUdA	223700	100.0	85.5	85.5	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	21180	d3-N-MeFOSAA	56550	100.0	94.4	94.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	10440	d3-N-MeFOSAA	56550	100.0	94.5	94.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	25630	d5-N-EtFOSAA	56960	100.0	110.8	110.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	10400	d5-N-EtFOSAA	56960	100.0	94.6	94.6	0.41/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	144300	13C8_PFOS	74460	96.5	100.7	104.3	1.00/ 1.00		

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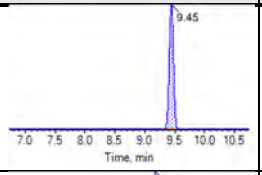
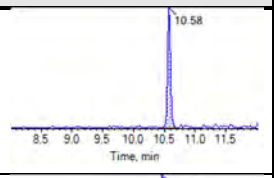
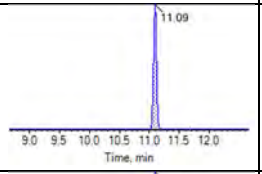
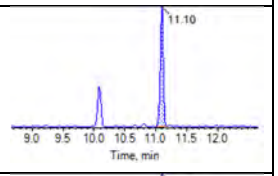
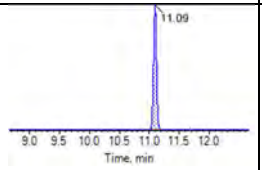
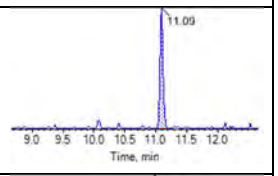
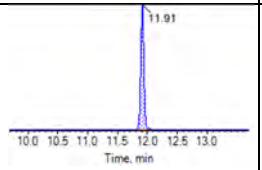
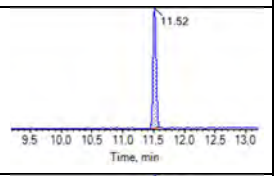
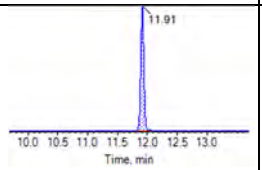
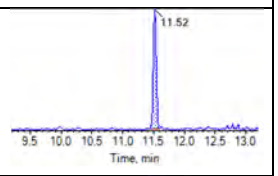
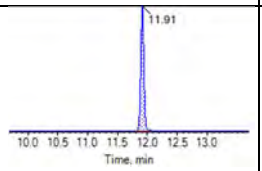
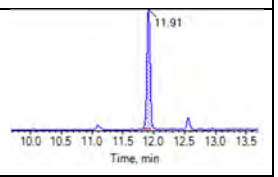
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	41420	13C8_PFOS	74460	96.5	108.4	112.4	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	68090	13C2_PFDoA	180000	100.0	100.4	100.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.09 (11.09)	11510	13C2_PFDoA	180000	100.0	103.9	103.9	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	71160	13C2_PFTeDA	146600	100.0	98.7	98.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	14800	13C2_PFTeDA	146600	100.0	92.8	92.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.91 (11.91)	51600	13C2_PFTeDA	146600	100.0	97.7	97.7	1.00/ 1.00		

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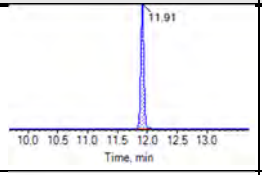
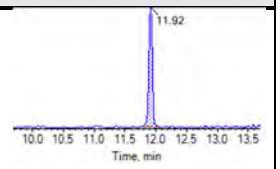
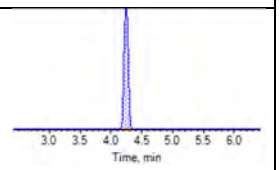
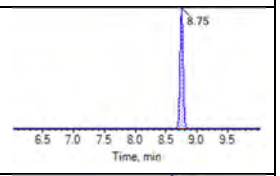
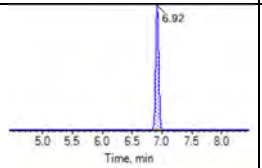
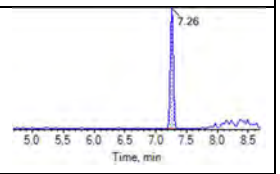
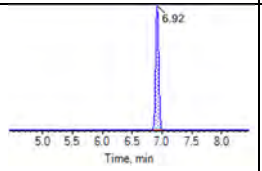
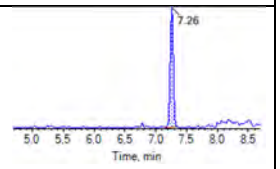
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	11210	13C2_PFTeDA	146600	100.0	96.4	96.4	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1840000	N/A	N/A	1000.0	1063.4	106.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1318000	N/A	N/A	1000.0	1071.3	107.1	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	77590	13C5_PFHxA	331600	100.0	94.1	94.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	60170	13C5_PFHxA	331600	100.0	97.0	97.0	0.78/ 0.75		

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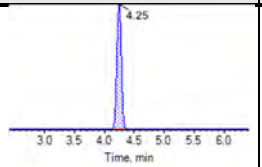
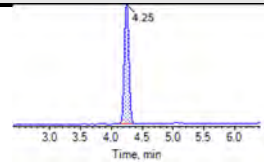
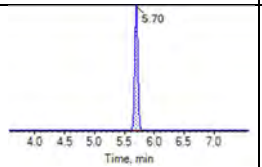
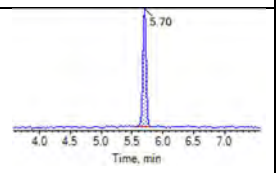
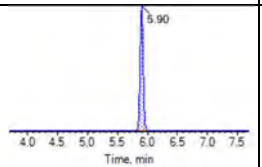
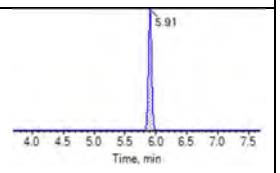
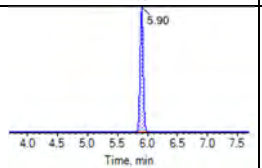
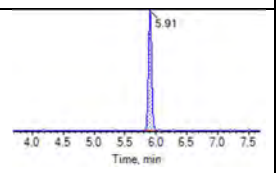
PFC103117004.wiff			
Sample Name	WPF171018-02	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117004.wiff
Acquisition Date	10/31/2017 17:17:20	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117004.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	229100	13C4_PFBA	156000	200.0	208.4	104.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	206400	13C5_PFPeA	238500	200.0	201.1	100.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	273300	13C3_PFBS	150600	177.0	184.1	104.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	113100	13C3_PFBS	150600	177.0	169.7	95.9	0.41/ 0.45		

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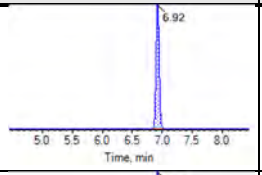
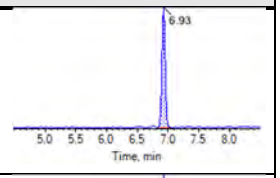
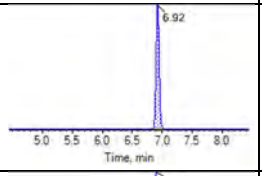
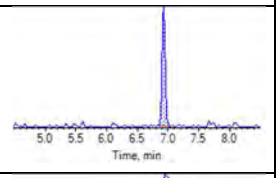
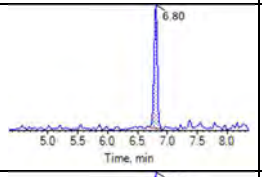
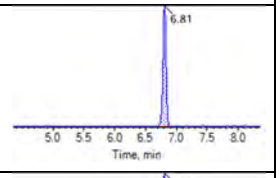
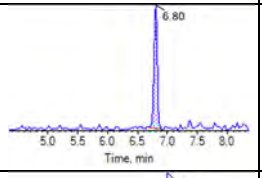
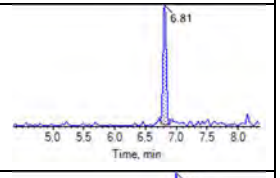
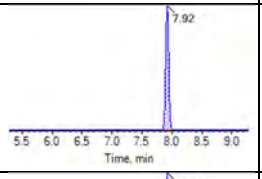
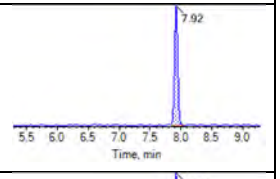
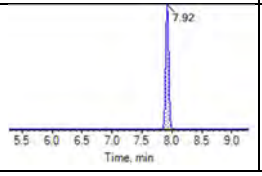
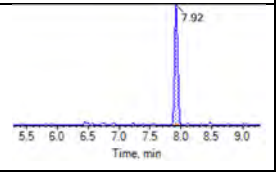
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	248400	13C5_PFHxA	303300	200.0	215.7	107.8	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	19570	13C5_PFHxA	303300	200.0	240.4	120.2	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	34440	13C2_4:2 FTS	31560	187.0	182.3	97.5	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	25070	13C2_4:2 FTS	31560	187.0	184.7	98.8	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	218700	13C4_PFHpA	237600	200.0	220.1	110.1	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	51990	13C4_PFHpA	237600	200.0	200.1	100.1	0.24/ 0.26		

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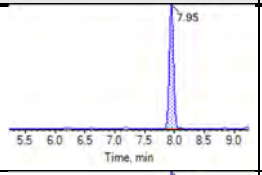
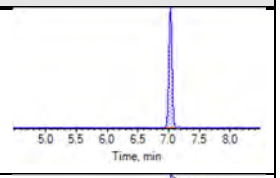
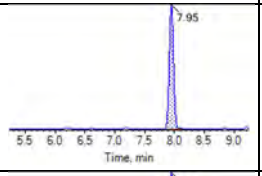
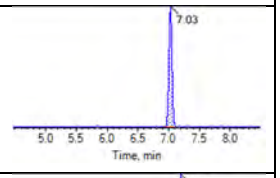
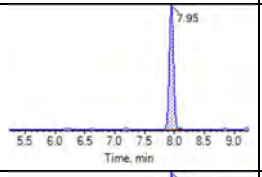
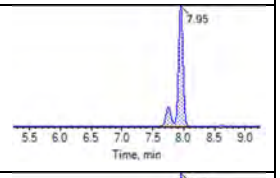
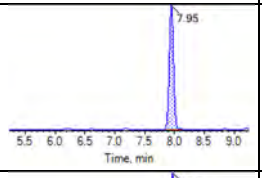
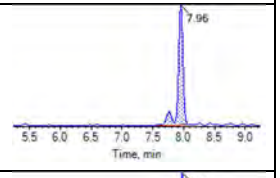
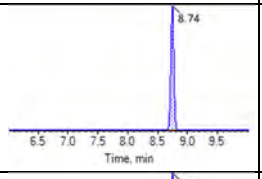
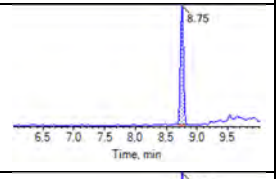
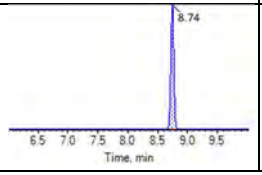
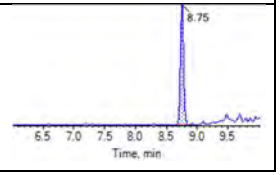
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	292900	13C3_PFHxS	74500	188.0	187.8	99.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	105900	13C3_PFHxS	74500	188.0	194.3	103.4	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	271800	13C3_PFHxS	74500	182.4	189.2	103.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	63450	13C3_PFHxS	74500	182.4	174.9	95.9	0.23/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	214900	13C8_PFOA	273800	200.0	186.0	93.0	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	87000	13C8_PFOA	273800	200.0	201.8	100.9	0.40/ 0.37		

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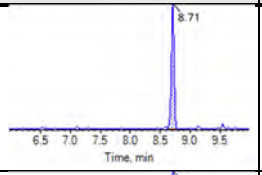
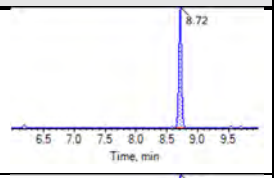
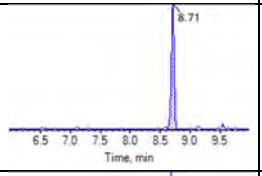
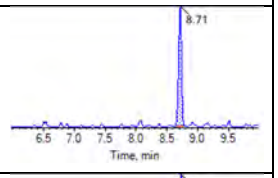
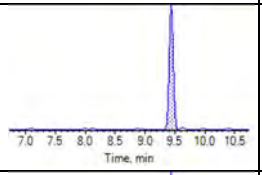
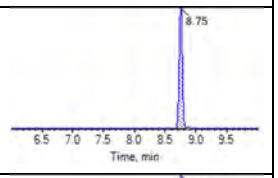
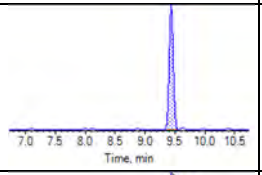
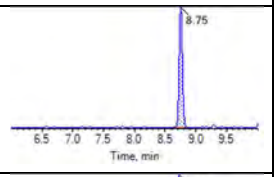
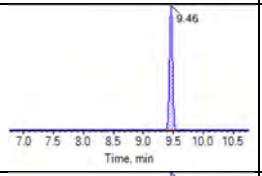
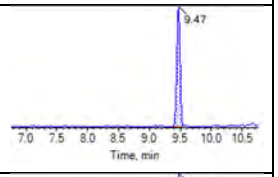
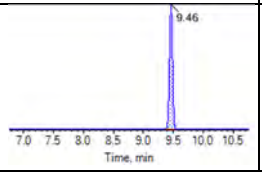
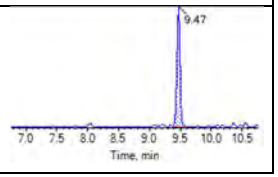
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	27950	13C2_6:2 FTS	35810	190.0	148.0	77.9	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	29860	13C2_6:2 FTS	35810	190.0	176.0	92.7	1.07/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	254800	13C8_PFOS	70880	190.0	184.4	97.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	54480	13C8_PFOS	70880	190.0	195.8	103.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	164900	13C9_PFNA	233000	200.0	210.6	105.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	41490	13C9_PFNA	233000	200.0	219.8	109.9	0.25/ 0.24		

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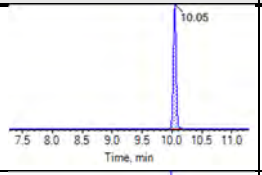
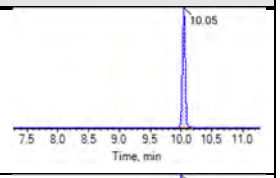
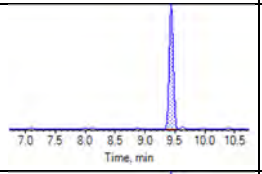
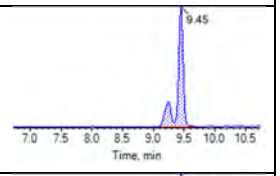
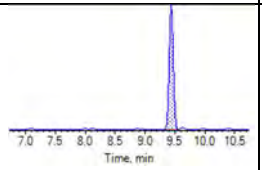
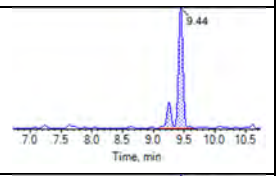
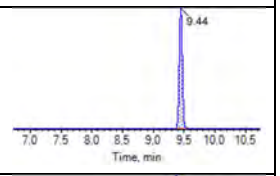
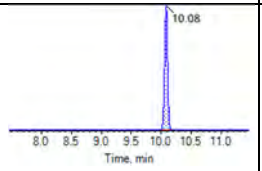
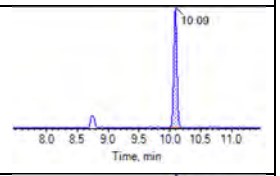
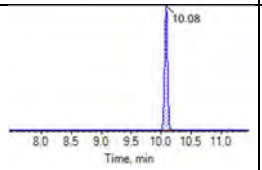
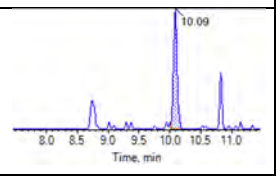
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.05 (10.04)	388900	13C8_PFOSA	522200	185.1	199.1	107.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	236300	13C8_PFOS	70880	200.0	205.2	102.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	38210	13C8_PFOS	70880	200.0	224.7	112.3	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1643000	N/A	N/A	1000.0	979.7	98.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	165900	13C6_PFDA	153100	200.0	210.3	105.1	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.09 (10.08)	18010	13C6_PFDA	153100	200.0	182.3	91.1	0.11/ 0.13		

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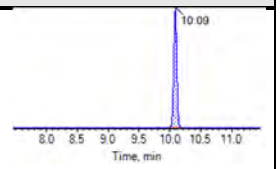
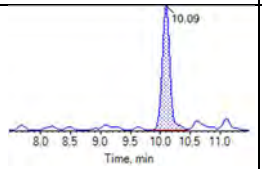
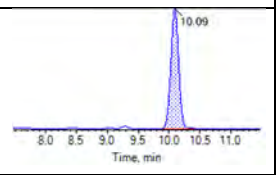
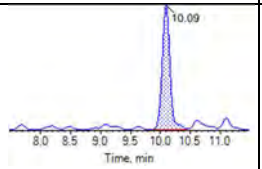
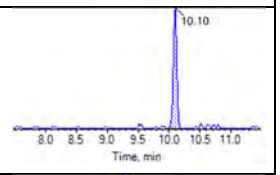
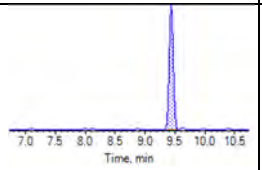
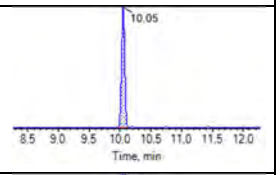
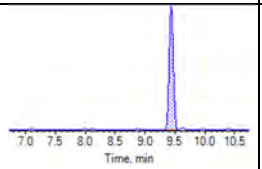
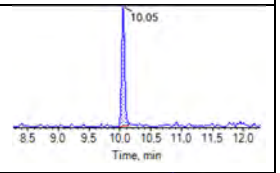
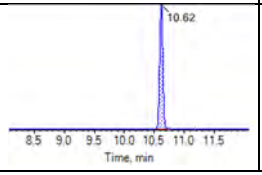
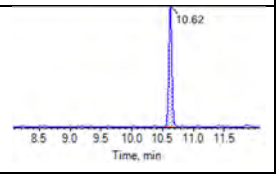
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1161000	N/A	N/A	1000.0	1006.7	100.7	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	25710	13C2_8:2 FTS	22510	192.0	221.7	115.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	30560	13C2_8:2 FTS	22510	192.0	271.8	141.6	1.19/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	214700	13C8_PFOS	70880	192.0	191.9	99.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	34980	13C8_PFOS	70880	192.0	171.7	89.4	0.16/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	166300	13C7_PFUdA	192800	200.0	242.3	121.1	1.00/ 1.00		

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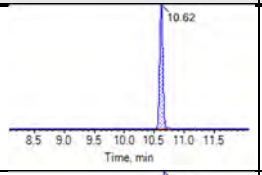
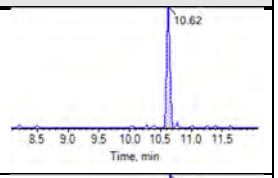
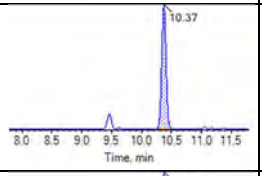
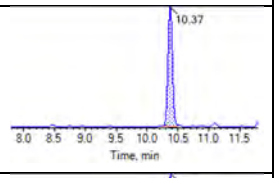
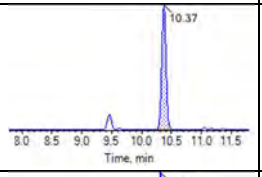
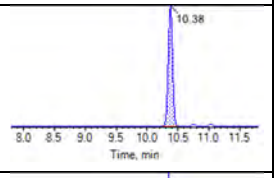
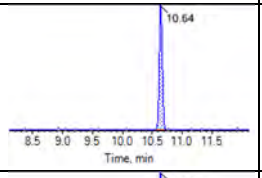
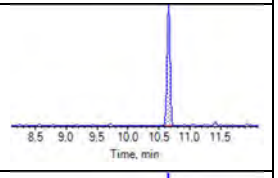
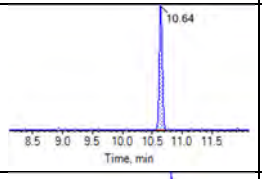
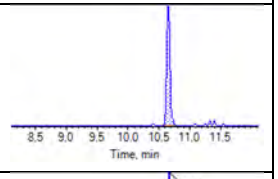
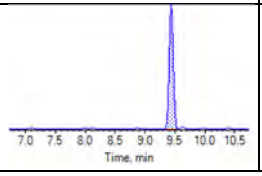
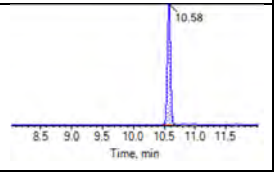
PFUdA_2	563.0 / 169.0	10.62 (10.62)	17550	13C7_PFUdA	192800	200.0	214.5	107.2	0.11/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	32410	d3-N-MeFOSAA	44720	200.0	182.8	91.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	15800	d3-N-MeFOSAA	44720	200.0	180.9	90.4	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	38960	d5-N-EtFOSAA	50990	200.0	188.2	94.1	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	18410	d5-N-EtFOSAA	50990	200.0	187.2	93.6	0.47/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	259000	13C8_PFOS	70880	193.0	189.8	98.3	1.00/ 1.00		

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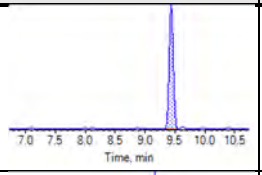
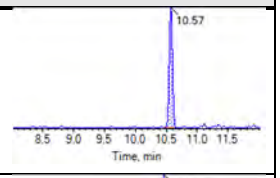
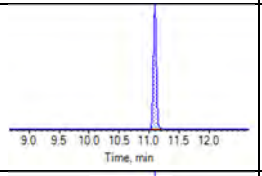
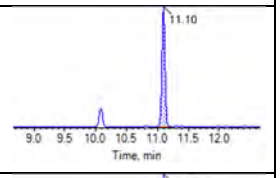
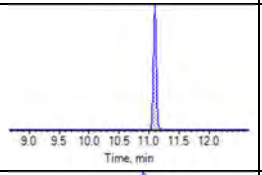
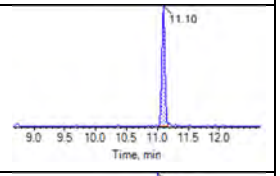
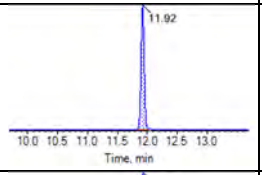
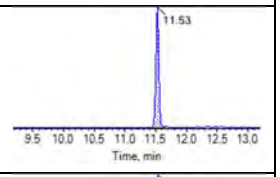
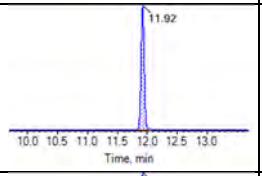
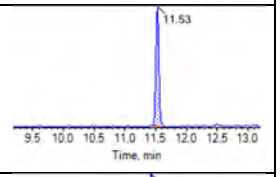
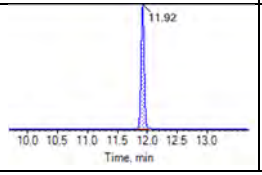
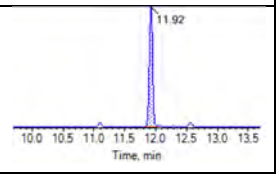
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.57 (10.93)	66390	13C8_PFOS	70880	193.0	182.6	94.6	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	133700	13C2_PFDoA	180800	200.0	196.3	98.2	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	21990	13C2_PFDoA	180800	200.0	197.6	98.8	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	133800	13C2_PFTeDA	131300	200.0	207.4	103.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	29530	13C2_PFTeDA	131300	200.0	206.9	103.5	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	93260	13C2_PFTeDA	131300	200.0	197.2	98.6	1.00/ 1.00		

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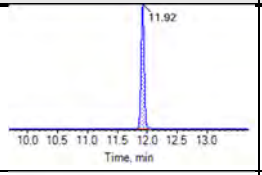
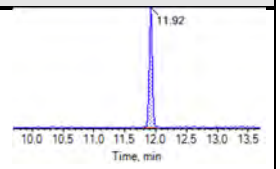
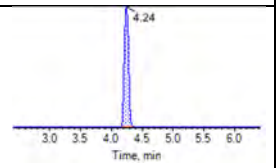
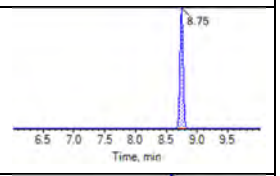
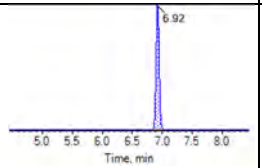
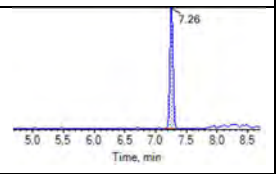
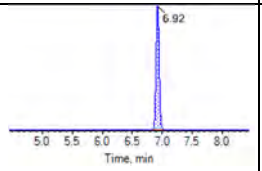
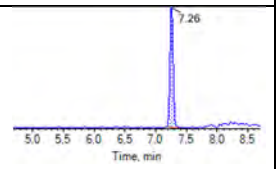
PFC103117004.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21590	13C2_PFTeDA	131300	200.0	207.3	103.7	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1799000	N/A	N/A	1000.0	1040.0	104.0	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1164000	N/A	N/A	1000.0	946.1	94.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	150400	13C5_PFHxA	303300	200.0	199.3	99.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	109100	13C5_PFHxA	303300	200.0	192.1	96.1	0.73/ 0.75		

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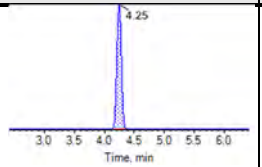
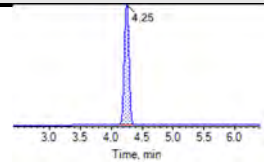
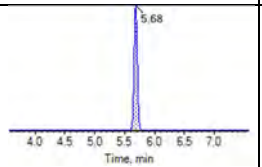
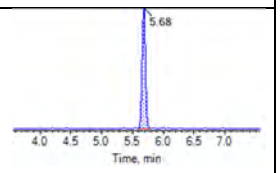
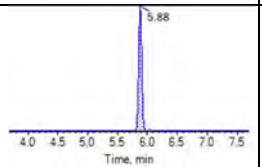
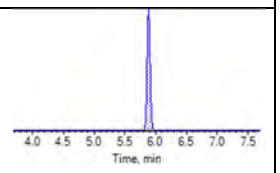
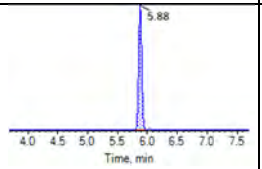
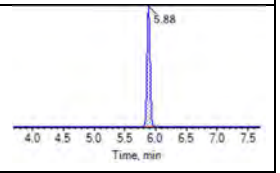
PFC103117005.wiff			
Sample Name	WPF171018-03	**Injection Vial**	4
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117005.wiff
Acquisition Date	10/31/2017 17:38:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117005.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	517100	13C4_PFBA	143800	500.0	510.3	102.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.68 (5.69)	489000	13C5_PFPeA	225300	500.0	504.5	100.9	1.00/ 1.00		
PFBS	298.9 / 80.0	5.88 (5.89)	682500	13C3_PFBS	157400	442.5	440.0	99.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.88 (5.89)	318900	13C3_PFBS	157400	442.5	457.9	103.5	0.47/ 0.45		

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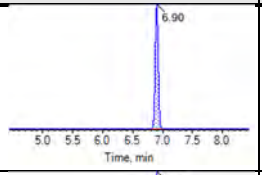
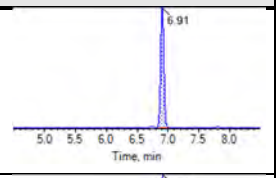
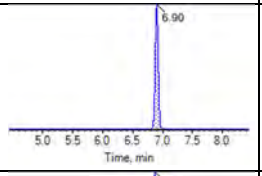
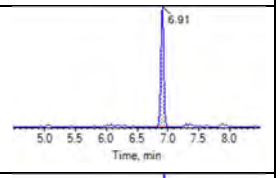
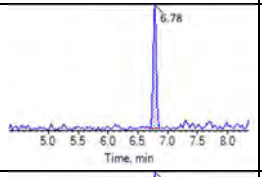
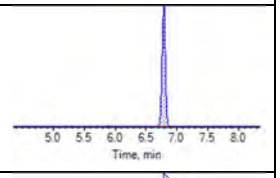
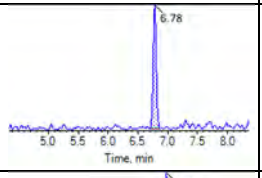
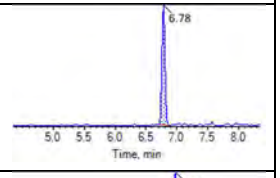
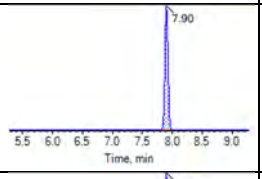
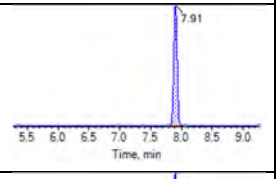
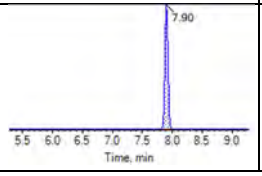
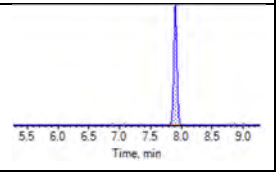
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.91 (6.92)	559700	13C5_PFHxA	280900	500.0	524.8	105.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.91 (6.92)	37040	13C5_PFHxA	280900	500.0	491.3	98.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	84330	13C2_4:2 FTS	31670	467.5	444.8	95.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	59010	13C2_4:2 FTS	31670	467.5	433.2	92.7	0.70/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	488100	13C4_PFHpA	228000	500.0	511.8	102.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.90 (7.93)	137800	13C4_PFHpA	228000	500.0	552.5	110.5	0.28/ 0.26		

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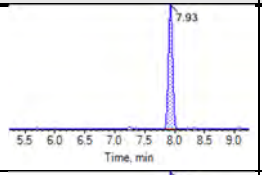
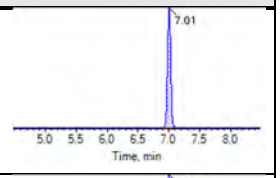
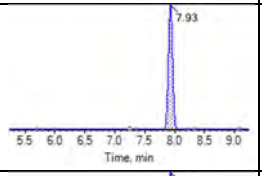
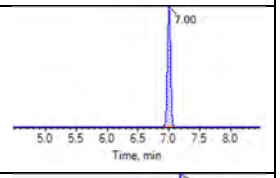
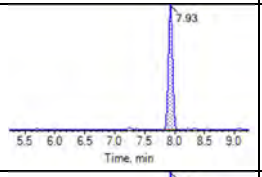
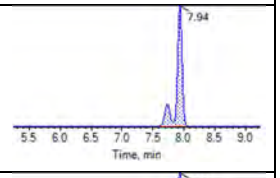
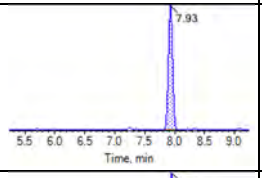
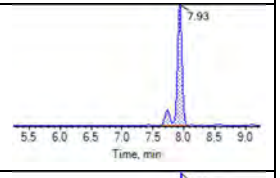
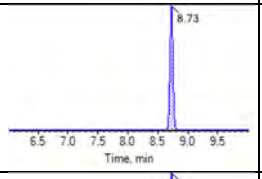
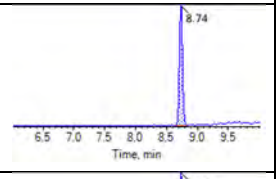
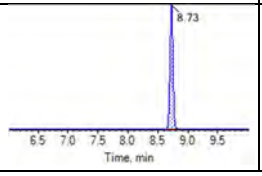
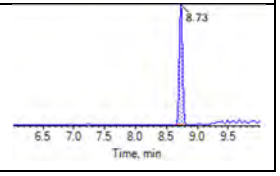
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.01 (7.02)	762400	13C3_PFHxS	65190	470.0	558.6	118.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.00 (7.02)	249200	13C3_PFHxS	65190	470.0	522.5	111.2	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.94 (7.96)	665500	13C3_PFHxS	65190	456.0	529.3	116.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.93 (7.96)	192500	13C3_PFHxS	65190	456.0	606.1	132.9	0.29/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	522800	13C8_PFOA	235000	500.0	527.2	105.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.73 (8.75)	192700	13C8_PFOA	235000	500.0	520.9	104.2	0.37/ 0.37		

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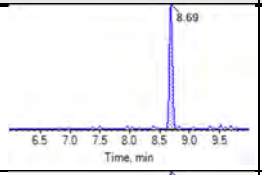
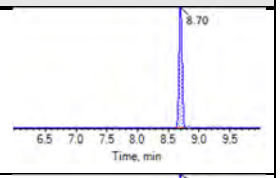
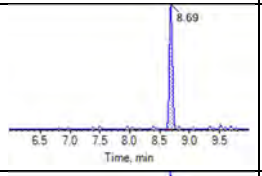
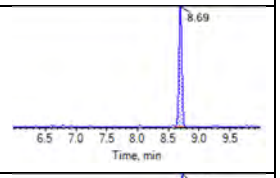
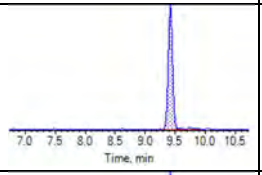
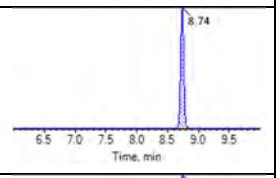
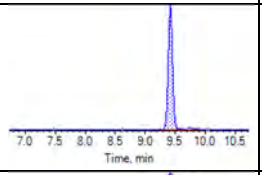
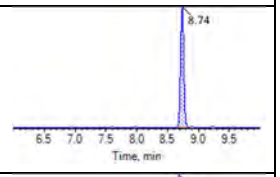
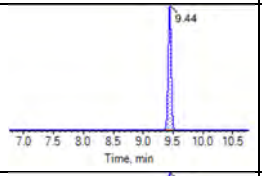
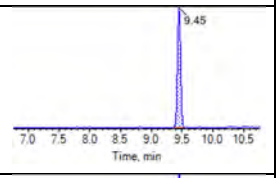
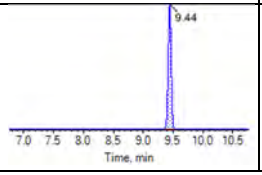
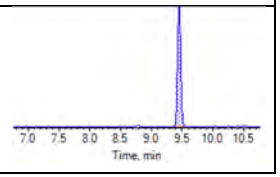
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.70 (8.72)	80140	13C2_6:2 FTS	36320	475.0	418.4	88.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.69 (8.72)	75960	13C2_6:2 FTS	36320	475.0	441.6	93.0	0.95/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	615300	13C8_PFOS	69320	475.0	455.3	95.9	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	120100	13C8_PFOS	69320	475.0	441.5	92.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	378800	13C9_PFNA	234300	500.0	481.0	96.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	102000	13C9_PFNA	234300	500.0	537.3	107.5	0.27/ 0.24		

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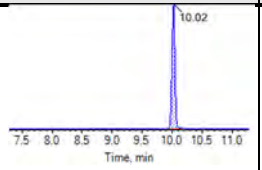
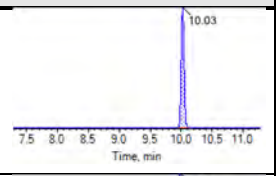
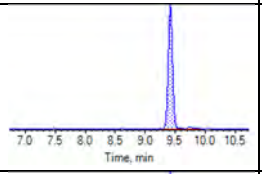
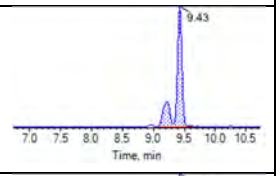
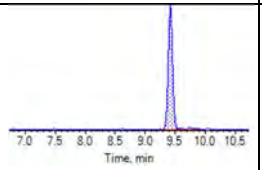
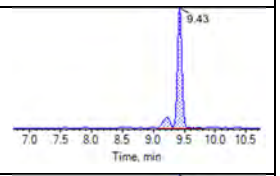
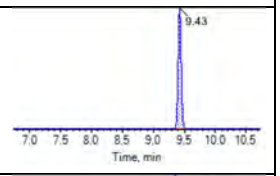
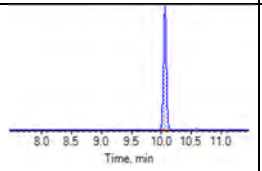
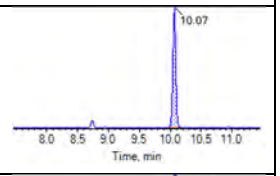
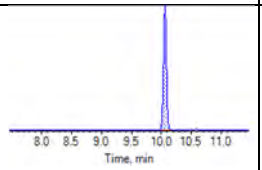
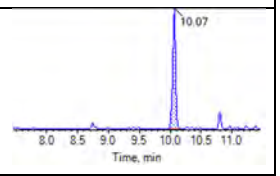
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	984500	13C8_PFOSA	504200	462.8	521.9	112.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	538600	13C8_PFOS	69320	500.0	478.2	95.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	84470	13C8_PFOS	69320	500.0	507.8	101.6	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1636000	N/A	N/A	1000.0	975.7	97.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	364700	13C6_PFDA	141800	500.0	499.0	99.8	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	47340	13C6_PFDA	141800	500.0	517.1	103.4	0.13/ 0.13		

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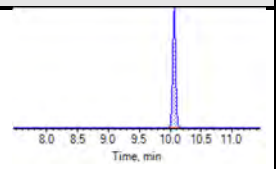
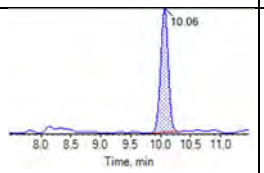
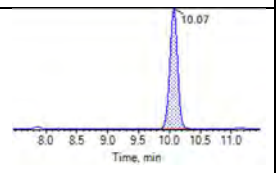
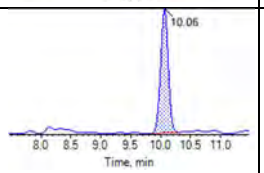
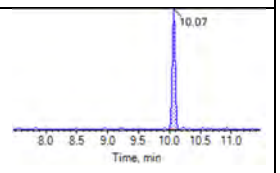
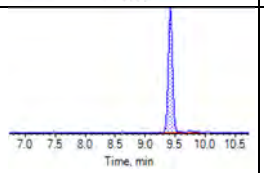
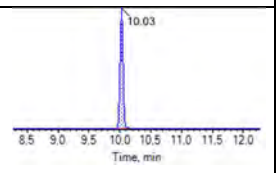
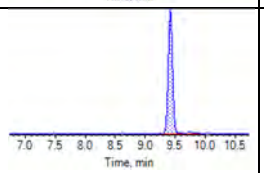
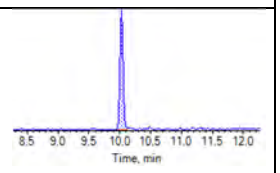
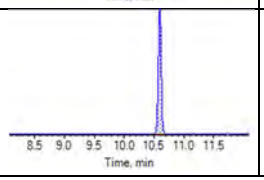
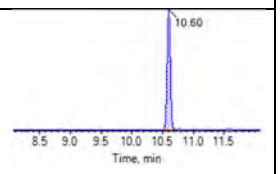
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1171000	N/A	N/A	1000.0	1015.5	101.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	64800	13C2_8:2 FTS	27340	480.0	459.8	95.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	57650	13C2_8:2 FTS	27340	480.0	422.1	87.9	0.89/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	488200	13C8_PFOS	69320	480.0	446.2	93.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	93410	13C8_PFOS	69320	480.0	468.7	97.6	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	358700	13C7_PFUdA	201900	500.0	498.9	99.8	1.00/ 1.00		

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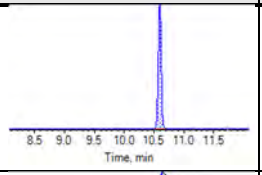
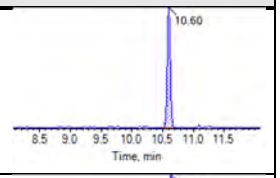
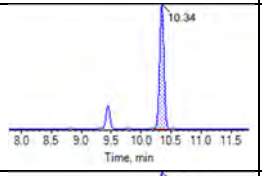
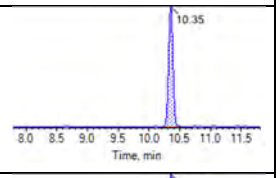
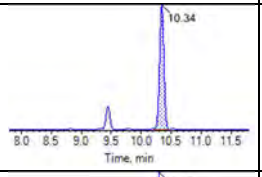
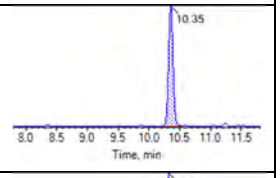
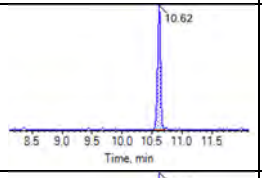
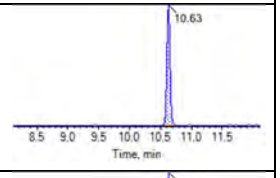
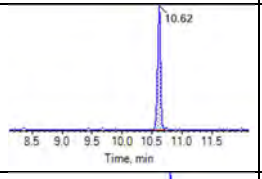
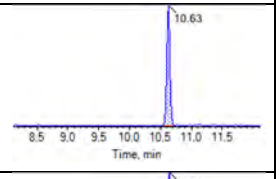
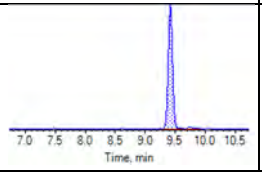
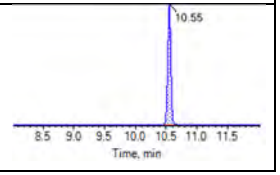
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	42550	13C7_PFUdA	201900	500.0	496.7	99.3	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.35 (10.37)	85690	d3-N-MeFOSAA	42130	500.0	512.9	102.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	41780	d3-N-MeFOSAA	42130	500.0	507.6	101.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	96410	d5-N-EtFOSAA	44930	500.0	528.6	105.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	48270	d5-N-EtFOSAA	44930	500.0	556.9	111.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	598200	13C8_PFOS	69320	482.5	448.2	92.9	1.00/ 1.00		

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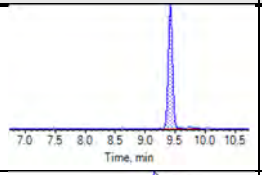
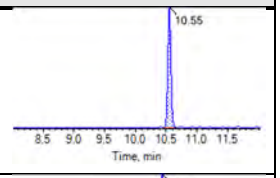
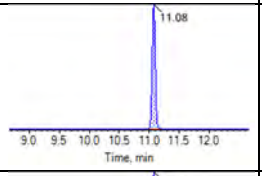
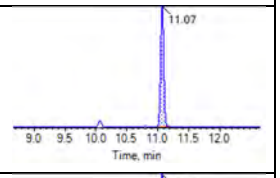
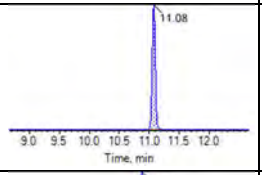
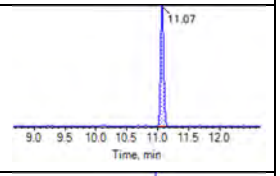
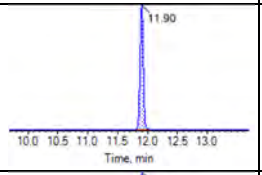
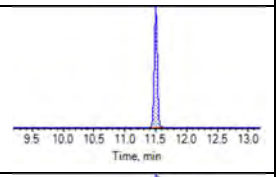
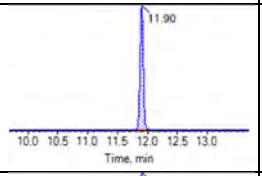
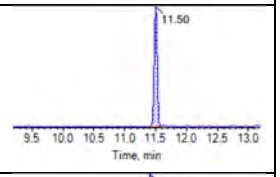
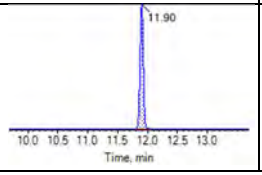
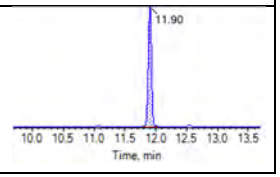
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	170800	13C8_PFOS	69320	482.5	480.4	99.6	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	342100	13C2_PFDoA	181100	500.0	501.6	100.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	58640	13C2_PFDoA	181100	500.0	526.0	105.2	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	314900	13C2_PFTeDA	125000	500.0	512.2	102.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	71040	13C2_PFTeDA	125000	500.0	522.5	104.5	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	221100	13C2_PFTeDA	125000	500.0	490.9	98.2	1.00/ 1.00		

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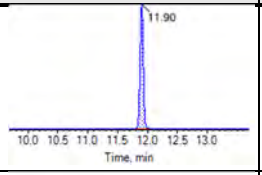
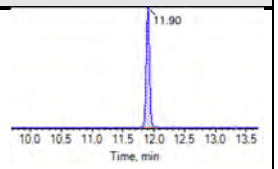
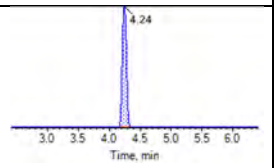
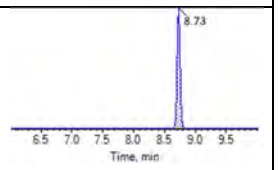
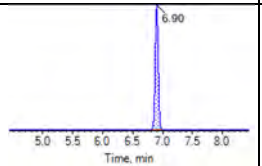
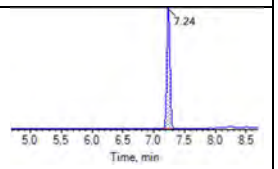
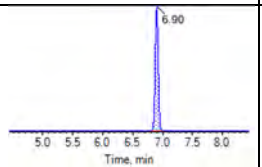
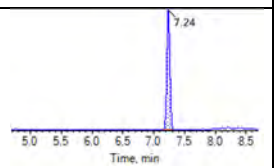
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	49350	13C2_PFTeDA	125000	500.0	497.6	99.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1737000	N/A	N/A	1000.0	1003.8	100.4	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	1169000	N/A	N/A	1000.0	949.8	95.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.24 (7.26)	401200	13C5_PFHxA	280900	500.0	574.2	114.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.24 (7.26)	280000	13C5_PFHxA	280900	500.0	532.6	106.5	0.70/ 0.75		

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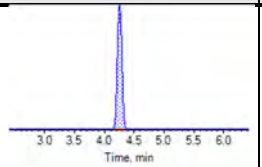
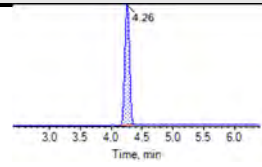
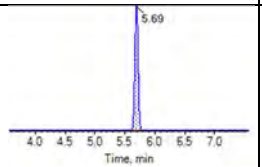
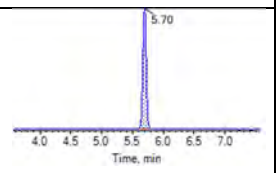
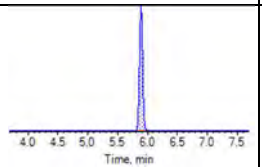
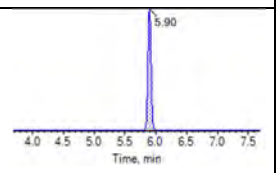
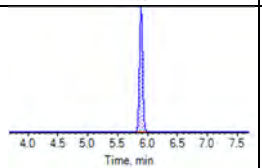
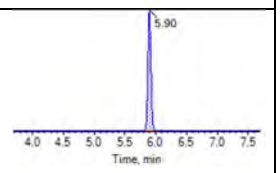
PFC103117006.wiff			
Sample Name	WPF171018-04	**Injection Vial**	5
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117006.wiff
Acquisition Date	10/31/2017 18:00:08	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117006.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	767000	13C4_PFBA	149800	750.0	726.8	96.9	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	757800	13C5_PFPeA	231500	750.0	760.8	101.4	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	989600	13C3_PFBS	156800	663.8	640.3	96.5	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	434700	13C3_PFBS	156800	663.8	626.5	94.4	0.44/ 0.45		

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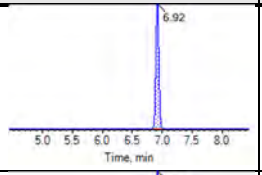
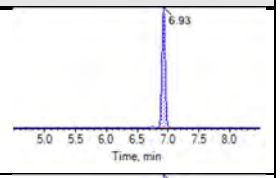
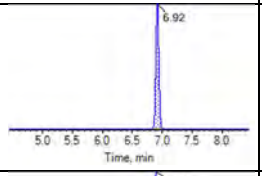
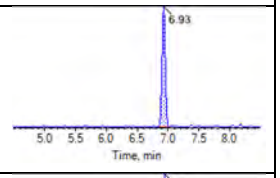
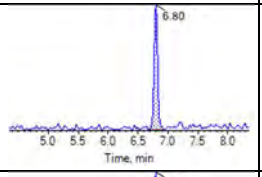
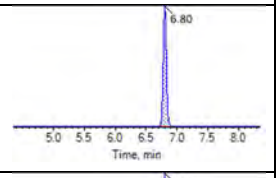
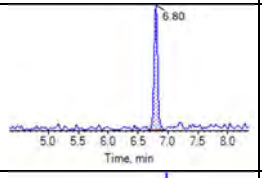
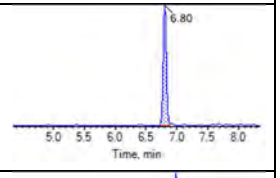
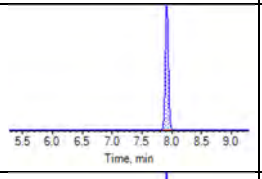
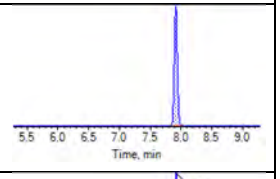
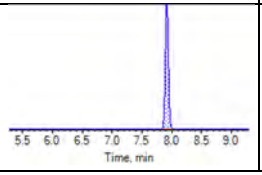
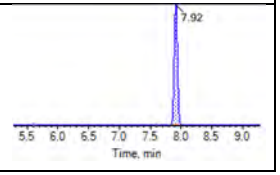
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	837400	13C5_PFHxA	309400	750.0	712.9	95.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	58640	13C5_PFHxA	309400	750.0	706.1	94.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	129900	13C2_4:2 FTS	33690	701.3	644.4	91.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	103600	13C2_4:2 FTS	33690	701.3	715.0	102.0	0.80/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	762600	13C4_PFHpA	250700	750.0	727.2	97.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	206900	13C4_PFHpA	250700	750.0	754.5	100.6	0.27/ 0.26		

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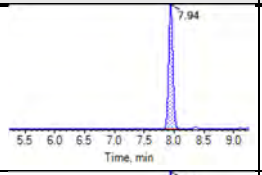
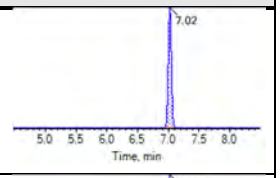
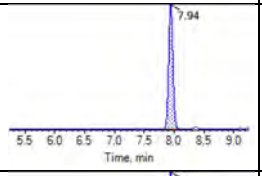
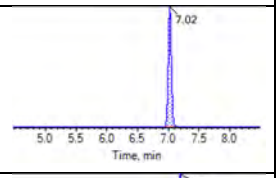
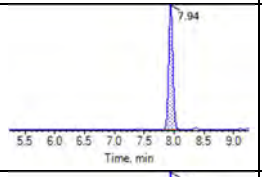
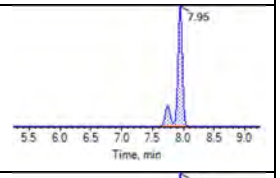
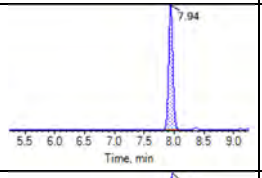
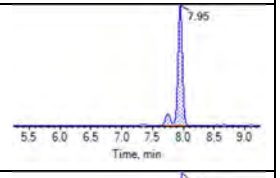
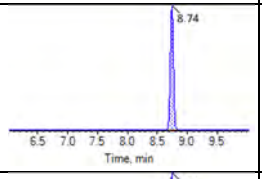
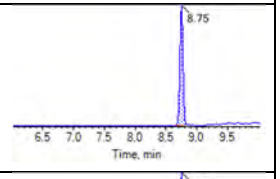
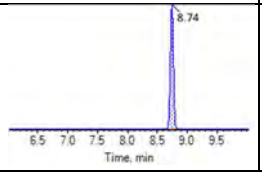
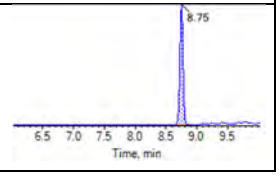
PFPeS	349.0 / 80.0	7.02 (7.02)	1148000	13C3_PFHxS	74210	705.0	739.0	104.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	403600	13C3_PFHxS	74210	705.0	743.6	105.5	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1049000	13C3_PFHxS	74210	684.0	732.7	107.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	251500	13C3_PFHxS	74210	684.0	695.8	101.7	0.24/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	736000	13C8_PFOA	236300	750.0	738.3	98.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	272300	13C8_PFOA	236300	750.0	732.0	97.6	0.37/ 0.37		

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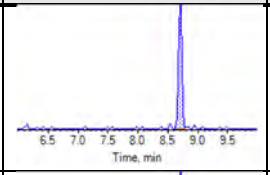
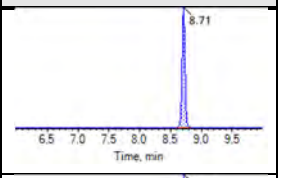
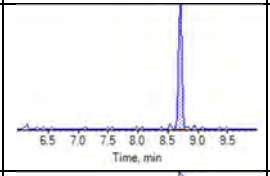
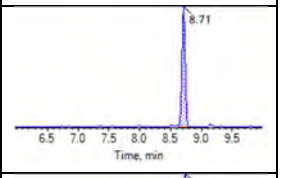
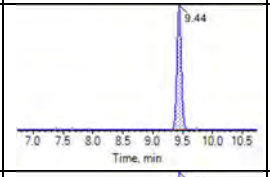
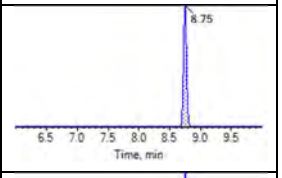
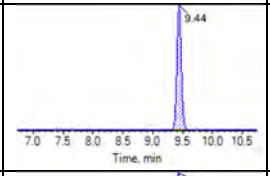
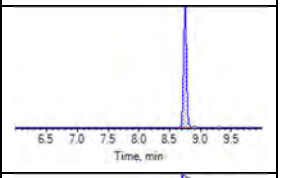
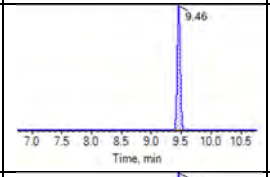
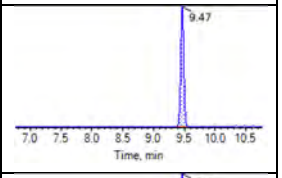
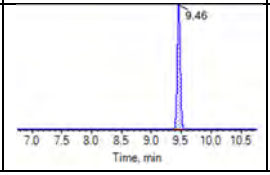
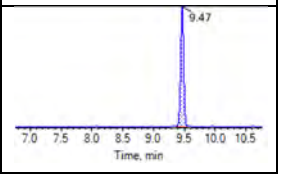
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	119000	13C2_6:2 FTS	29030	712.5	777.0	109.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	100000	13C2_6:2 FTS	29030	712.5	727.4	102.1	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	906400	13C8_PFOS	69030	712.5	673.5	94.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	189600	13C8_PFOS	69030	712.5	699.6	98.2	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	594200	13C9_PFNA	253400	750.0	697.8	93.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	147600	13C9_PFNA	253400	750.0	718.6	95.8	0.25/ 0.24		

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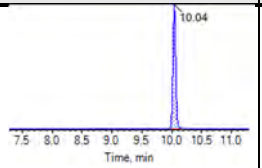
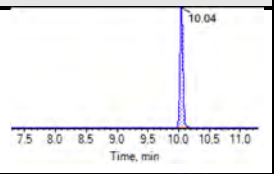
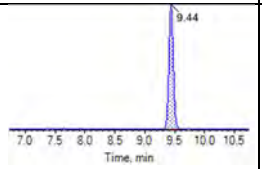
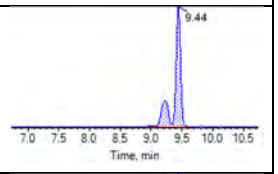
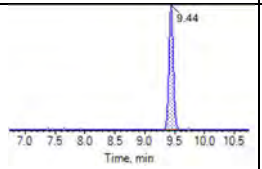
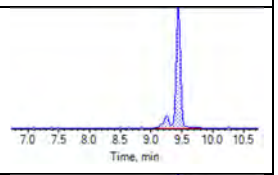
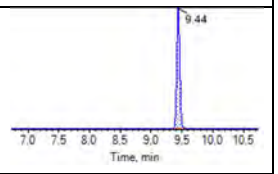
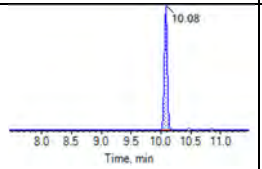
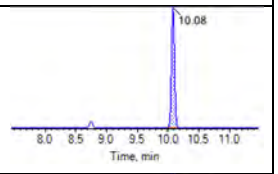
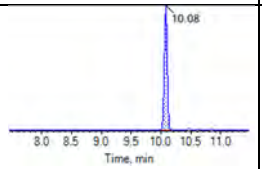
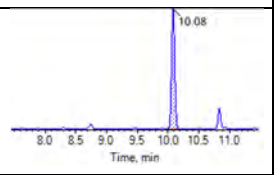
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	1416000	13C8_PFOSA	562200	694.1	673.1	97.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	798200	13C8_PFOS	69030	750.0	711.7	94.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	130300	13C8_PFOS	69030	750.0	786.7	104.9	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1731000	N/A	N/A	1000.0	1032.2	103.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	577100	13C6_PFDA	127300	750.0	879.7	117.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	66430	13C6_PFDA	127300	750.0	808.5	107.8	0.12/ 0.13		

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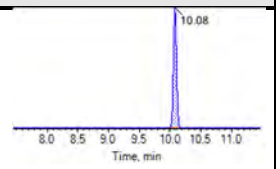
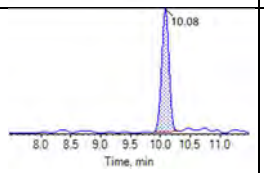
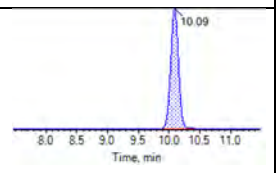
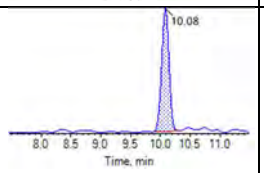
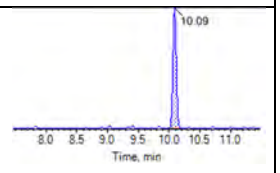
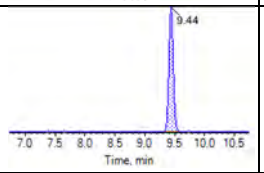
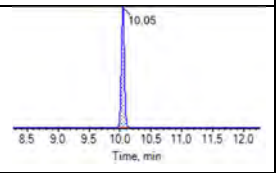
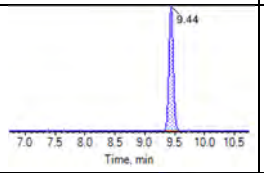
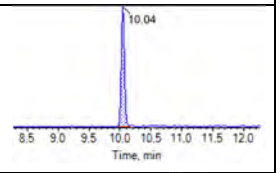
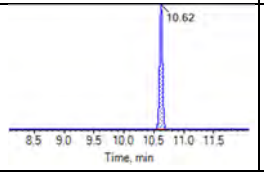
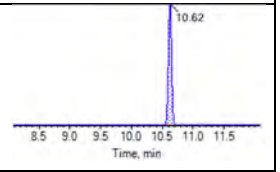
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1174000	N/A	N/A	1000.0	1017.6	101.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	82480	13C2_8:2 FTS	23650	720.0	676.8	94.0	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.09 (10.09)	76340	13C2_8:2 FTS	23650	720.0	646.3	89.8	0.93/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	822000	13C8_PFOS	69030	720.0	754.4	104.8	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	141600	13C8_PFOS	69030	720.0	713.3	99.1	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	520500	13C7_PFUdA	203300	750.0	719.0	95.9	1.00/ 1.00		

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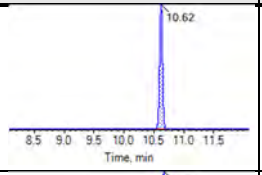
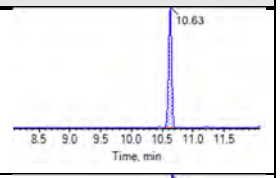
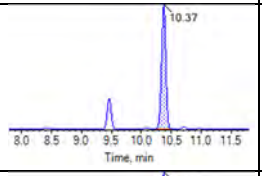
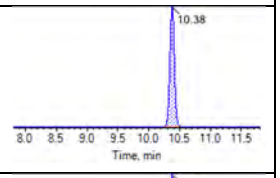
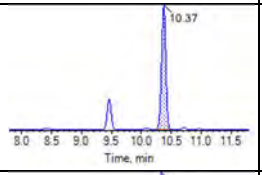
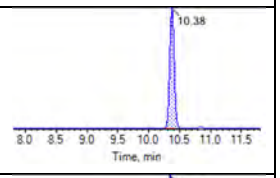
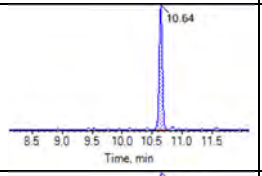
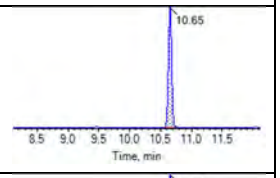
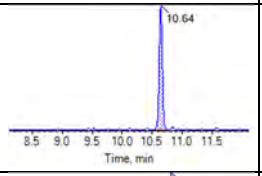
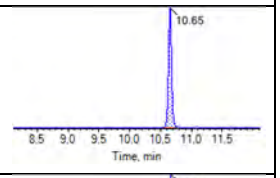
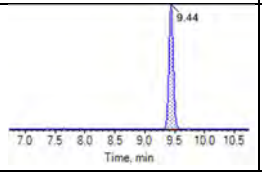
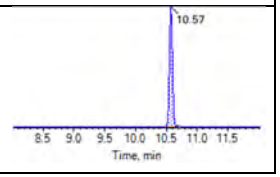
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	65130	13C7_PFUdA	203300	750.0	755.0	100.7	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.38 (10.37)	139900	d3-N-MeFOSAA	51150	750.0	689.6	91.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	74720	d3-N-MeFOSAA	51150	750.0	747.8	99.7	0.53/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.65 (10.64)	150600	d5-N-EtFOSAA	47640	750.0	778.8	103.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	76880	d5-N-EtFOSAA	47640	750.0	836.6	111.5	0.51/ 0.48		
PFDS	599.0 / 80.0	10.57 (10.93)	964500	13C8_PFOS	69030	723.8	725.7	100.3	1.00/ 1.00		

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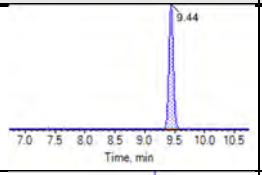
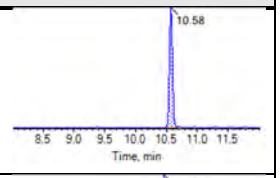
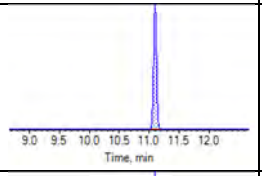
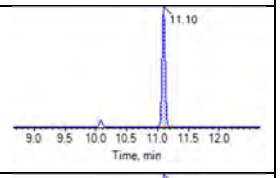
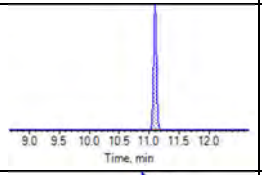
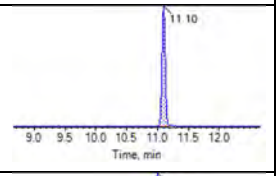
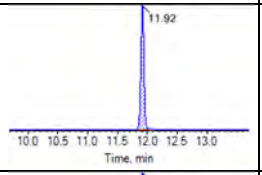
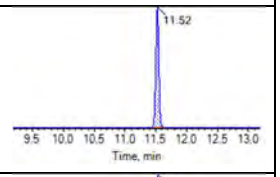
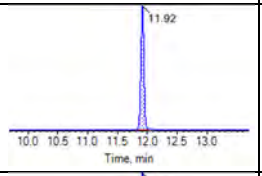
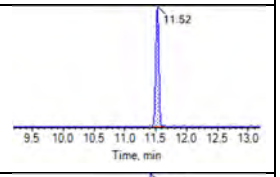
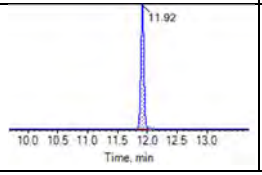
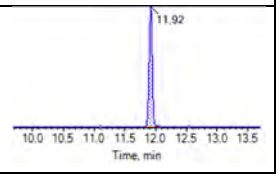
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	233800	13C8_PFOS	69030	723.8	660.5	91.3	0.24/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	520100	13C2_PFDoA	171500	750.0	805.4	107.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	79330	13C2_PFDoA	171500	750.0	751.5	100.2	0.15/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	466000	13C2_PFTeDA	124300	750.0	762.2	101.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	102400	13C2_PFTeDA	124300	750.0	757.4	101.0	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	357300	13C2_PFTeDA	124300	750.0	797.8	106.4	1.00/ 1.00		

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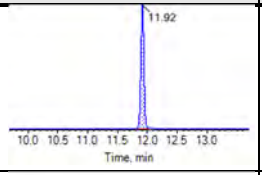
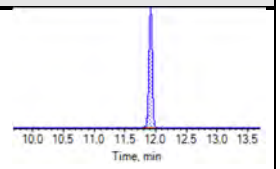
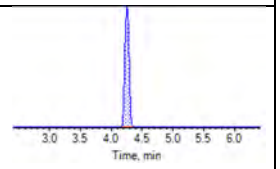
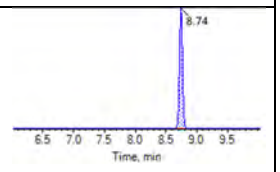
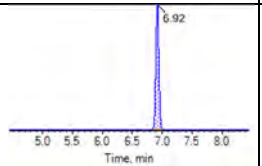
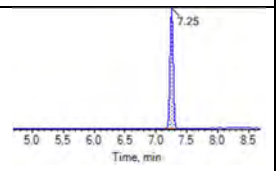
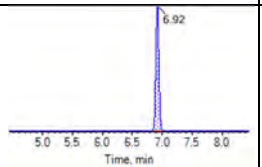
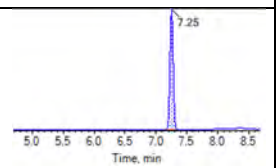
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	75610	13C2_PFTeDA	124300	750.0	766.6	102.2	0.21/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1749000	N/A	N/A	1000.0	1010.7	101.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1228000	N/A	N/A	1000.0	997.8	99.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	559800	13C5_PFHxA	309400	750.0	727.4	97.0	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	408300	13C5_PFHxA	309400	750.0	705.1	94.0	0.73/ 0.75		

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LCMSMS#6

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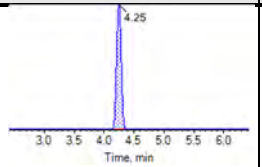
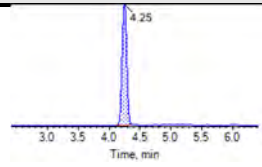
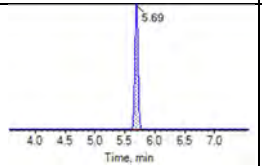
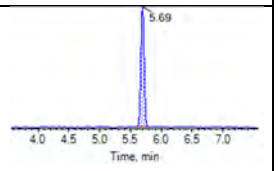
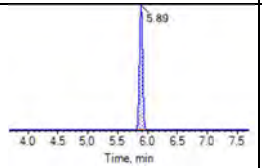
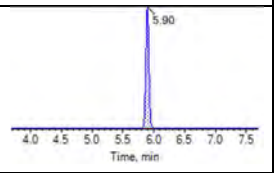
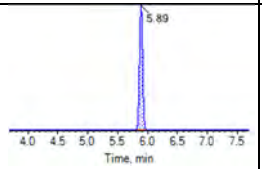
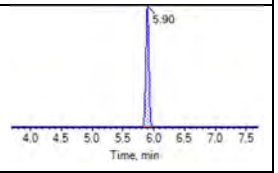
PFC103117007.wiff			
Sample Name	WPF171018-05	**Injection Vial**	6
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117007.wiff
Acquisition Date	10/31/2017 18:21:33	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117007.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1028000	13C4_PFBA	142000	1000.0	1026.7	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	999500	13C5_PFPeA	235000	1000.0	988.5	98.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1387000	13C3_PFBS	145100	885.0	969.9	109.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	649800	13C3_PFBS	145100	885.0	1012.3	114.4	0.47/ 0.45		

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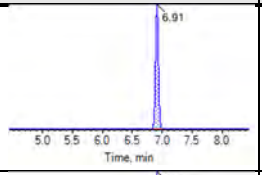
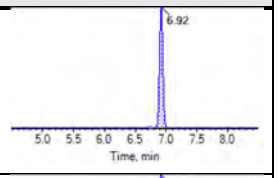
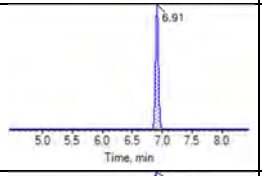
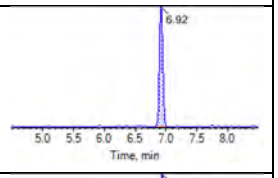
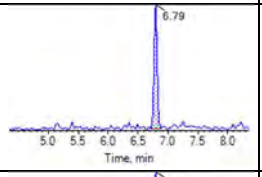
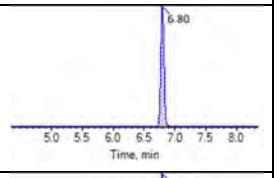
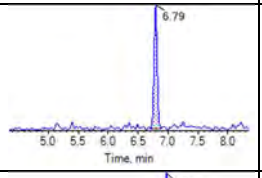
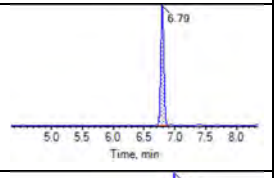
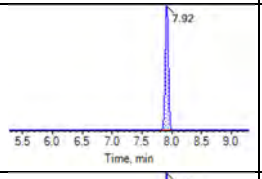
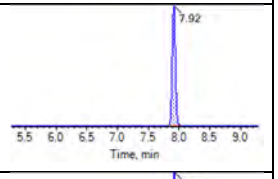
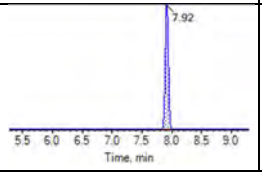
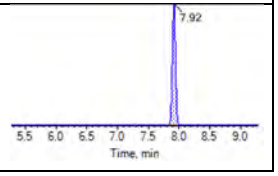
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1069000	13C5_PFHxA	287400	1000.0	980.0	98.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	78140	13C5_PFHxA	287400	1000.0	1013.1	101.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	174600	13C2_4:2 FTS	26660	935.0	1093.9	117.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	138600	13C2_4:2 FTS	26660	935.0	1208.6	129.3	0.79/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1052000	13C4_PFHpA	260000	1000.0	967.2	96.7	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	263700	13C4_PFHpA	260000	1000.0	927.4	92.7	0.25/ 0.26		

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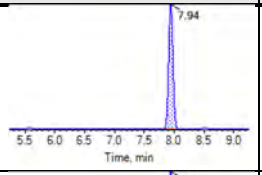
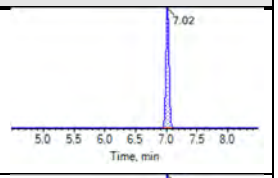
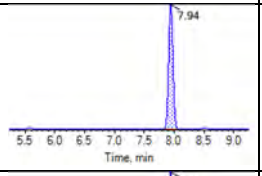
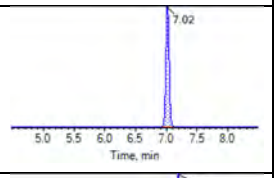
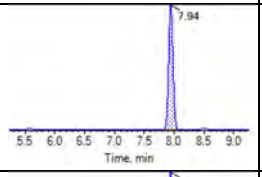
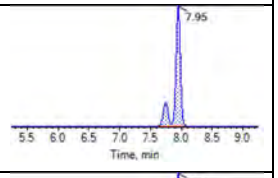
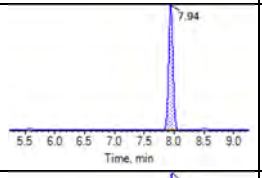
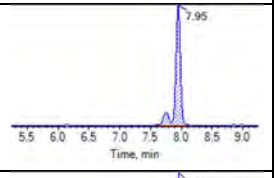
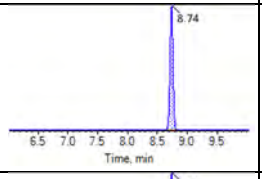
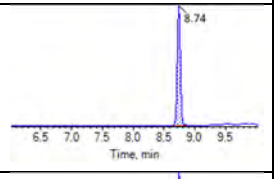
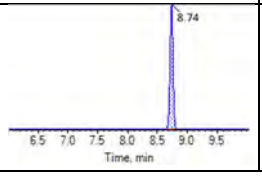
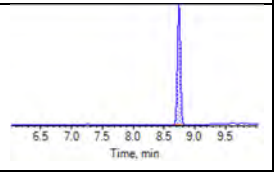
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1464000	13C3_PFHxS	82910	940.0	843.5	89.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	530700	13C3_PFHxS	82910	940.0	875.1	93.1	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1331000	13C3_PFHxS	82910	912.0	832.5	91.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	333300	13C3_PFHxS	82910	912.0	825.3	90.5	0.25/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	1037000	13C8_PFOA	237800	1000.0	1033.9	103.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.74 (8.75)	352100	13C8_PFOA	237800	1000.0	940.6	94.1	0.34/ 0.37		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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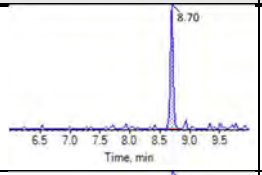
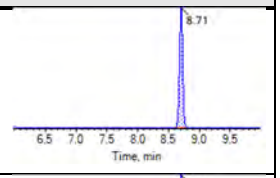
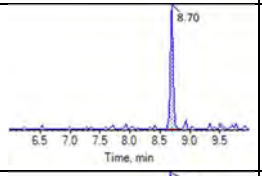
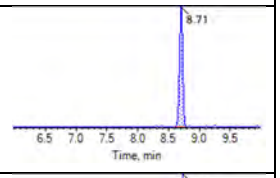
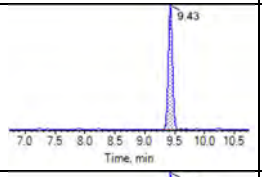
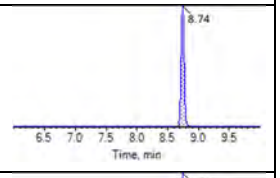
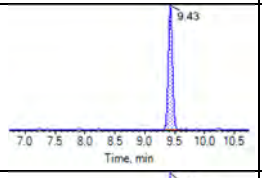
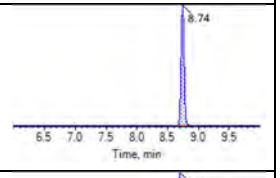
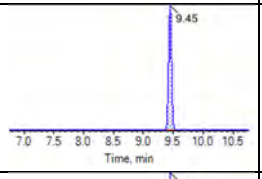
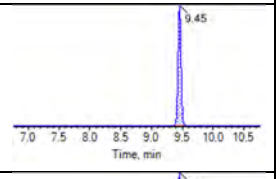
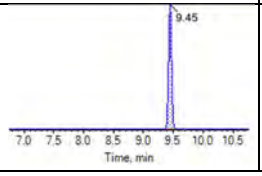
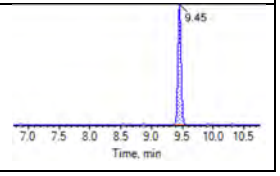
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	165700	13C2_6:2 FTS	28340	950.0	1108.9	116.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	150400	13C2_6:2 FTS	28340	950.0	1120.6	118.0	0.91/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	1332000	13C8_PFOS	60240	950.0	1133.7	119.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	275900	13C8_PFOS	60240	950.0	1166.9	122.8	0.21/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	879400	13C9_PFNA	240000	1000.0	1090.5	109.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	187700	13C9_PFNA	240000	1000.0	965.3	96.5	0.21/ 0.24		

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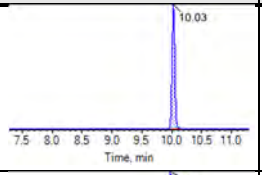
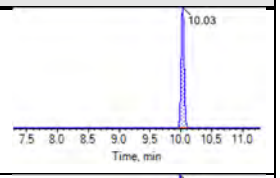
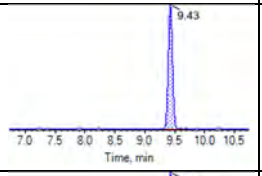
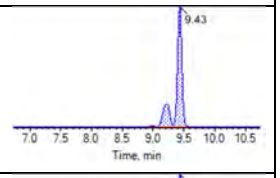
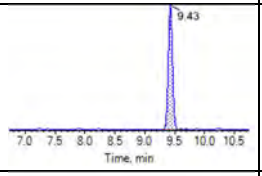
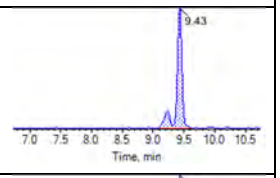
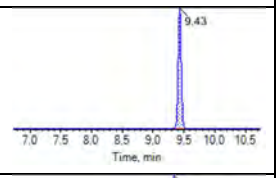
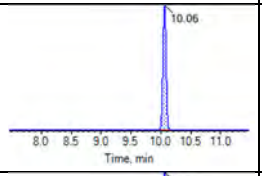
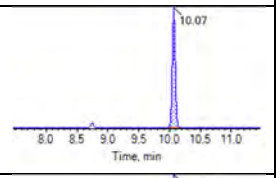
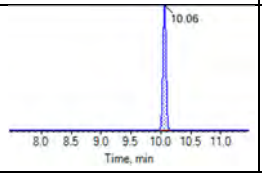
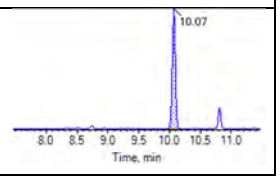
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	1847000	13C8_PFOSA	517000	925.5	955.0	103.2	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	1165000	13C8_PFOS	60240	1000.0	1190.7	119.1	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	148600	13C8_PFOS	60240	1000.0	1028.3	102.8	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1668000	N/A	N/A	1000.0	994.4	99.4	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	714500	13C6_PFDA	156800	1000.0	884.1	88.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	89470	13C6_PFDA	156800	1000.0	883.9	88.4	0.13/ 0.13		

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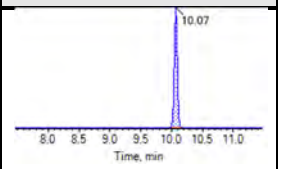
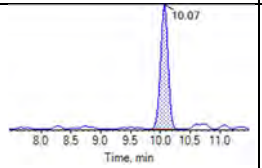
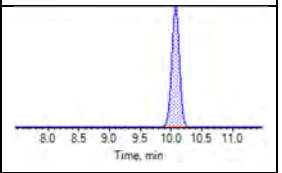
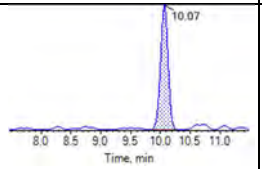
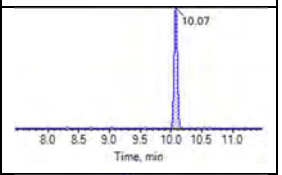
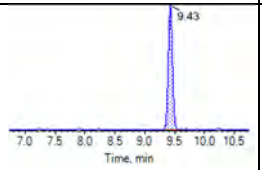
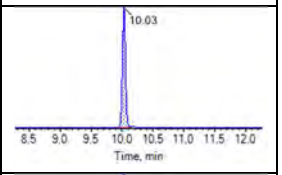
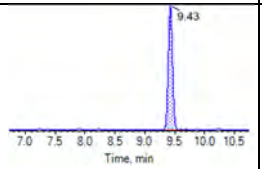
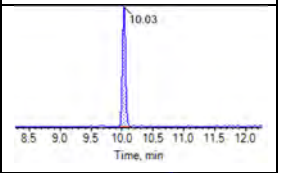
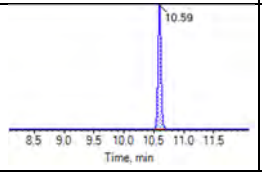
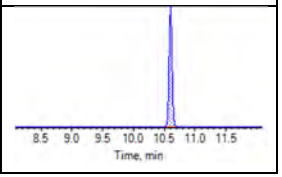
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1105000	N/A	N/A	1000.0	957.8	95.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	103100	13C2_8:2 FTS	24270	960.0	824.0	85.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	103600	13C2_8:2 FTS	24270	960.0	855.0	89.1	1.01/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1064000	13C8_PFOS	60240	960.0	1118.6	116.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	204900	13C8_PFOS	60240	960.0	1182.8	123.2	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	738100	13C7_PFUdA	198300	1000.0	1045.4	104.5	1.00/ 1.00		

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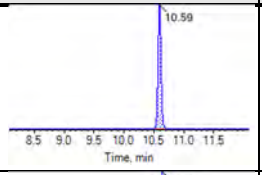
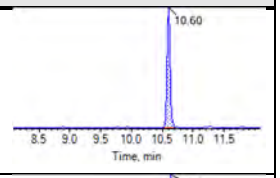
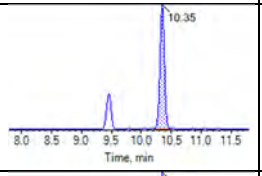
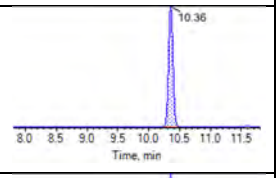
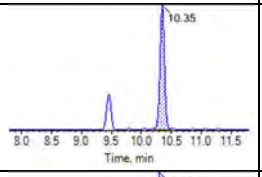
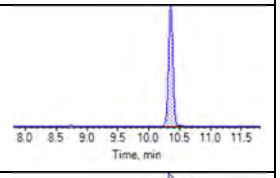
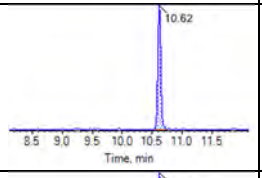
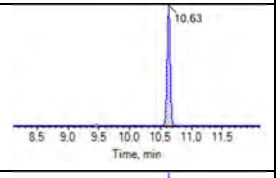
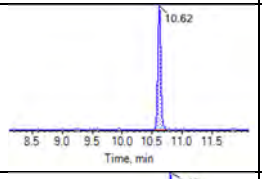
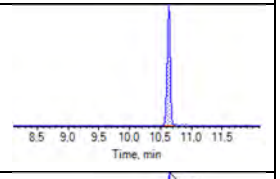
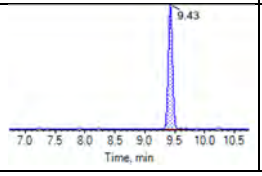
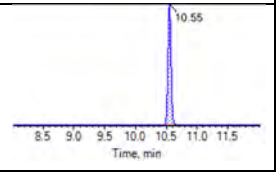
PFUdA_2	563.0 / 169.0	10.60 (10.62)	91010	13C7_PFUdA	198300	1000.0	1081.7	108.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	187000	d3-N-MeFOSAA	49860	1000.0	945.7	94.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	89990	d3-N-MeFOSAA	49860	1000.0	923.8	92.4	0.48/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	196000	d5-N-EtFOSAA	51440	1000.0	938.5	93.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	92660	d5-N-EtFOSAA	51440	1000.0	933.6	93.4	0.47/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	1311000	13C8_PFOS	60240	965.0	1129.9	117.1	1.00/ 1.00		

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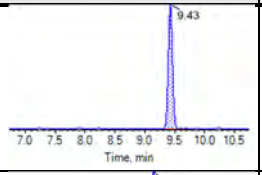
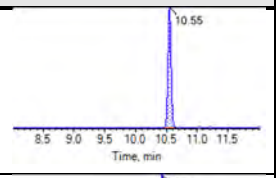
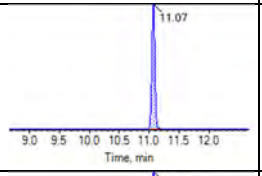
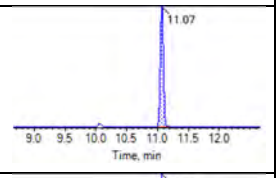
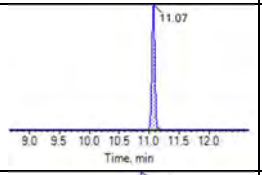
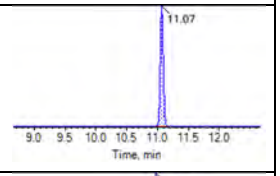
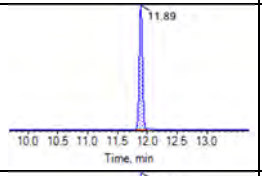
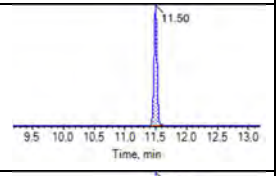
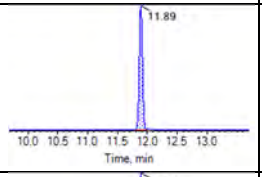
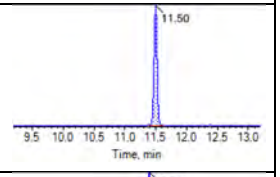
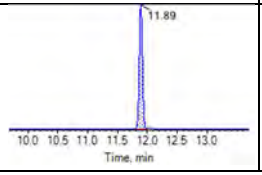
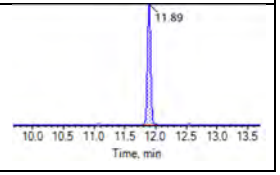
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	339600	13C8_PFOS	60240	965.0	1099.1	113.9	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	710800	13C2_PFDoA	192600	1000.0	979.8	98.0	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	117800	13C2_PFDoA	192600	1000.0	993.5	99.3	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	628200	13C2_PFTeDA	123800	1000.0	1032.0	103.2	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	147600	13C2_PFTeDA	123800	1000.0	1096.3	109.6	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	478600	13C2_PFTeDA	123800	1000.0	1073.2	107.3	1.00/ 1.00		

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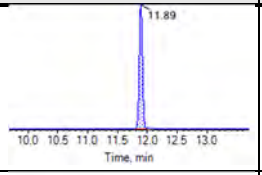
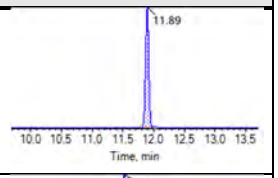
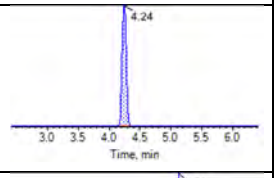
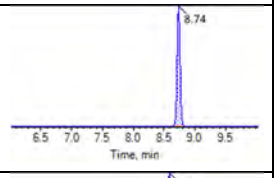
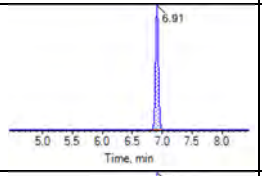
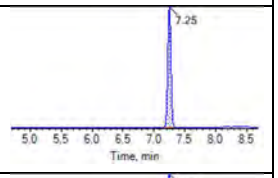
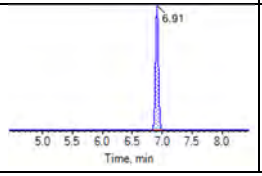
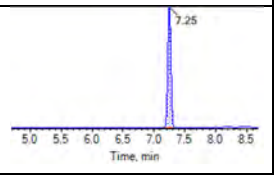
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	97510	13C2_PFTeDA	123800	1000.0	993.0	99.3	0.20/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1680000	N/A	N/A	1000.0	971.1	97.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1289000	N/A	N/A	1000.0	1047.9	104.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	735100	13C5_PFHxA	287400	1000.0	1028.5	102.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	604200	13C5_PFHxA	287400	1000.0	1123.4	112.3	0.82/ 0.75		

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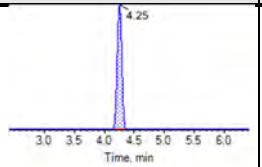
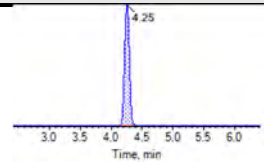
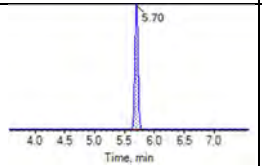
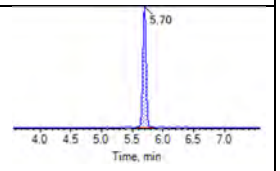
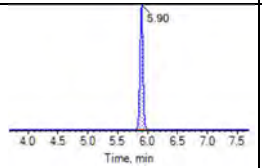
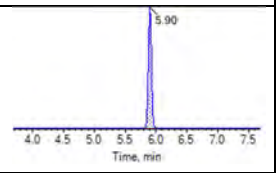
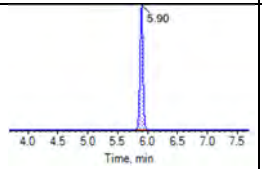
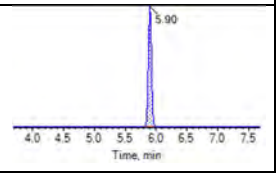
PFC103117008.wiff			
Sample Name	WPF171018-06	**Injection Vial**	7
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117008.wiff
Acquisition Date	10/31/2017 18:42:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117008.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1489000	13C4_PFBA	150400	1500.0	1405.2	93.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1422000	13C5_PFPeA	237800	1500.0	1390.0	92.7	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1939000	13C3_PFBS	153900	1327.5	1278.4	96.3	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	884500	13C3_PFBS	153900	1327.5	1298.7	97.8	0.46/ 0.45		

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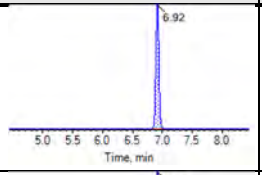
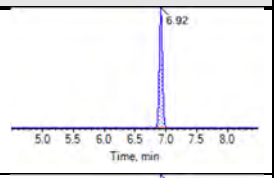
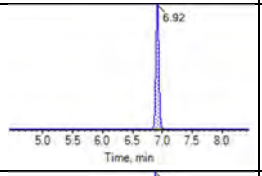
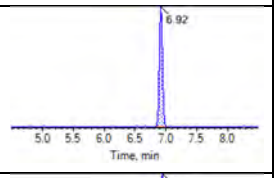
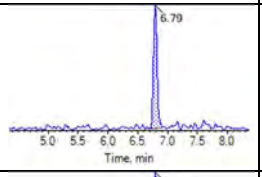
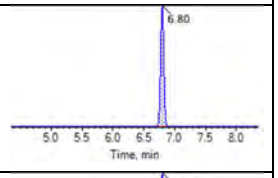
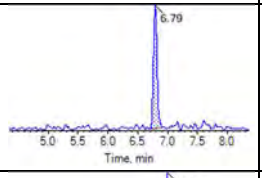
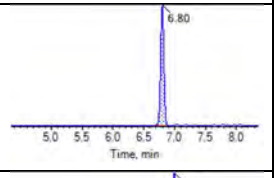
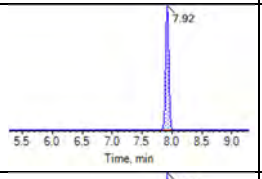
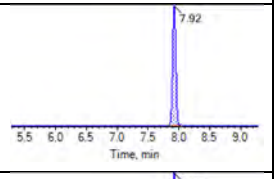
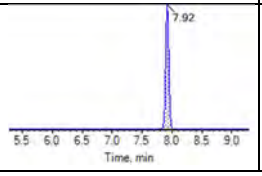
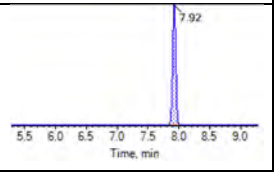
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1631000	13C5_PFHxA	304900	1500.0	1408.8	93.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	116200	13C5_PFHxA	304900	1500.0	1420.4	94.7	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	246100	13C2_4:2 FTS	33620	1402.5	1222.8	87.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	182300	13C2_4:2 FTS	33620	1402.5	1260.8	89.9	0.74/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1479000	13C4_PFHpA	237500	1500.0	1488.5	99.2	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	376400	13C4_PFHpA	237500	1500.0	1449.0	96.6	0.25/ 0.26		

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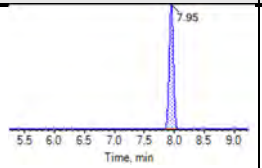
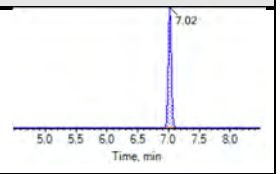
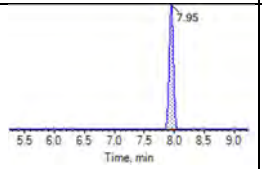
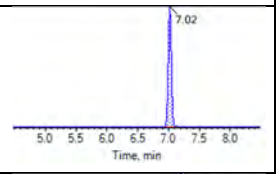
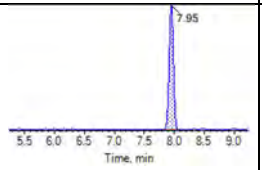
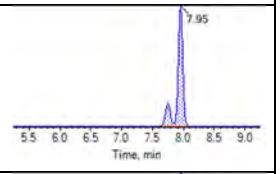
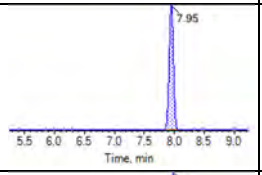
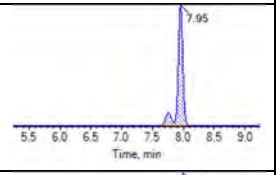
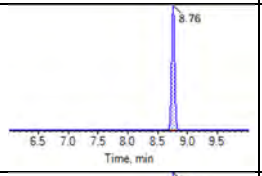
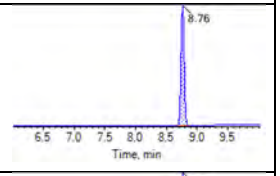
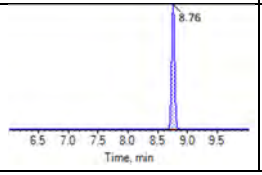
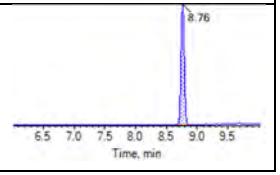
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	2099000	13C3_PFHxS	64940	1410.0	1543.5	109.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	739400	13C3_PFHxS	64940	1410.0	1556.4	110.4	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1950000	13C3_PFHxS	64940	1368.0	1556.7	113.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	488300	13C3_PFHxS	64940	1368.0	1543.6	112.8	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	1426000	13C8_PFOA	252800	1500.0	1337.0	89.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	520200	13C8_PFOA	252800	1500.0	1307.2	87.1	0.36/ 0.37		

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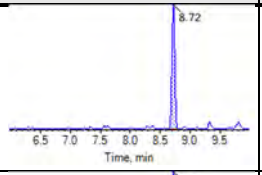
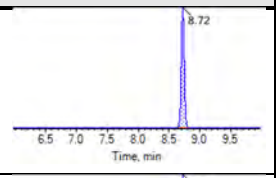
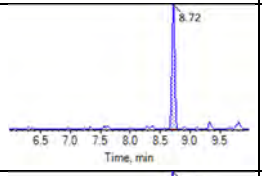
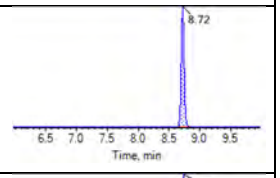
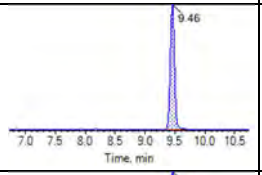
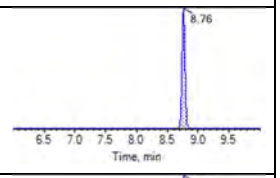
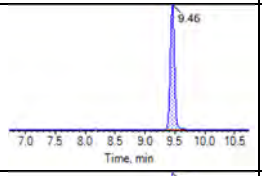
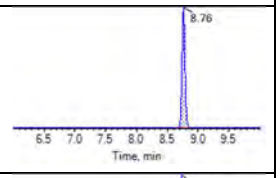
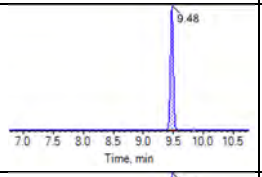
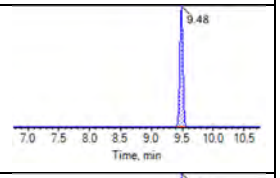
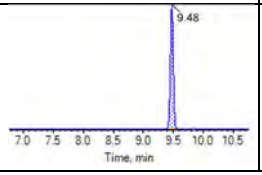
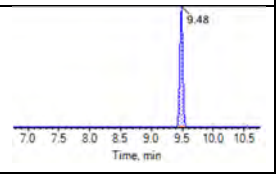
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	255200	13C2_6:2 FTS	32970	1425.0	1467.4	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	215100	13C2_6:2 FTS	32970	1425.0	1377.5	96.7	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	1807000	13C8_PFOS	71370	1425.0	1298.7	91.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	360500	13C8_PFOS	71370	1425.0	1287.1	90.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	1241000	13C9_PFNA	232700	1500.0	1586.5	105.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.48 (9.47)	300400	13C9_PFNA	232700	1500.0	1592.9	106.2	0.24/ 0.24		

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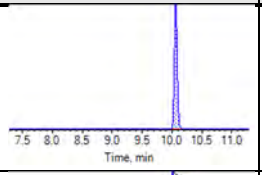
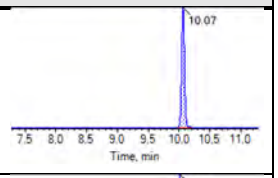
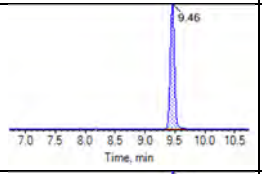
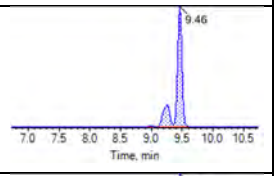
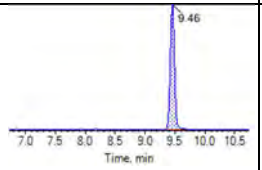
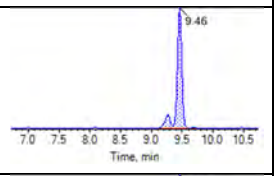
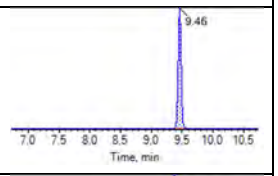
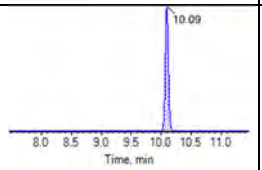
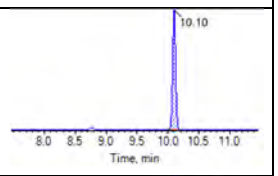
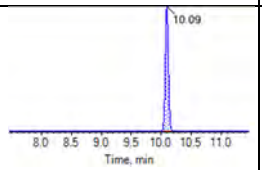
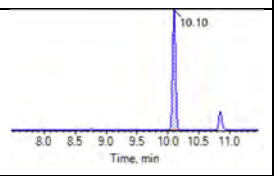
PFOSA	498.0 / 78.0	10.07 (10.04)	2835000	13C8_PFOSA	588100	1388.3	1288.5	92.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1614000	13C8_PFOS	71370	1500.0	1391.8	92.8	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	232800	13C8_PFOS	71370	1500.0	1359.6	90.6	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1663000	N/A	N/A	1000.0	991.6	99.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	1182000	13C6_PFDA	152400	1500.0	1505.0	100.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	136700	13C6_PFDA	152400	1500.0	1388.9	92.6	0.12/ 0.13		

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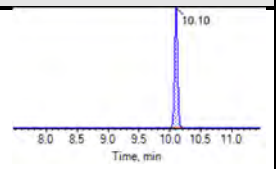
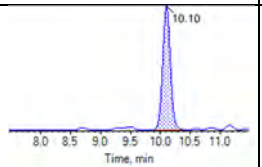
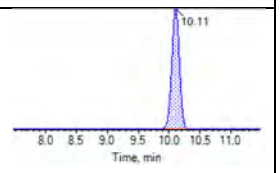
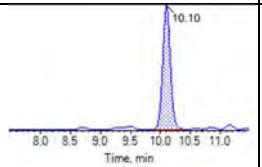
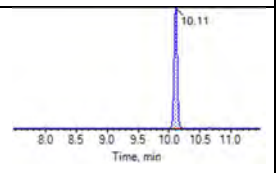
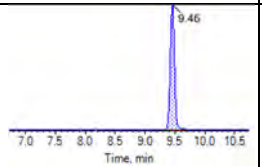
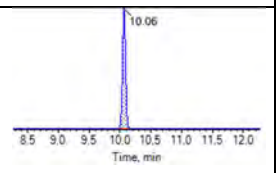
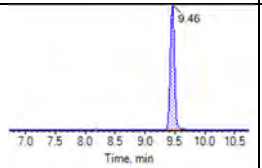
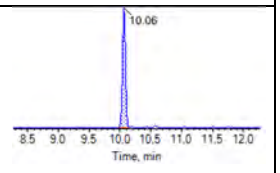
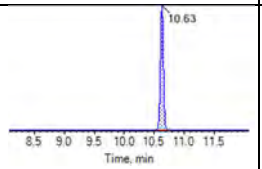
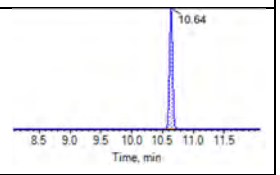
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1111000	N/A	N/A	1000.0	963.2	96.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	187700	13C2_8:2 FTS	26430	1440.0	1378.3	95.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	164700	13C2_8:2 FTS	26430	1440.0	1247.9	86.7	0.88/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1494000	13C8_PFOS	71370	1440.0	1326.4	92.1	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	268300	13C8_PFOS	71370	1440.0	1307.5	90.8	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	992100	13C7_PFUdA	189300	1500.0	1471.6	98.1	1.00/ 1.00		

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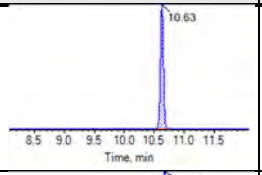
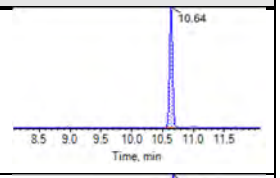
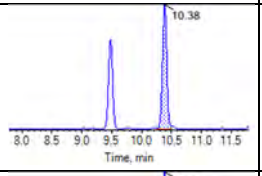
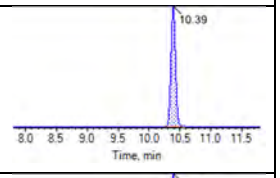
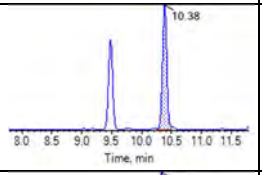
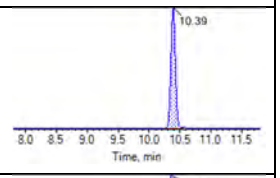
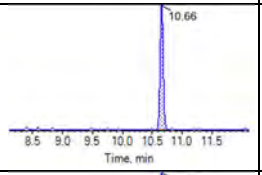
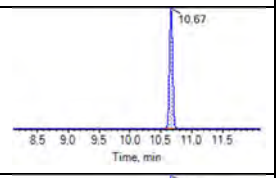
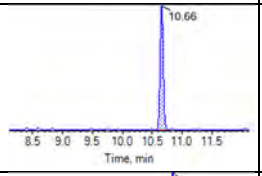
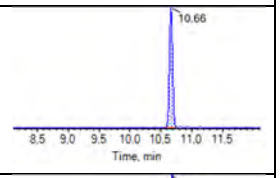
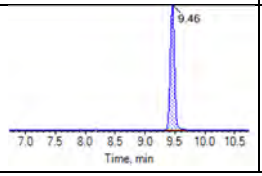
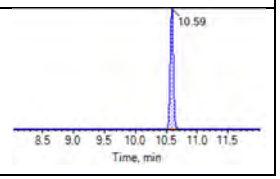
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.64 (10.62)	122800	13C7_PFUdA	189300	1500.0	1528.8	101.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	275600	d3-N-MeFOSAA	43350	1500.0	1602.9	106.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	126100	d3-N-MeFOSAA	43350	1500.0	1488.4	99.2	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	317000	d5-N-EtFOSAA	56120	1500.0	1391.5	92.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	149600	d5-N-EtFOSAA	56120	1500.0	1381.7	92.1	0.47/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	1748000	13C8_PFOS	71370	1447.5	1272.1	87.9	1.00/ 1.00		

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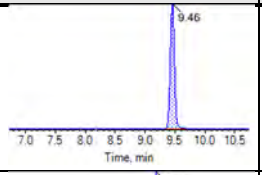
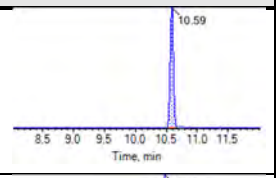
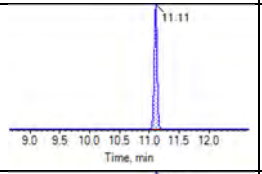
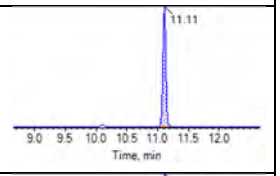
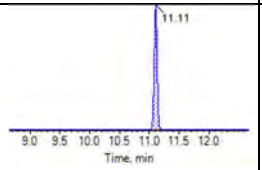
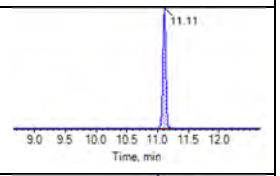
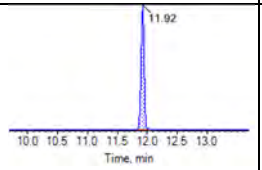
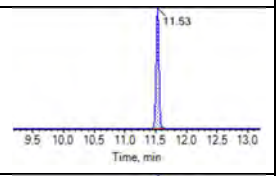
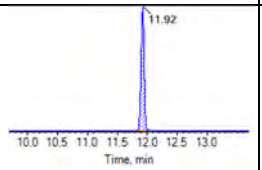
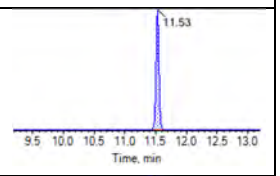
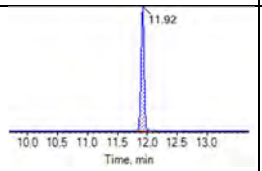
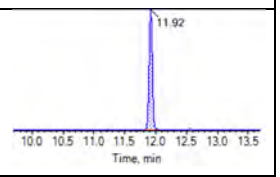
PFDS_2	599.0 / 99.0	10.59 (10.93)	446100	13C8_PFOS	71370	1447.5	1218.8	84.2	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	1040000	13C2_PFDoA	185200	1500.0	1490.6	99.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	163200	13C2_PFDoA	185200	1500.0	1431.6	95.4	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	941100	13C2_PFTeDA	133400	1500.0	1434.5	95.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	199800	13C2_PFTeDA	133400	1500.0	1377.4	91.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	672900	13C2_PFTeDA	133400	1500.0	1400.3	93.4	1.00/ 1.00		

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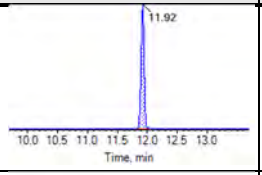
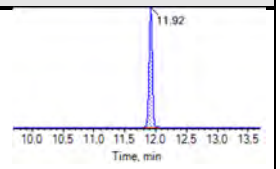
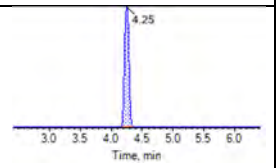
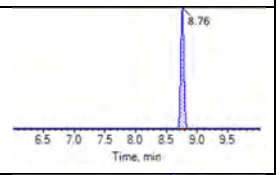
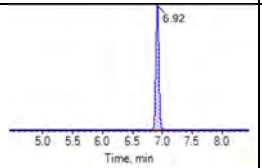
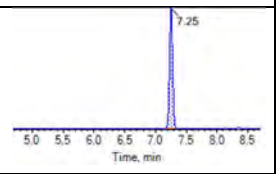
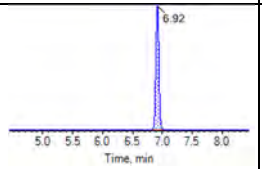
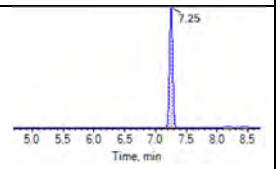
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	150000	13C2_PFTeDA	133400	1500.0	1417.9	94.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1642000	N/A	N/A	1000.0	948.9	94.9	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1265000	N/A	N/A	1000.0	1028.0	102.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1099000	13C5_PFHxA	304900	1500.0	1449.9	96.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	823200	13C5_PFHxA	304900	1500.0	1442.9	96.2	0.75/ 0.75		

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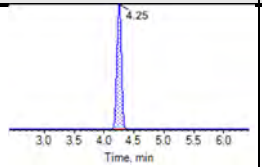
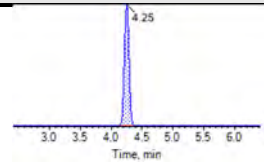
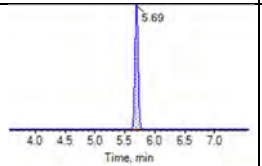
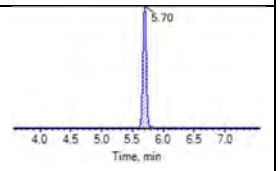
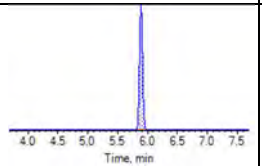
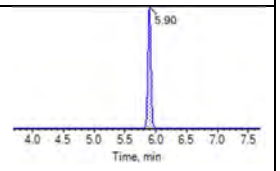
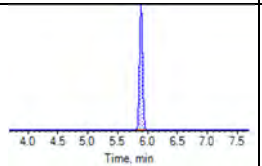
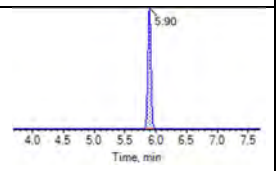
PFC103117009.wiff			
Sample Name	WPF171018-07	**Injection Vial**	8
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117009.wiff
Acquisition Date	10/31/2017 19:04:19	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117009.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	2053000	13C4_PFBA	145700	2000.0	1999.6	100.0	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1921000	13C5_PFPeA	223300	2000.0	2000.1	100.0	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	2726000	13C3_PFBS	152900	1770.0	1808.9	102.2	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	1193000	13C3_PFBS	152900	1770.0	1762.6	99.6	0.44/ 0.45		

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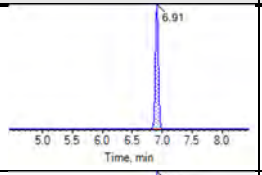
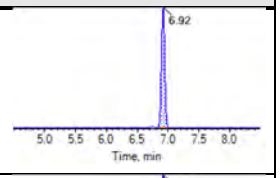
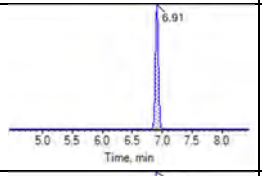
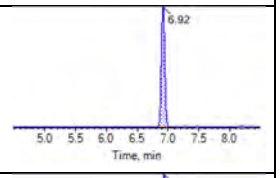
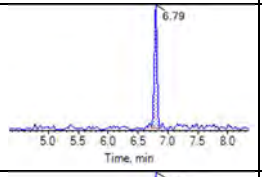
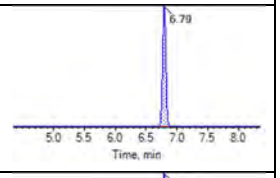
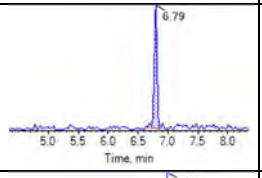
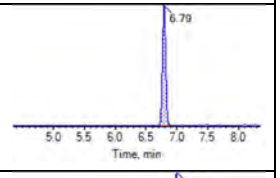
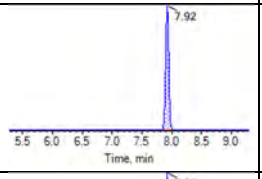
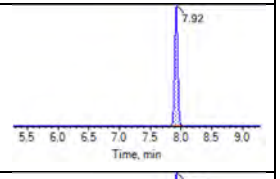
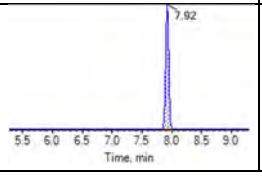
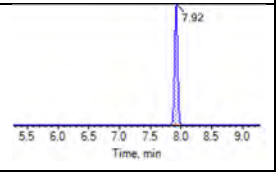
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	2215000	13C5_PFHxA	294500	2000.0	1981.5	99.1	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	158400	13C5_PFHxA	294500	2000.0	2004.2	100.2	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	359900	13C2_4:2 FTS	27160	1870.0	2214.1	118.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	247600	13C2_4:2 FTS	27160	1870.0	2120.3	113.4	0.69/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	2024000	13C4_PFHpA	239900	2000.0	2017.1	100.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	499000	13C4_PFHpA	239900	2000.0	1902.1	95.1	0.25/ 0.26		

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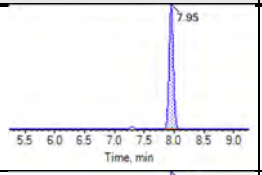
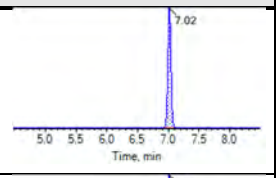
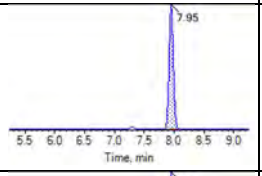
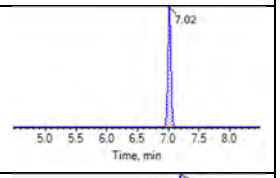
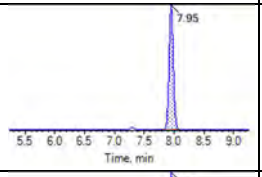
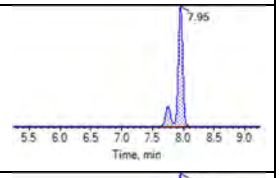
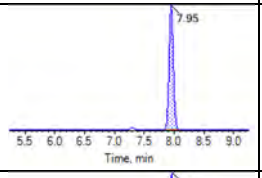
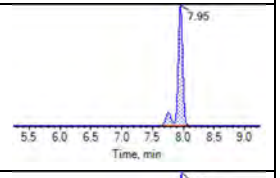
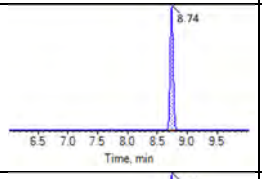
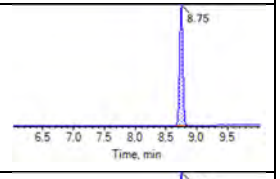
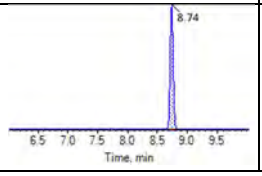
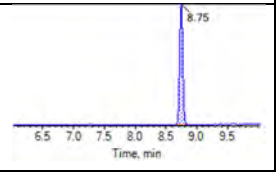
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	3042000	13C3_PFHxS	83220	1880.0	1746.1	92.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	1102000	13C3_PFHxS	83220	1880.0	1809.6	96.3	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	2701000	13C3_PFHxS	83220	1824.0	1682.8	92.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	673200	13C3_PFHxS	83220	1824.0	1660.8	91.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	1955000	13C8_PFOA	225600	2000.0	2053.8	102.7	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	699100	13C8_PFOA	225600	2000.0	1968.2	98.4	0.36/ 0.37		

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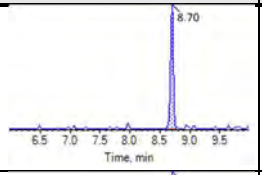
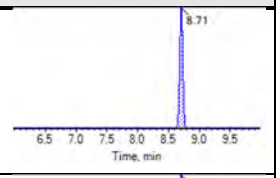
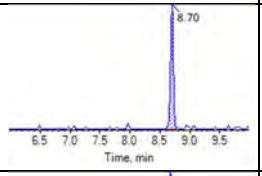
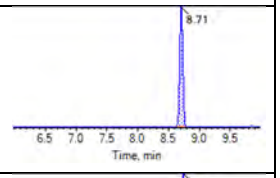
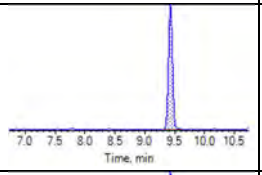
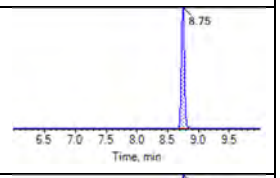
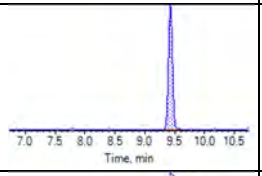
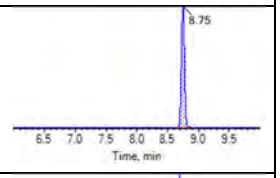
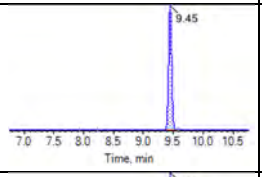
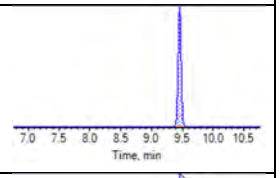
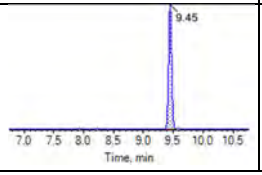
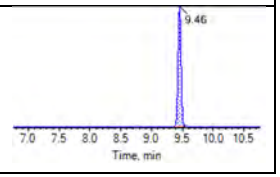
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	301500	13C2_6:2 FTS	29880	1900.0	1913.2	100.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	283300	13C2_6:2 FTS	29880	1900.0	2001.9	105.4	0.94/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	2539000	13C8_PFOS	66190	1900.0	1967.8	103.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	496500	13C8_PFOS	66190	1900.0	1911.1	100.6	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	1649000	13C9_PFNA	223400	2000.0	2195.7	109.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	367500	13C9_PFNA	223400	2000.0	2029.9	101.5	0.22/ 0.24		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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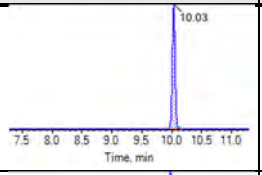
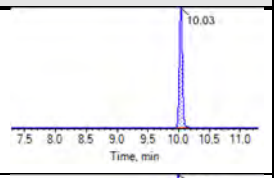
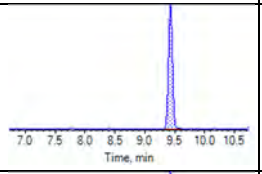
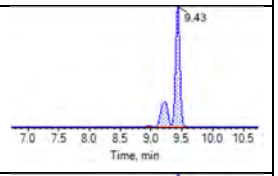
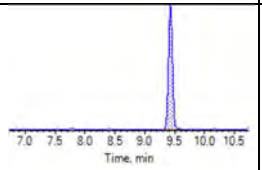
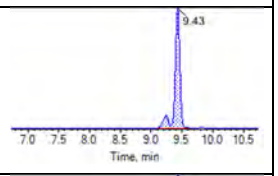
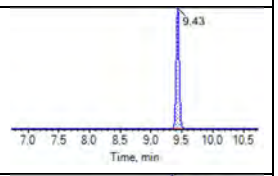
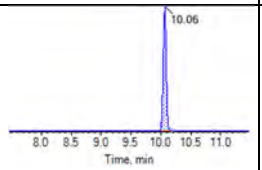
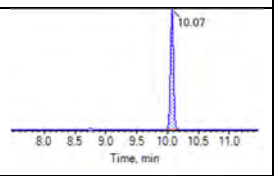
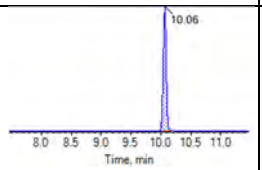
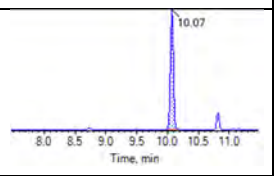
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	3524000	13C8_PFOSA	519300	1851.0	1813.9	98.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	2095000	13C8_PFOS	66190	2000.0	1948.3	97.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	291100	13C8_PFOS	66190	2000.0	1833.0	91.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1670000	N/A	N/A	1000.0	995.6	99.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	1453000	13C6_PFDA	138600	2000.0	2034.1	101.7	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	181400	13C6_PFDA	138600	2000.0	2027.1	101.4	0.12/ 0.13		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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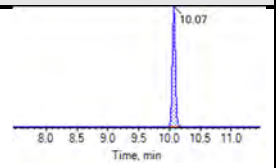
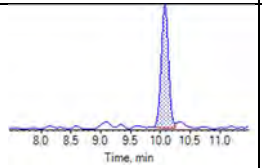
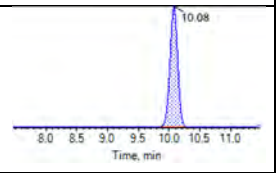
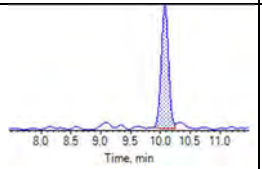
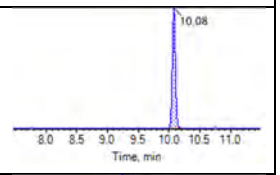
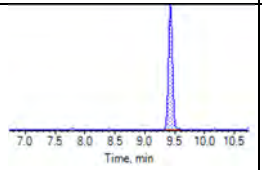
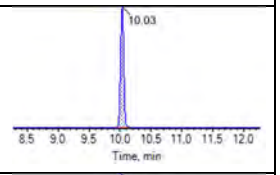
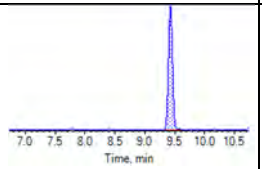
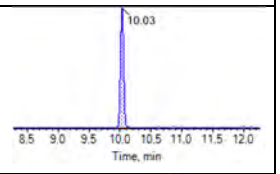
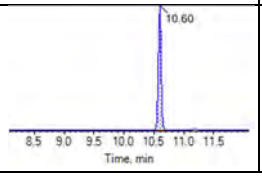
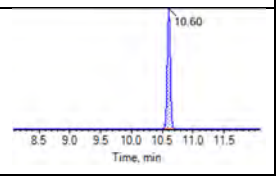
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1082000	N/A	N/A	1000.0	938.0	93.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	222200	13C2_8:2 FTS	22570	1920.0	1910.6	99.5	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	212000	13C2_8:2 FTS	22570	1920.0	1881.0	98.0	0.95/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1996000	13C8_PFOS	66190	1920.0	1910.7	99.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	372800	13C8_PFOS	66190	1920.0	1959.1	102.0	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	1448000	13C7_PFUdA	215200	2000.0	1889.7	94.5	1.00/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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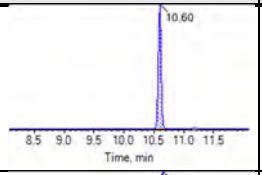
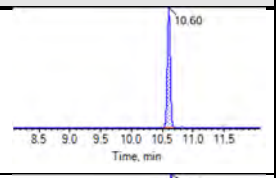
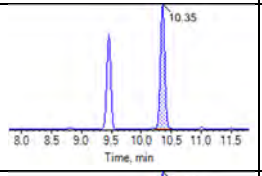
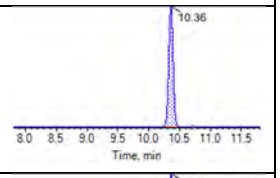
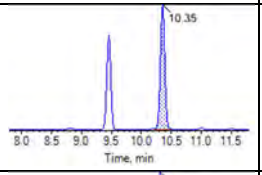
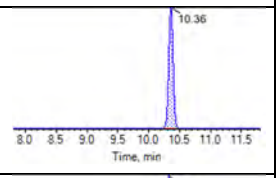
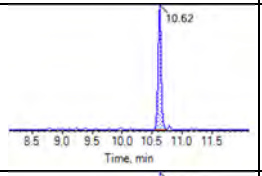
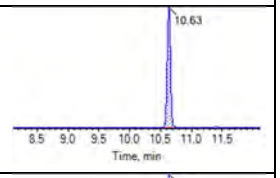
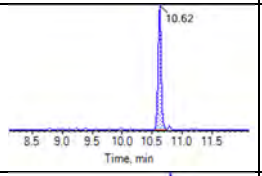
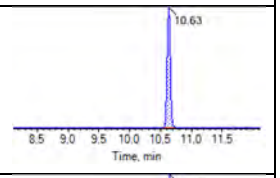
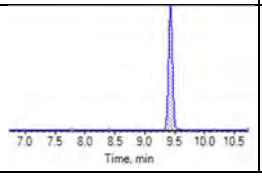
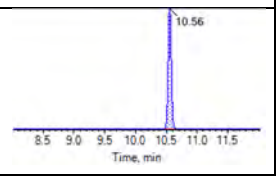
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	177500	13C7_PFUdA	215200	2000.0	1943.2	97.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	397100	d3-N-MeFOSAA	42350	2000.0	2364.4	118.2	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	202200	d3-N-MeFOSAA	42350	2000.0	2443.8	122.2	0.51/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	383000	d5-N-EtFOSAA	47710	2000.0	1977.3	98.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	190300	d5-N-EtFOSAA	47710	2000.0	2067.5	103.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	2440000	13C8_PFOS	66190	1930.0	1914.5	99.2	1.00/ 1.00		

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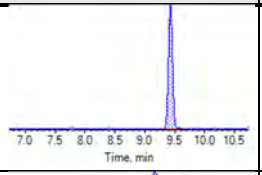
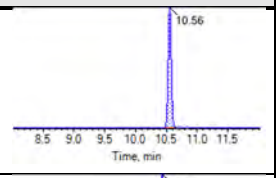
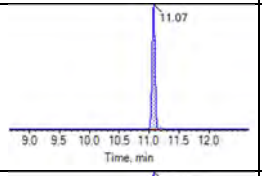
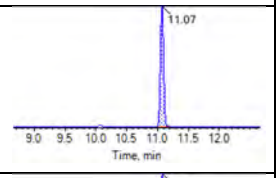
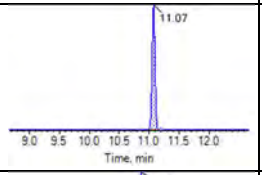
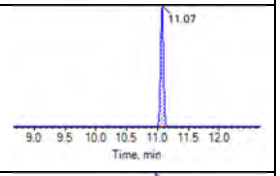
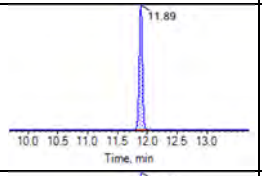
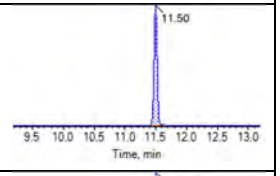
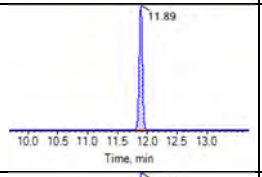
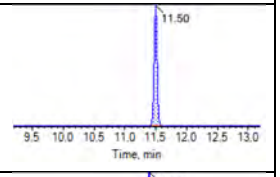
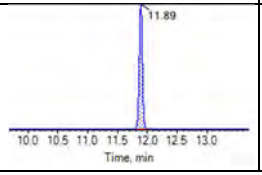
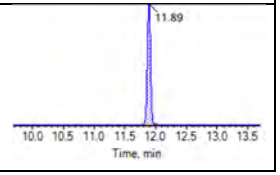
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	681800	13C8_PFOS	66190	1930.0	2008.5	104.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	1327000	13C2_PFDoA	182900	2000.0	1926.8	96.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	218800	13C2_PFDoA	182900	2000.0	1943.1	97.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	1162000	13C2_PFTeDA	124800	2000.0	1894.3	94.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	262600	13C2_PFTeDA	124800	2000.0	1935.1	96.8	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	885000	13C2_PFTeDA	124800	2000.0	1968.9	98.4	1.00/ 1.00		

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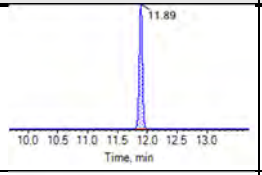
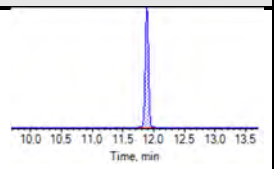
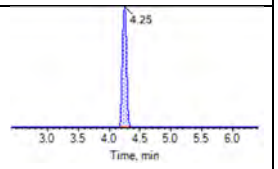
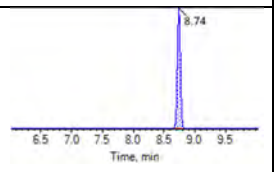
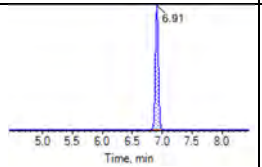
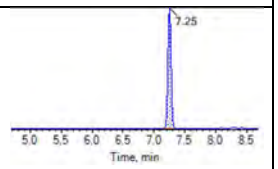
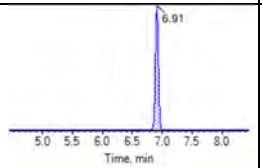
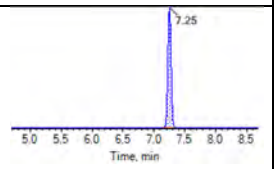
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	206700	13C2_PFTeDA	124800	2000.0	2087.7	104.4	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1664000	N/A	N/A	1000.0	962.1	96.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1180000	N/A	N/A	1000.0	959.0	95.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1391000	13C5_PFHxA	294500	2000.0	1899.0	94.9	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	1079000	13C5_PFHxA	294500	2000.0	1958.5	97.9	0.78/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:25

Data File: PFC103117010.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-08

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	100	95.734	95.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	102.683	102.7	
Perfluorotetradecanoic acid (PFTeDA)	100	97.154	97.2	
Perfluorotridecanoic acid (PFTrDA)	100	100.845	100.8	
Perfluorododecanoic acid (PFDoA)	100	99.066	99.1	
Perfluoroundecanoic acid (PFUdA)	100	106.06	106.1	
Perfluorodecanoic acid (PFDA)	100	114.979	115	
Perfluorononanoic acid (PFNA)	100	118.365	118.4	
Perfluoroheptanoic acid (PFHpA)	100	96.552	96.6	
Perfluorooctanoic acid (PFOA)	100	105.165	105.2	
Perfluorohexanoic acid (PFHxA)	100	109.036	109	
Perfluorooctanesulfonate (PFOS)	100	127.441	127.4	
Perfluorobutanesulfonate (PFBS)	88.5	80.892	91.4	
Perfluorohexanesulfonate (PFHxS)	91.2	82.93	90.9	

Recovery criteria is 70% - 130%

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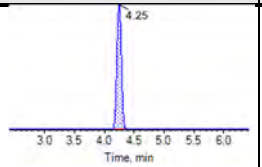
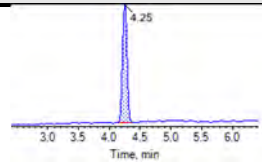
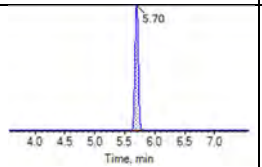
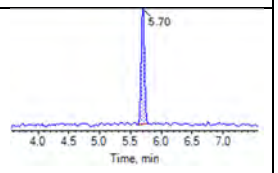
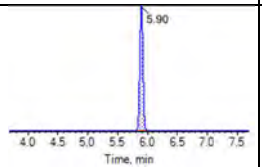
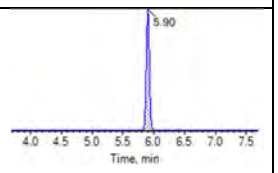
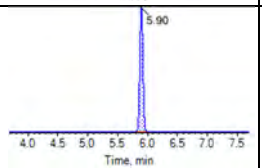
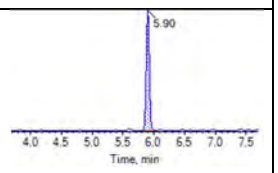
PFC103117010.wiff			
Sample Name	WPF171018-08ISC	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117010.wiff
Acquisition Date	10/31/2017 19:25:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117010.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	111100	13C4_PFBA	162400	100.0	97.1	97.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	103000	13C5_PFPeA	250800	100.0	95.5	95.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	137000	13C3_PFBS	171900	88.5	80.9	91.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	63140	13C3_PFBS	171900	88.5	83.0	93.8	0.46/ 0.45		

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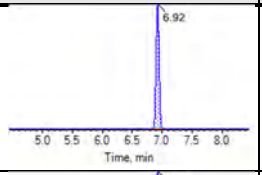
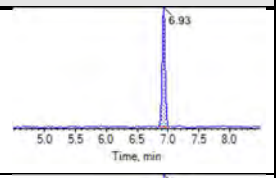
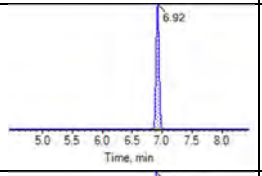
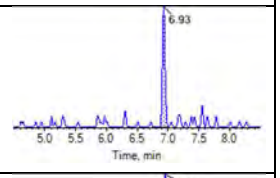
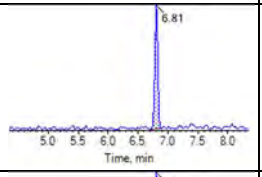
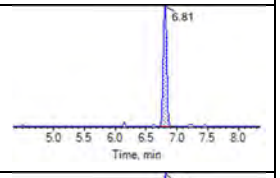
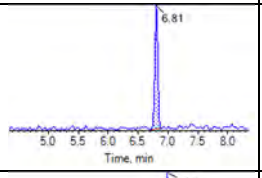
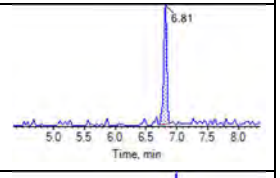
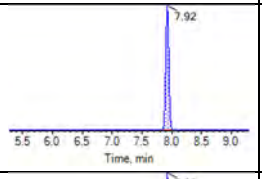
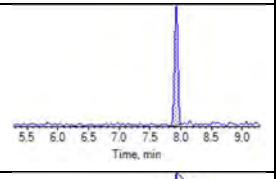
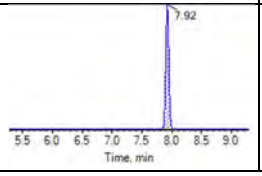
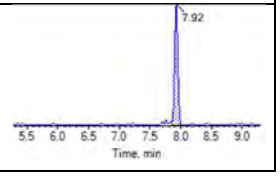
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	122100	13C5_PFHxA	294900	100.0	109.0	109.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	5888	13C5_PFHxA	294900	100.0	74.4	74.4	0.05/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	18690	13C2_4:2 FTS	34790	93.5	89.8	96.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	15480	13C2_4:2 FTS	34790	93.5	103.4	110.6	0.83/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	103100	13C4_PFHpA	255200	100.0	96.6	96.6	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	30680	13C4_PFHpA	255200	100.0	109.9	109.9	0.30/ 0.26		

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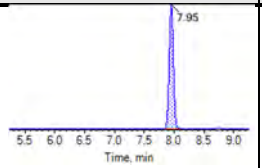
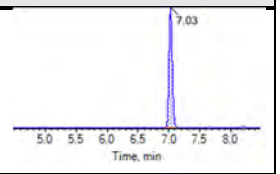
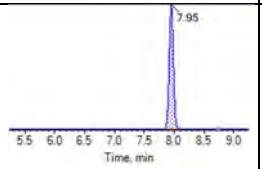
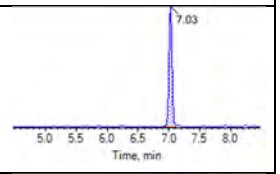
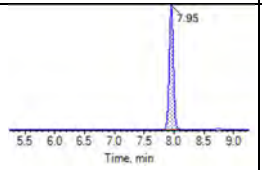
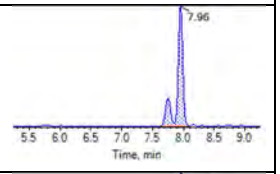
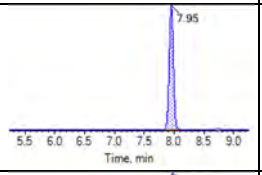
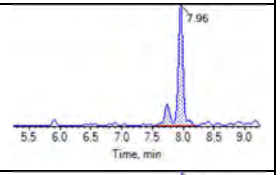
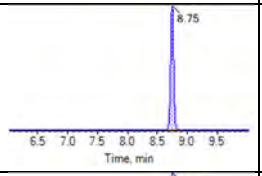
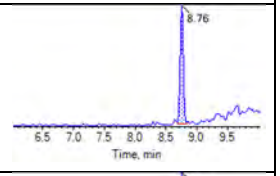
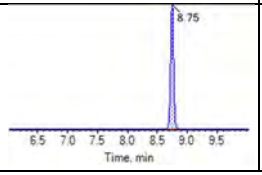
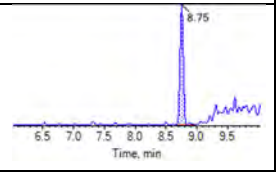
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	149300	13C3_PFHxS	86360	94.0	82.6	87.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	56890	13C3_PFHxS	86360	94.0	90.1	95.8	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	138100	13C3_PFHxS	86360	91.2	82.9	90.9	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31570	13C3_PFHxS	86360	91.2	75.1	82.3	0.23/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	111300	13C8_PFOA	250900	100.0	105.2	105.2	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	41220	13C8_PFOA	250900	100.0	104.3	104.3	0.37/ 0.37		

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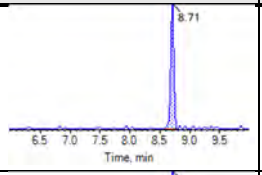
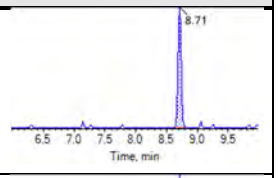
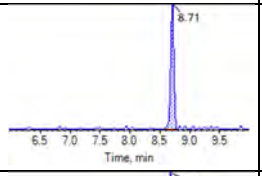
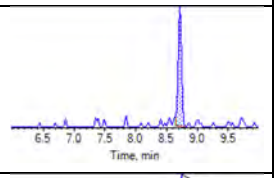
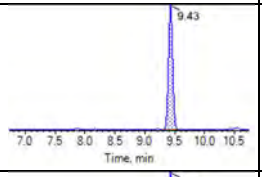
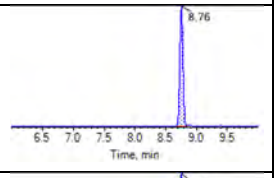
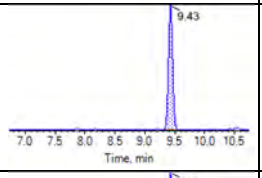
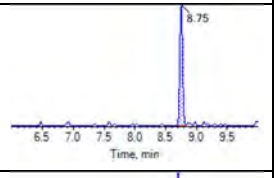
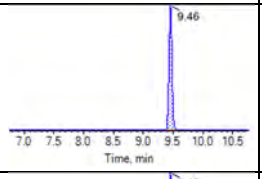
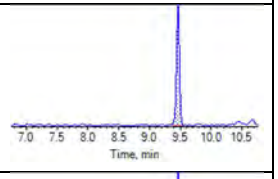
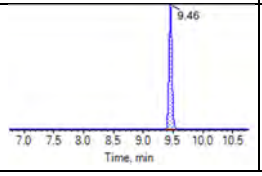
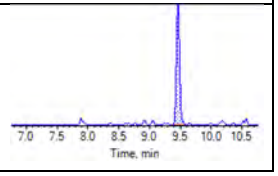
6:2 FTS	427.0 / 407.0	8.71 (8.72)	18750	13C2_6:2 FTS	36170	95.0	98.3	103.5	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	14260	13C2_6:2 FTS	36170	95.0	83.3	87.6	0.76/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	123500	13C8_PFOS	62810	95.0	100.9	106.2	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	25280	13C8_PFOS	62810	95.0	102.5	107.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	102900	13C9_PFNA	258600	100.0	118.4	118.4	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	26100	13C9_PFNA	258600	100.0	124.6	124.6	0.25/ 0.24		

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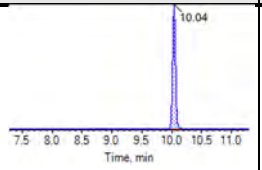
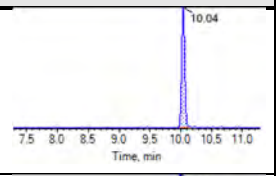
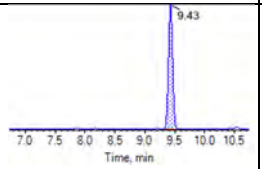
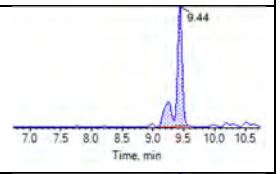
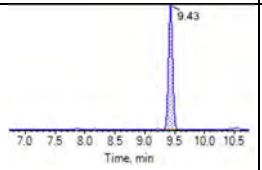
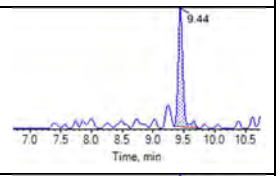
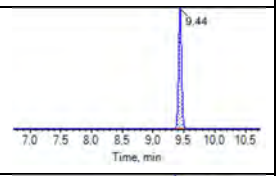
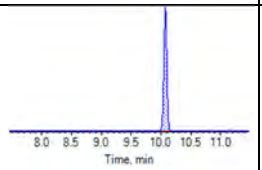
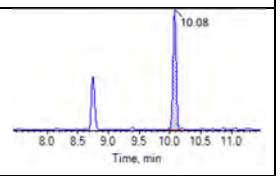
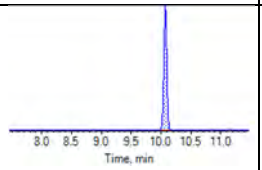
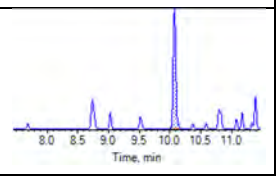
PFOSA	498.0 / 78.0	10.04 (10.04)	191800	13C8_PFOSA	619900	92.6	82.7	89.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	130000	13C8_PFOS	62810	100.0	127.4	127.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	10420	13C8_PFOS	62810	100.0	69.1	69.1	0.08/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1753000	N/A	N/A	1000.0	1045.5	104.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	85700	13C6_PFDA	144600	100.0	115.0	115.0	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	8841	13C6_PFDA	144600	100.0	94.7	94.7	0.10/ 0.13		

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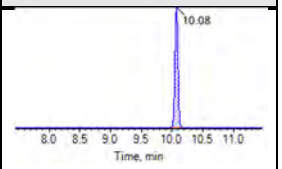
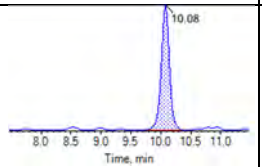
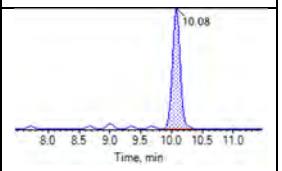
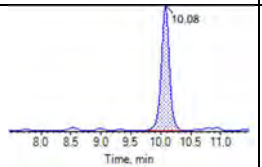
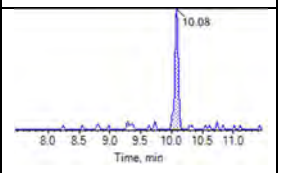
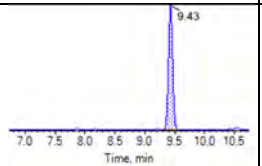
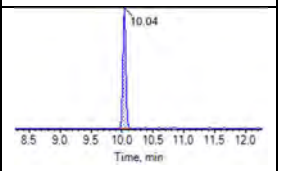
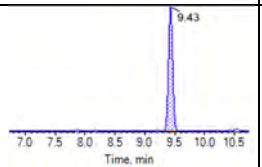
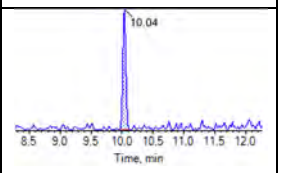
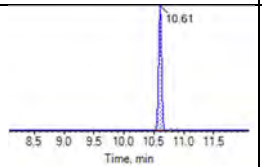
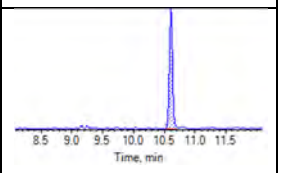
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1276000	N/A	N/A	1000.0	1105.9	110.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	13030	13C2_8:2 FTS	31060	96.0	81.4	84.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	15860	13C2_8:2 FTS	31060	96.0	102.3	106.5	1.22/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	118900	13C8_PFOS	62810	96.0	119.9	124.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	21440	13C8_PFOS	62810	96.0	118.7	123.7	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	81440	13C7_PFUdA	215600	100.0	106.1	106.1	1.00/ 1.00		

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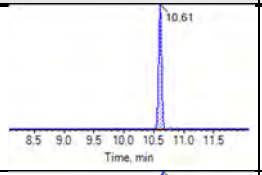
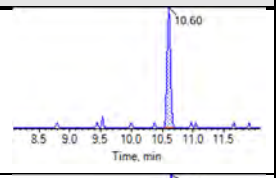
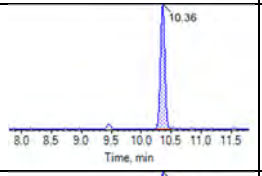
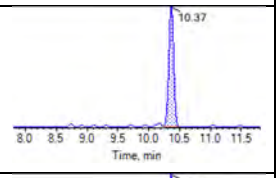
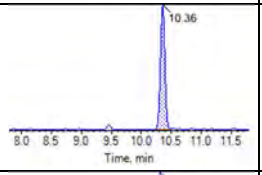
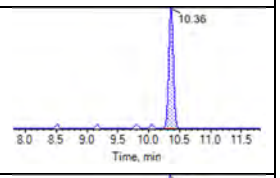
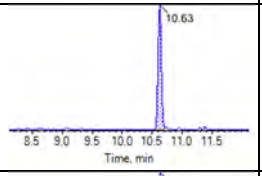
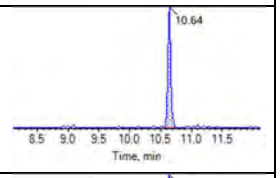
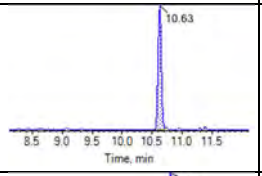
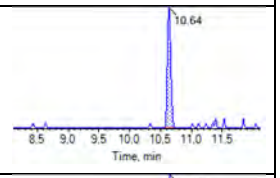
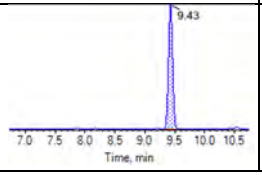
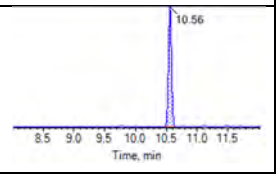
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	9431	13C7_PFUdA	215600	100.0	103.1	103.1	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	24450	d3-N-MeFOSAA	60050	100.0	102.7	102.7	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	10980	d3-N-MeFOSAA	60050	100.0	93.6	93.6	0.45/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	23940	d5-N-EtFOSAA	61590	100.0	95.7	95.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	10380	d5-N-EtFOSAA	61590	100.0	87.3	87.3	0.43/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	144200	13C8_PFOS	62810	96.5	119.3	123.6	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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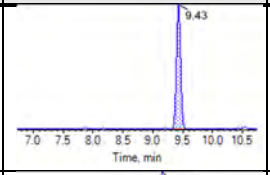
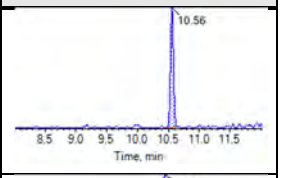
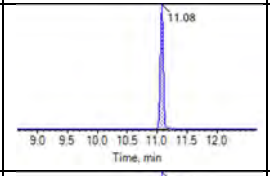
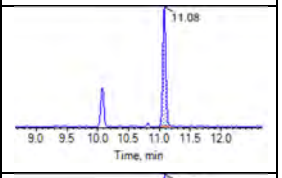
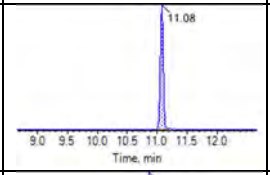
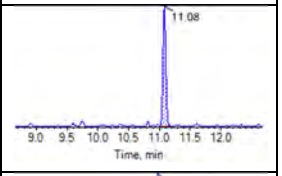
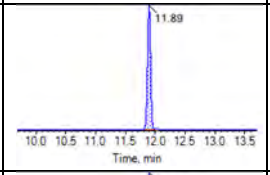
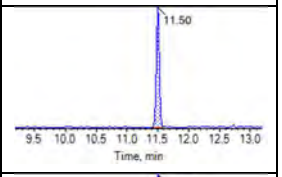
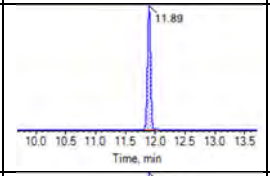
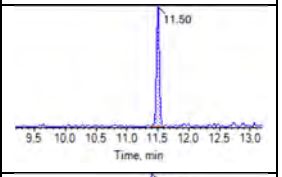
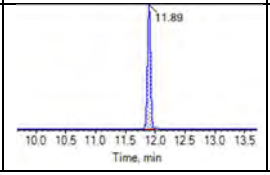
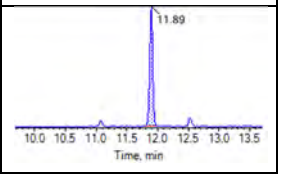
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	38170	13C8_PFOS	62810	96.5	118.5	122.8	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	74670	13C2_PFDoA	200100	100.0	99.1	99.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	15300	13C2_PFDoA	200100	100.0	124.1	124.1	0.20/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	69300	13C2_PFTeDA	139800	100.0	100.8	100.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	17000	13C2_PFTeDA	139800	100.0	111.9	111.9	0.25/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	48900	13C2_PFTeDA	139800	100.0	97.2	97.2	1.00/ 1.00		

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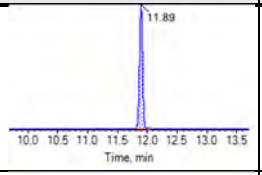
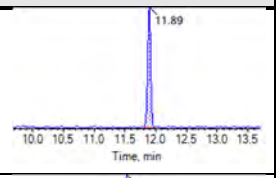
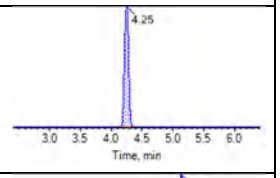
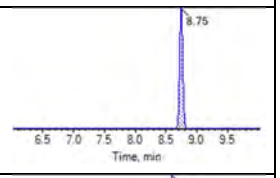
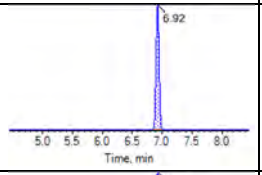
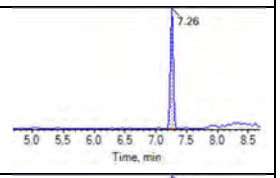
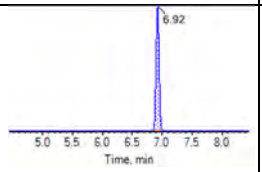
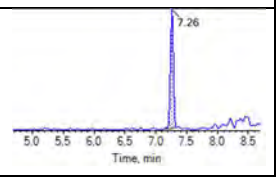
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	12580	13C2_PFTeDA	139800	100.0	113.5	113.5	0.26/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1812000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1200000	N/A	N/A	1000.0	975.5	97.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	88300	13C5_PFHxA	294900	100.0	120.4	120.4	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	50190	13C5_PFHxA	294900	100.0	91.0	91.0	0.57/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:47

Data File: PFC103117011.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-11

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	200	210.524	105.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	200	260.015	130	
Perfluorotetradecanoic acid (PFTeDA)	200	187.232	93.6	
Perfluorotridecanoic acid (PFTrDA)	200	207.518	103.8	
Perfluoroundecanoic acid (PFUdA)	200	210.847	105.4	
Perfluorododecanoic acid (PFDoA)	200	203.003	101.5	
Perfluorodecanoic acid (PFDA)	200	222.376	111.2	
Perfluorononanoic acid (PFNA)	200	219.1	109.6	
Perfluoroheptanoic acid (PFHpA)	200	208.064	104	
Perfluorooctanoic acid (PFOA)	200	205.04	102.5	
Perfluorohexanoic acid (PFHxA)	200	202.832	101.4	
Perfluorooctanesulfonate (PFOS)	200	212.35	106.2	
Perfluorobutanesulfonate (PFBS)	177	178.688	101	
Perfluorohexanesulfonate (PFHxS)	182.4	171.093	93.8	

Recovery criteria is 70% - 130%

GC
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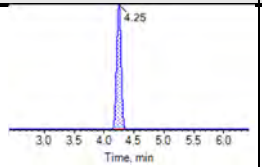
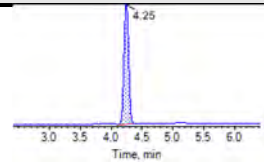
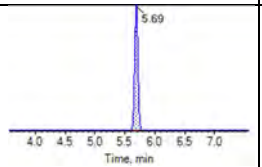
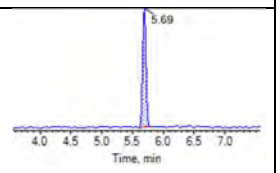
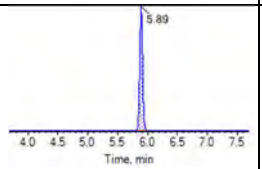
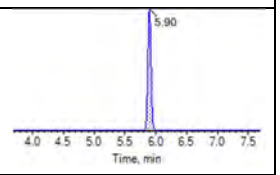
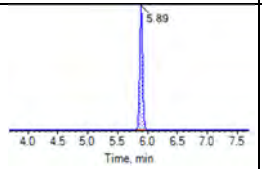
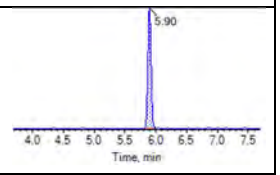
PFC103117011.wiff			
Sample Name	WPF171018-11ISC	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117011.wiff
Acquisition Date	10/31/2017 19:47:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117011.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	220600	13C4_PFBA	159400	200.0	196.4	98.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	215800	13C5_PFPeA	241700	200.0	207.5	103.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	286400	13C3_PFBS	162700	177.0	178.7	101.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	126300	13C3_PFBS	162700	177.0	175.4	99.1	0.44/ 0.45		

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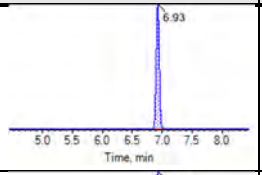
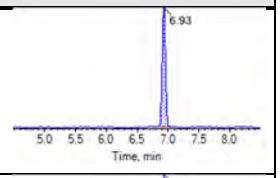
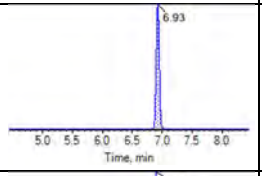
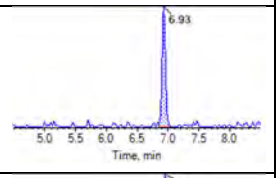
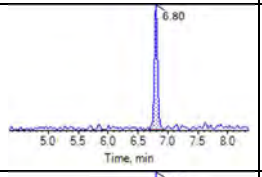
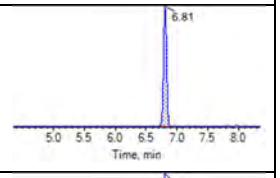
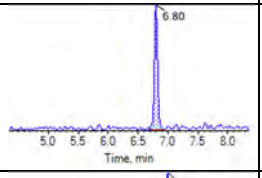
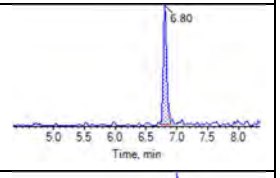
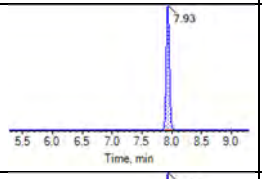
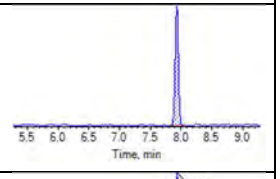
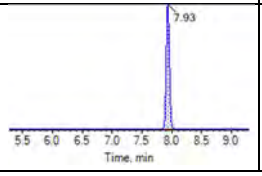
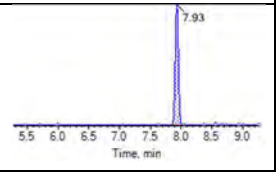
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	229400	13C5_PFHxA	297900	200.0	202.8	101.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	16640	13C5_PFHxA	297900	200.0	208.1	104.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	44190	13C2_4:2 FTS	35600	187.0	207.4	110.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	29580	13C2_4:2 FTS	35600	187.0	193.2	103.3	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	215000	13C4_PFHpA	247100	200.0	208.1	104.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	62190	13C4_PFHpA	247100	200.0	230.2	115.1	0.29/ 0.26		

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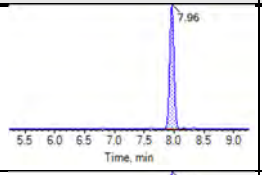
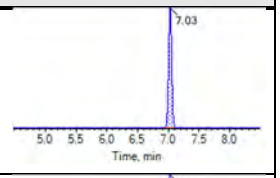
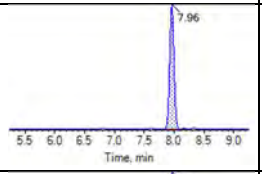
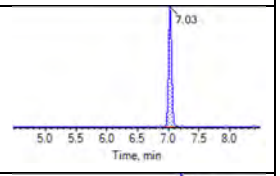
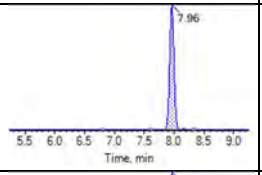
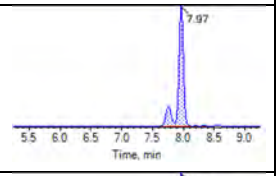
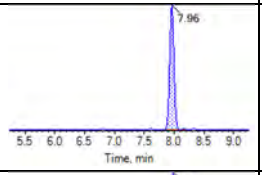
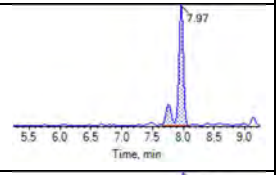
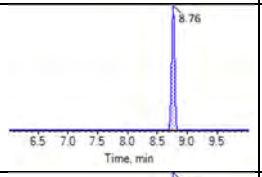
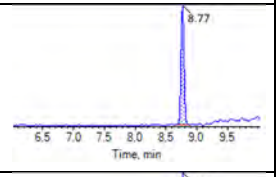
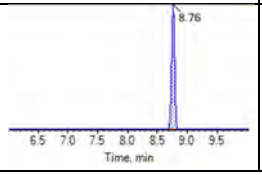
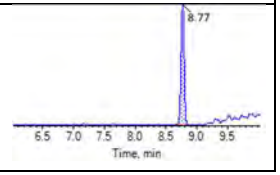
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	320600	13C3_PFHxS	93110	188.0	164.5	87.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	118800	13C3_PFHxS	93110	188.0	174.4	92.8	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	307200	13C3_PFHxS	93110	182.4	171.1	93.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	65870	13C3_PFHxS	93110	182.4	145.2	79.6	0.21/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	224600	13C8_PFOA	259600	200.0	205.0	102.5	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	81170	13C8_PFOA	259600	200.0	198.6	99.3	0.36/ 0.37		

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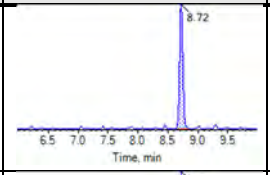
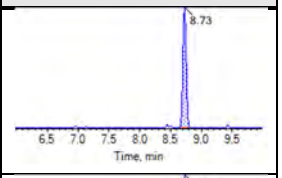
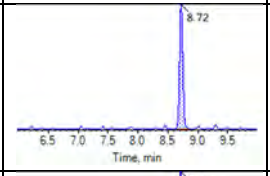
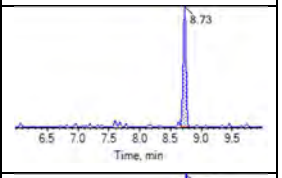
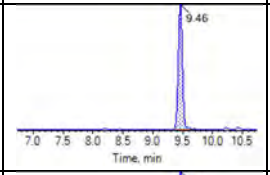
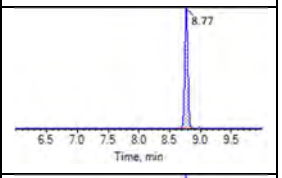
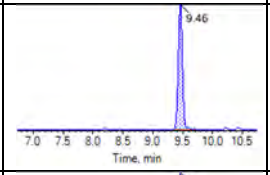
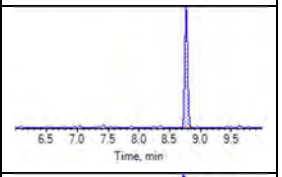
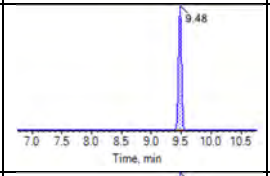
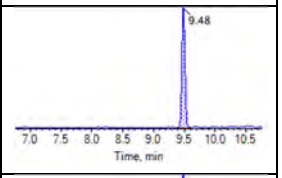
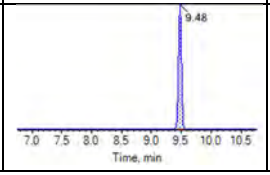
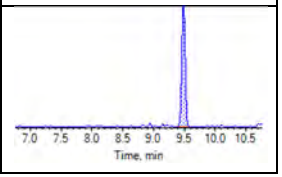
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.73 (8.72)	32710	13C2_6:2 FTS	40460	190.0	153.3	80.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	27600	13C2_6:2 FTS	40460	190.0	144.0	75.8	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.77 (8.76)	262500	13C8_PFOS	68800	190.0	195.7	103.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.77 (8.76)	59740	13C8_PFOS	68800	190.0	221.2	116.4	0.23/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	185300	13C9_PFNA	251600	200.0	219.1	109.6	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	47060	13C9_PFNA	251600	200.0	230.8	115.4	0.25/ 0.24		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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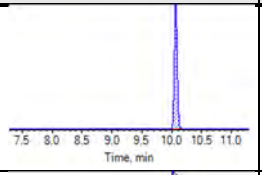
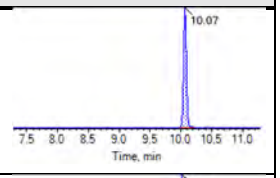
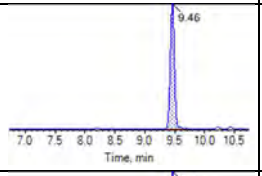
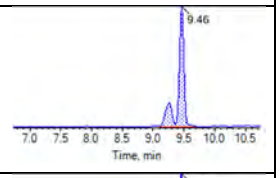
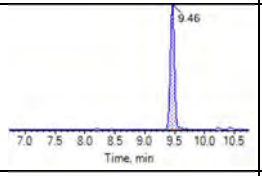
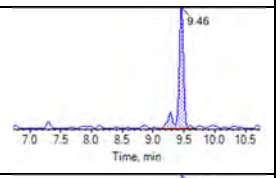
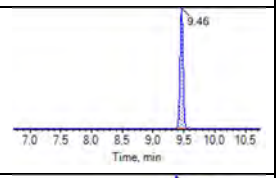
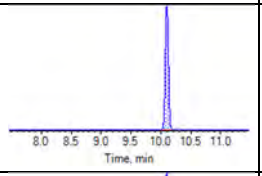
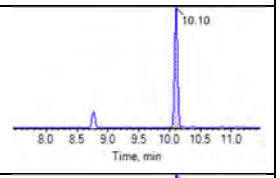
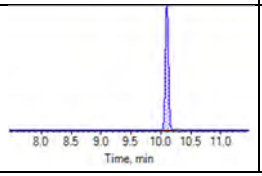
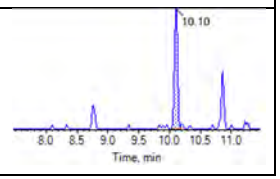
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.07 (10.04)	446300	13C8_PFOSA	613800	185.1	194.3	105.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	237400	13C8_PFOS	68800	200.0	212.4	106.2	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	29930	13C8_PFOS	68800	200.0	181.3	90.7	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1756000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	176200	13C6_PFDA	153800	200.0	222.4	111.2	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	14770	13C6_PFDA	153800	200.0	148.8	74.4	0.08/ 0.13		

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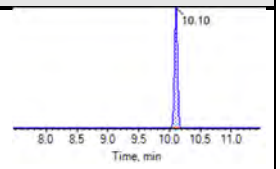
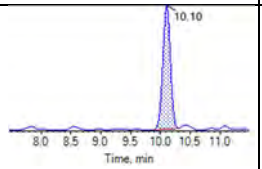
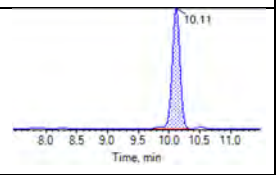
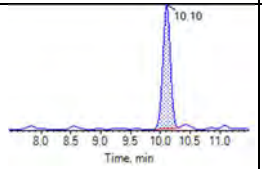
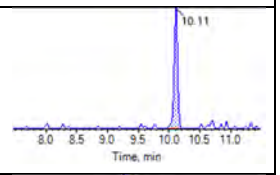
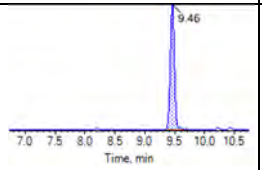
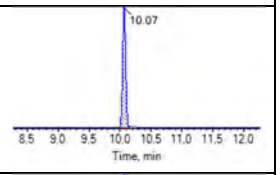
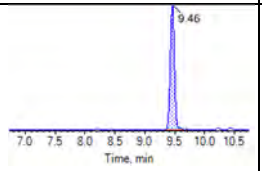
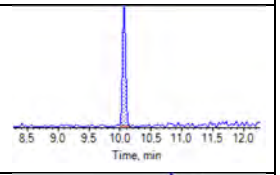
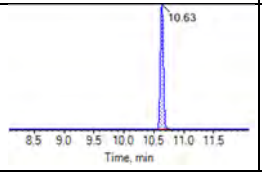
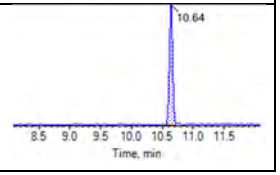
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1192000	N/A	N/A	1000.0	1032.9	103.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	31010	13C2_8:2 FTS	30920	192.0	194.6	101.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	26270	13C2_8:2 FTS	30920	192.0	170.1	88.6	0.85/ 0.96		
PFNS	549.0 / 80.0	10.07 (10.49)	225100	13C8_PFOS	68800	192.0	207.2	107.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	39250	13C8_PFOS	68800	192.0	198.4	103.3	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	149300	13C7_PFUdA	198900	200.0	210.8	105.4	1.00/ 1.00		

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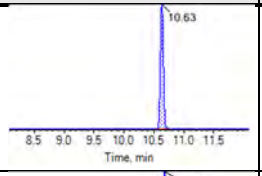
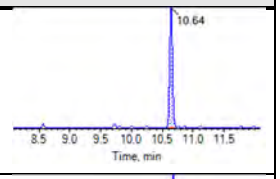
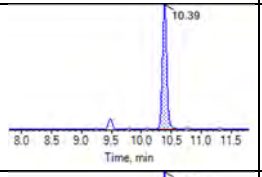
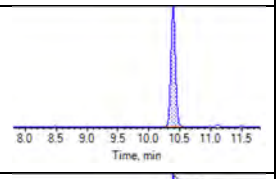
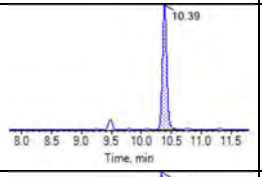
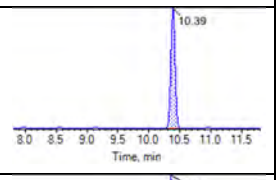
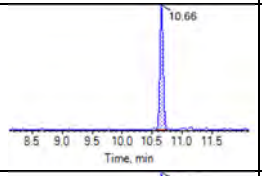
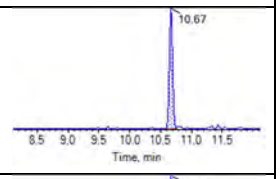
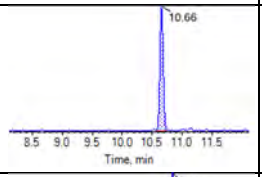
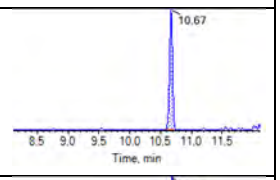
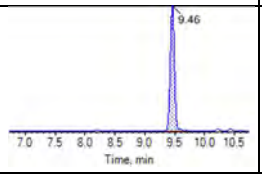
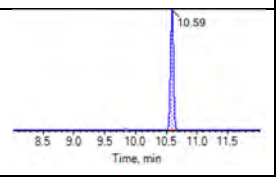
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.64 (10.62)	18210	13C7_PFUdA	198900	200.0	215.8	107.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	62670	d3-N-MeFOSAA	60780	200.0	260.0	130.0	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	25170	d3-N-MeFOSAA	60780	200.0	212.0	106.0	0.40/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	41740	d5-N-EtFOSAA	48840	200.0	210.5	105.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.67 (10.64)	23500	d5-N-EtFOSAA	48840	200.0	249.4	124.7	0.56/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	279400	13C8_PFOS	68800	193.0	210.9	109.3	1.00/ 1.00		

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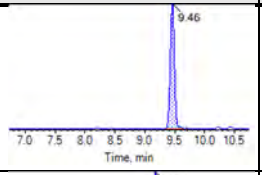
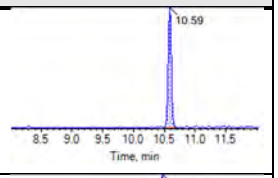
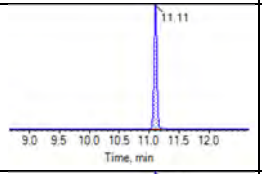
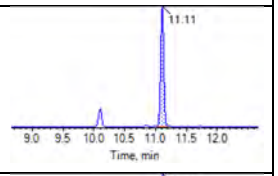
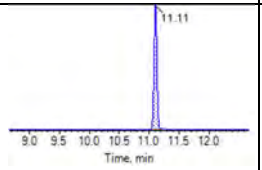
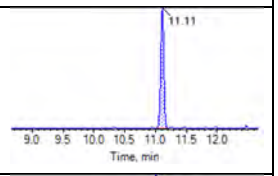
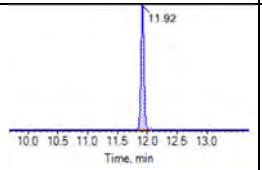
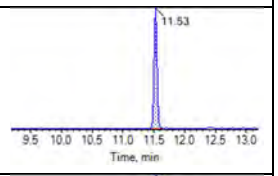
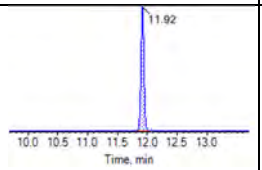
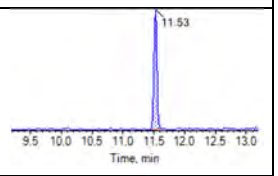
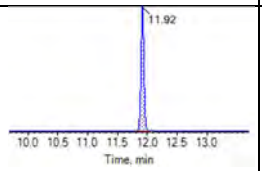
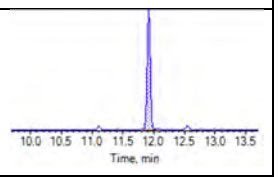
PFDS_2	599.0 / 99.0	10.59 (10.93)	78890	13C8_PFOS	68800	193.0	223.5	115.8	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	155100	13C2_PFDoA	202800	200.0	203.0	101.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	29930	13C2_PFDoA	202800	200.0	239.7	119.9	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	135800	13C2_PFTeDA	133100	200.0	207.5	103.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	27550	13C2_PFTeDA	133100	200.0	190.4	95.2	0.20/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	89730	13C2_PFTeDA	133100	200.0	187.2	93.6	1.00/ 1.00		

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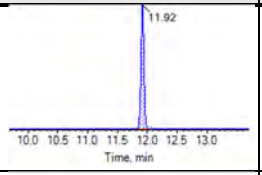
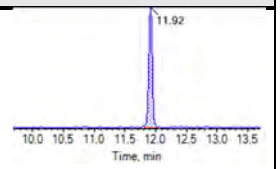
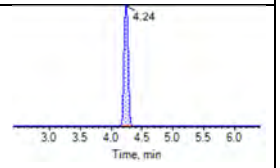
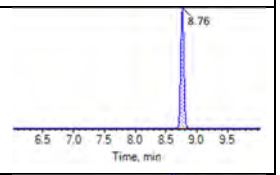
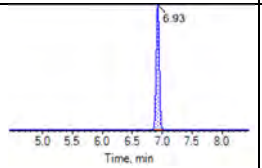
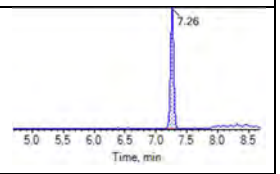
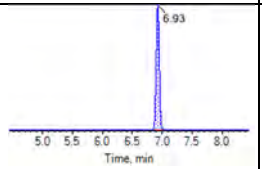
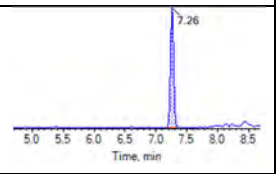
PFC103117011.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21760	13C2_PFTeDA	133100	200.0	206.2	103.1	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1752000	N/A	N/A	1000.0	1012.5	101.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1309000	N/A	N/A	1000.0	1063.8	106.4	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	168600	13C5_PFHxA	297900	200.0	227.5	113.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	128000	13C5_PFHxA	297900	200.0	229.7	114.8	0.76/ 0.75		

Initial Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 20:08

Data File: PFC103117012.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	992.673	99.3	
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	805.223	80.5	
Perfluorotetradecanoic acid (PFTeDA)	1000	973.64	97.4	
Perfluorotridecanoic acid (PFTrDA)	1000	946.09	94.6	
Perfluorododecanoic acid (PFDoA)	1000	1136.449	113.6	
Perfluoroundecanoic acid (PFUdA)	1000	1138.359	113.8	
Perfluorononanoic acid (PFNA)	1000	1156.564	115.7	
Perfluorodecanoic acid (PFDA)	1000	1176.324	117.6	
Perfluorooctanoic acid (PFOA)	1000	992.655	99.3	
Perfluoroheptanoic acid (PFHpA)	1000	984.497	98.4	
Perfluorooctanesulfonate (PFOS)	1000	1013.94	101.4	
Perfluorohexanoic acid (PFHxA)	1000	968.909	96.9	
Perfluorohexanesulfonate (PFHxS)	912	911.712	100	
Perfluorobutanesulfonate (PFBS)	885	872.842	98.6	

Recovery criteria is 70% - 130%

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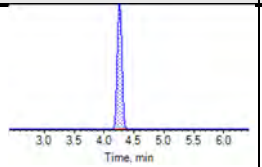
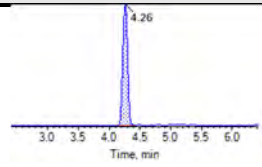
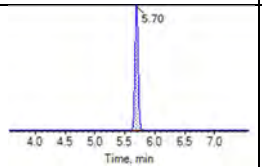
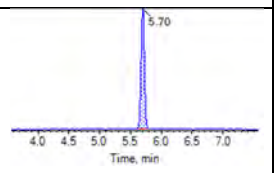
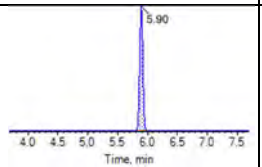
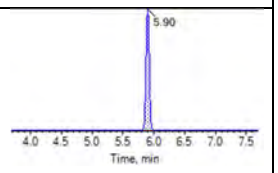
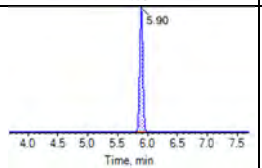
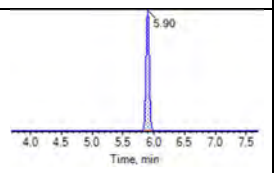
Sample Name	WPF171018-09ICV	**Injection Vial**	9
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117012.wiff
Acquisition Date	10/31/2017 20:08:29	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117012.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	1064000	13C4_PFBA	144400	1000.0	1045.3	104.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	960900	13C5_PFPeA	229700	1000.0	972.5	97.2	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1275000	13C3_PFBS	148200	885.0	872.8	98.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	574900	13C3_PFBS	148200	885.0	876.7	99.1	0.45/ 0.45		

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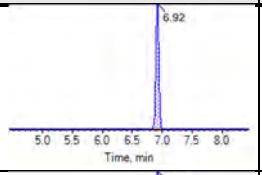
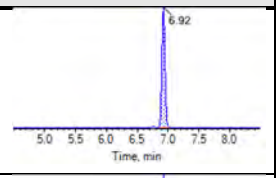
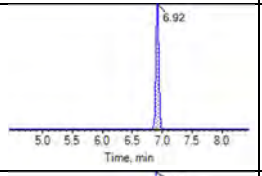
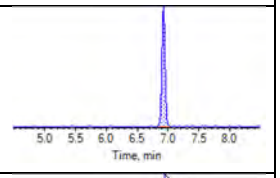
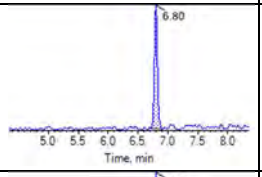
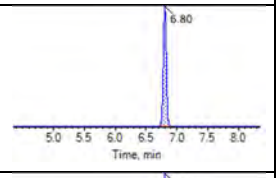
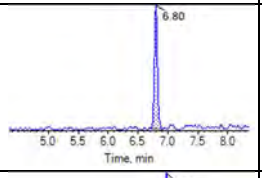
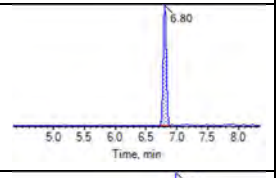
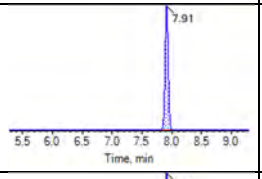
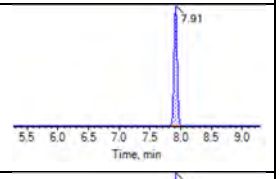
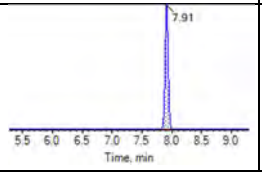
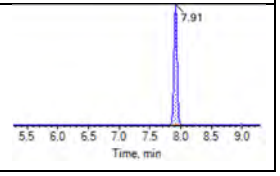
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1104000	13C5_PFHxA	300000	1000.0	968.9	96.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	81250	13C5_PFHxA	300000	1000.0	1009.0	100.9	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	186700	13C2_4:2 FTS	32970	935.0	946.0	101.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	125300	13C2_4:2 FTS	32970	935.0	883.9	94.5	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	966100	13C4_PFHpA	234600	1000.0	984.5	98.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.91 (7.93)	234400	13C4_PFHpA	234600	1000.0	913.7	91.4	0.24/ 0.26		

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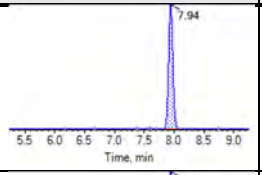
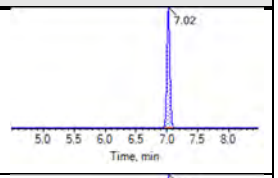
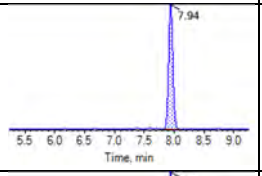
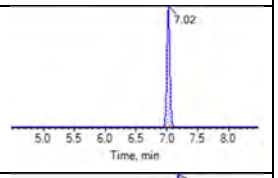
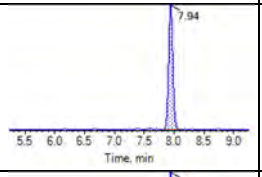
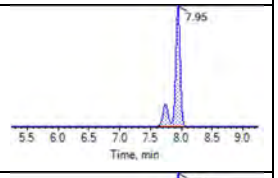
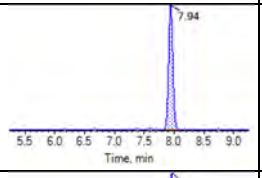
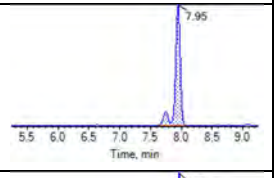
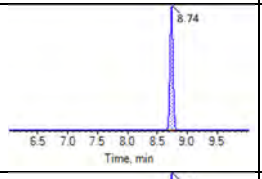
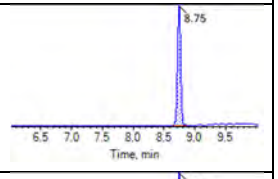
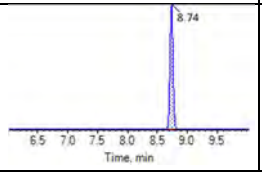
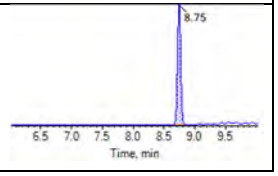
PFC103117012.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1553000	13C3_PFHxS	71220	940.0	1041.6	110.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	525000	13C3_PFHxS	71220	940.0	1007.7	107.2	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1252000	13C3_PFHxS	71220	912.0	911.7	100.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	315900	13C3_PFHxS	71220	912.0	910.7	99.9	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	936000	13C8_PFOA	223500	1000.0	992.7	99.3	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	324300	13C8_PFOA	223500	1000.0	921.7	92.2	0.35/ 0.37		

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LCMSMS#6

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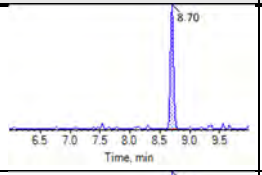
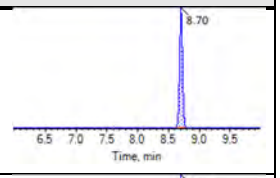
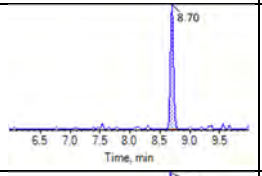
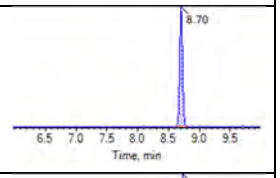
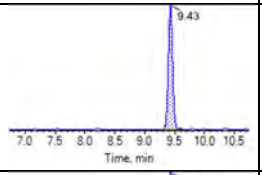
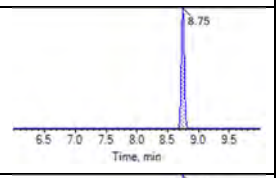
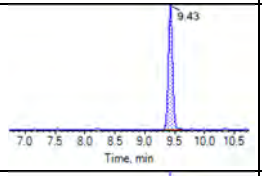
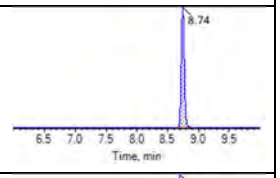
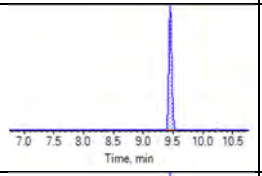
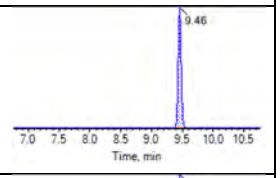
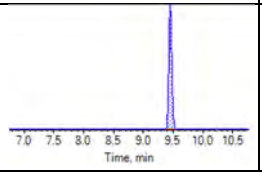
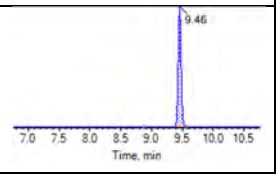
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.70 (8.72)	161400	13C2_6:2 FTS	31260	950.0	978.8	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.70 (8.72)	140600	13C2_6:2 FTS	31260	950.0	949.5	99.9	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	1125000	13C8_PFOS	63080	950.0	914.9	96.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	219600	13C8_PFOS	63080	950.0	886.7	93.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	838200	13C9_PFNA	215600	1000.0	1156.6	115.7	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	194900	13C9_PFNA	215600	1000.0	1115.3	111.5	0.23/ 0.24		

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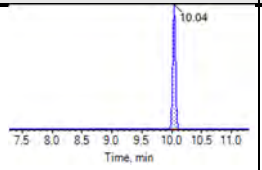
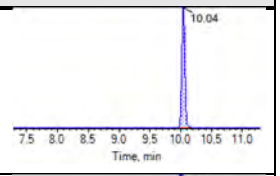
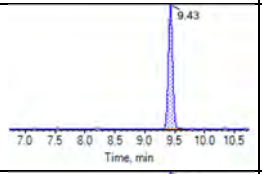
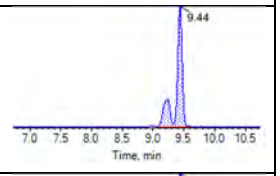
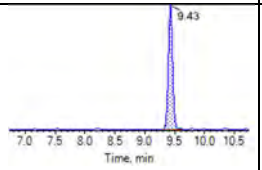
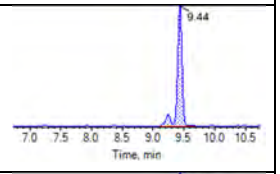
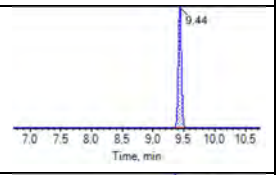
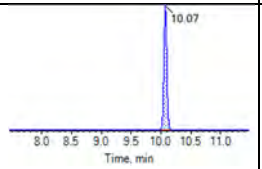
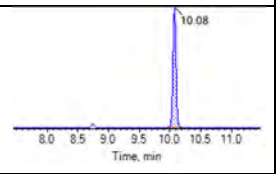
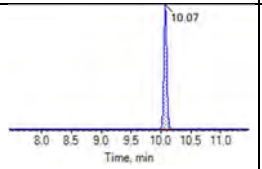
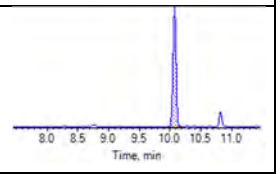
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	1956000	13C8_PFOSA	526500	925.5	992.9	107.3	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	1039000	13C8_PFOS	63080	1000.0	1013.9	101.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	146400	13C8_PFOS	63080	1000.0	967.1	96.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1509000	N/A	N/A	1000.0	900.1	90.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	852000	13C6_PFDA	140500	1000.0	1176.3	117.6	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	97830	13C6_PFDA	140500	1000.0	1078.4	107.8	0.11/ 0.13		

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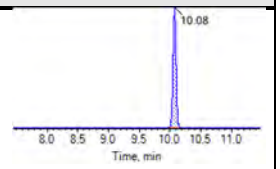
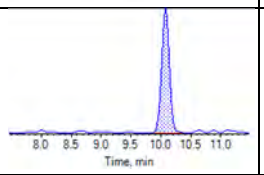
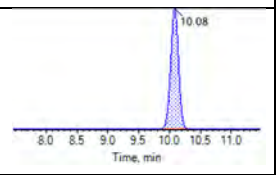
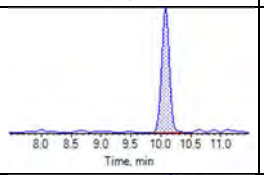
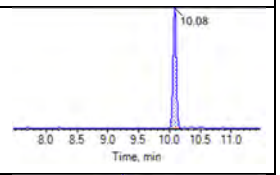
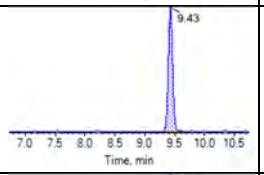
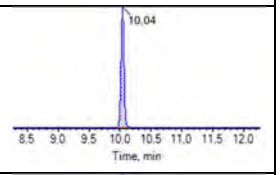
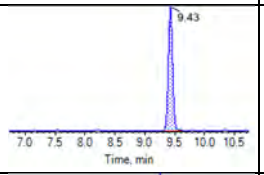
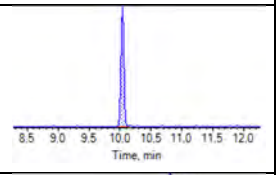
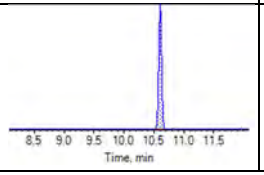
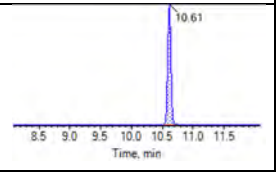
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1072000	N/A	N/A	1000.0	929.7	93.0	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	98140	13C2_8:2 FTS	25240	960.0	754.4	78.6	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	113600	13C2_8:2 FTS	25240	960.0	901.1	93.9	1.16/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	1082000	13C8_PFOS	63080	960.0	1086.4	113.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	190900	13C8_PFOS	63080	960.0	1052.3	109.6	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	691800	13C7_PFUdA	170600	1000.0	1138.4	113.8	1.00/ 1.00		

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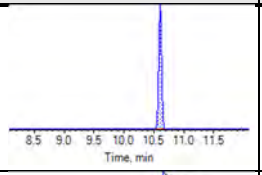
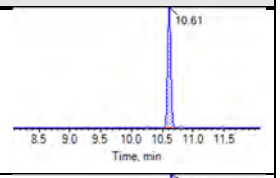
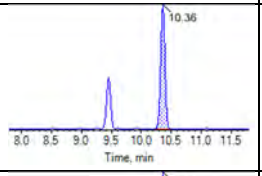
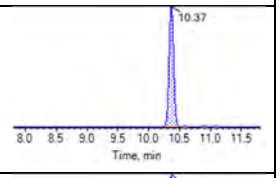
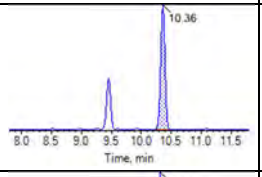
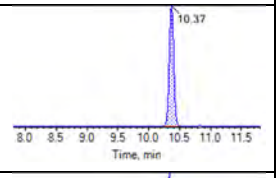
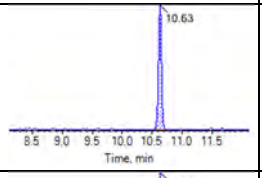
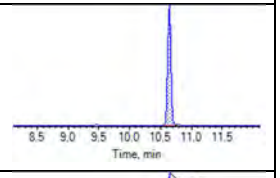
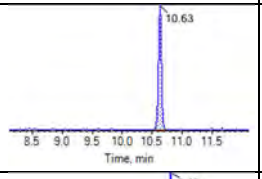
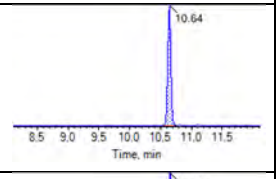
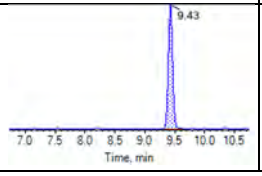
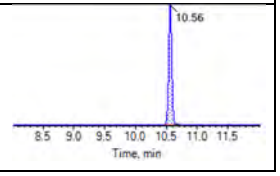
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.61 (10.62)	87290	13C7_PFUdA	170600	1000.0	1205.5	120.5	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	168700	d3-N-MeFOSAA	42860	1000.0	992.7	99.3	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.37 (10.37)	90260	d3-N-MeFOSAA	42860	1000.0	1078.2	107.8	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	173700	d5-N-EtFOSAA	53130	1000.0	805.2	80.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	97590	d5-N-EtFOSAA	53130	1000.0	952.1	95.2	0.56/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	1160000	13C8_PFOS	63080	965.0	955.2	99.0	1.00/ 1.00		

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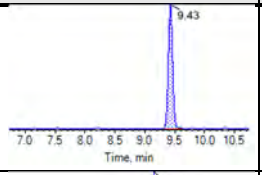
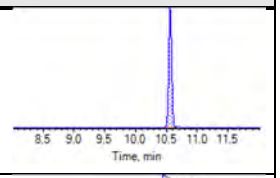
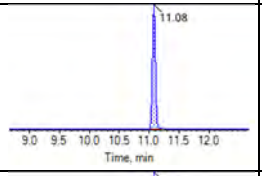
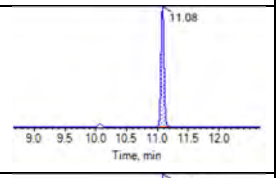
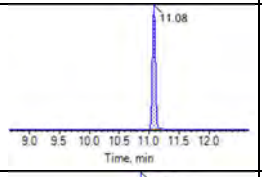
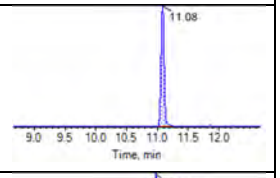
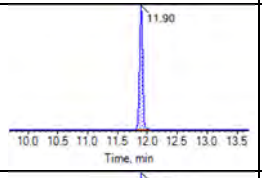
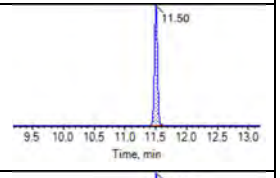
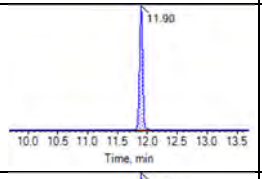
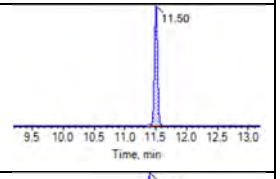
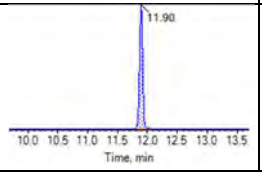
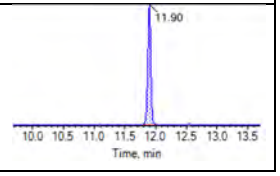
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	321800	13C8_PFOS	63080	965.0	994.7	103.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	682300	13C2_PFDoA	159400	1000.0	1136.4	113.6	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	112000	13C2_PFDoA	159400	1000.0	1141.7	114.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	600900	13C2_PFTeDA	129200	1000.0	946.1	94.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	144300	13C2_PFTeDA	129200	1000.0	1027.3	102.7	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	453000	13C2_PFTeDA	129200	1000.0	973.6	97.4	1.00/ 1.00		

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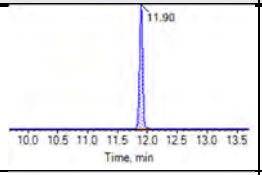
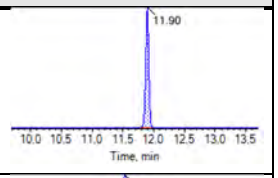
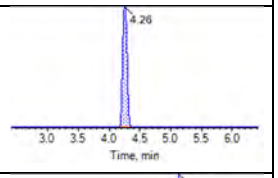
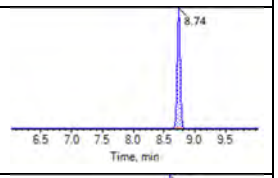
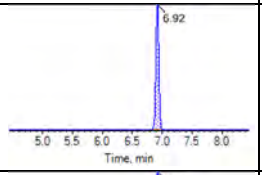
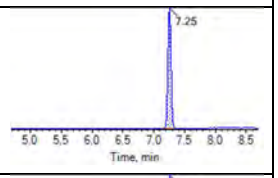
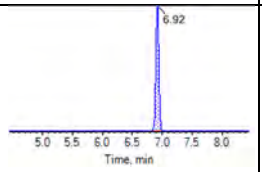
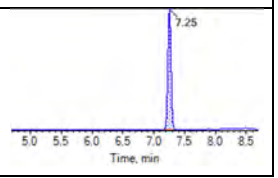
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	97390	13C2_PFTeDA	129200	1000.0	950.6	95.1	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1620000	N/A	N/A	1000.0	936.3	93.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1107000	N/A	N/A	1000.0	899.9	90.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	672200	13C5_PFHxA	300000	1000.0	900.8	90.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	515400	13C5_PFHxA	300000	1000.0	918.0	91.8	0.77/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Data File: PFC103117086.wiff

Lab Sample ID WPF171018-09

Column ID: Gemini 3u C-18

Client SDG: 436488

Injection Date: 01-NOV-17 23:11

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Method: EPA 537 Modified

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	897.571	89.8	
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	783.483	78.3	
Perfluorotetradecanoic acid (PFTeDA)	1000	916.993	91.7	
Perfluorododecanoic acid (PFDoA)	1000	935.239	93.5	
Perfluorotridecanoic acid (PFTrDA)	1000	1004.332	100.4	
Perfluoroundecanoic acid (PFUdA)	1000	1010.627	101.1	
Perfluorodecanoic acid (PFDA)	1000	1191.201	119.1	
Perfluorononanoic acid (PFNA)	1000	1132.686	113.3	
Perfluorooctanoic acid (PFOA)	1000	925.878	92.6	
Perfluoroheptanoic acid (PFHpA)	1000	958.951	95.9	
Perfluorohexanoic acid (PFHxA)	1000	989.929	99	
Perfluorooctanesulfonate (PFOS)	1000	1102.708	110.3	
Perfluorohexanesulfonate (PFHxS)	912	854.874	93.7	
Perfluorobutanesulfonate (PFBS)	885	855.536	96.7	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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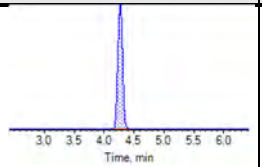
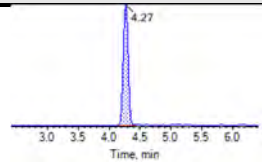
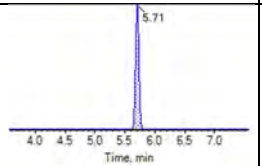
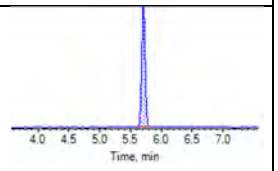
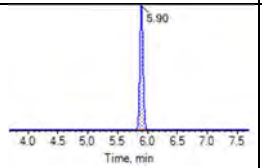
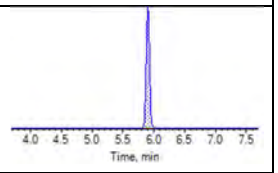
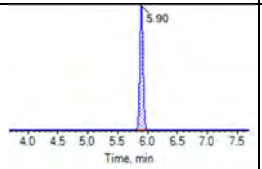
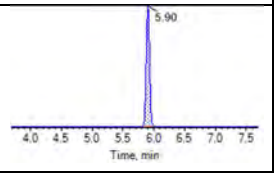
PFC103117086.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	21
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117086.wiff
Acquisition Date	11/1/2017 23:11:19	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117086.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1052000	13C4_PFBA	142600	1000.0	1046.4	104.6	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	931400	13C5_PFPeA	223800	1000.0	967.5	96.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1282000	13C3_PFBS	152100	885.0	855.5	96.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	563000	13C3_PFBS	152100	885.0	836.7	94.5	0.44/ 0.45		

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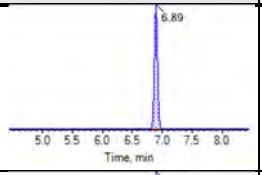
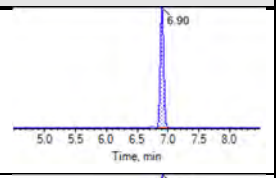
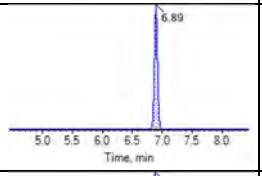
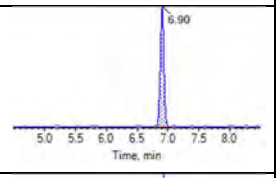
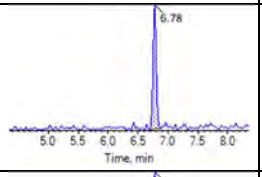
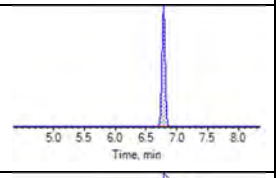
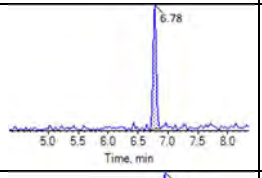
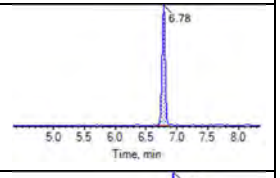
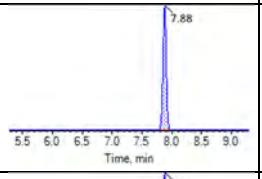
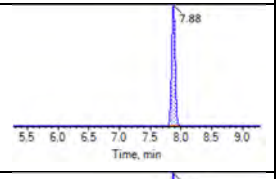
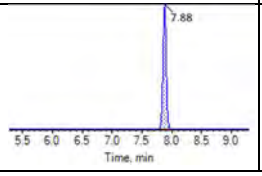
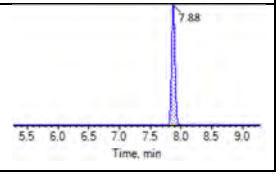
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	1022000	13C5_PFHxA	271900	1000.0	989.9	99.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	75730	13C5_PFHxA	271900	1000.0	1037.9	103.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.78 (6.80)	156100	13C2_4:2 FTS	30380	935.0	858.4	91.8	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	111700	13C2_4:2 FTS	30380	935.0	854.6	91.4	0.72/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	973800	13C4_PFHpA	242800	1000.0	959.0	95.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	244600	13C4_PFHpA	242800	1000.0	921.4	92.1	0.25/ 0.26		

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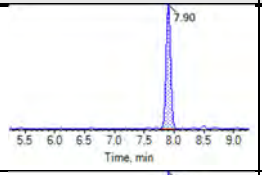
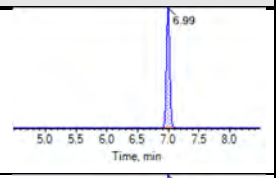
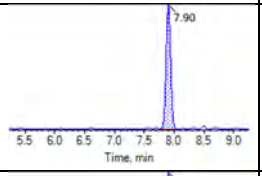
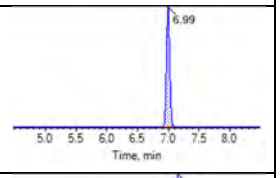
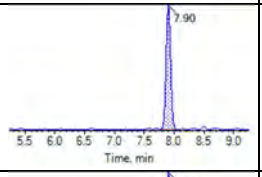
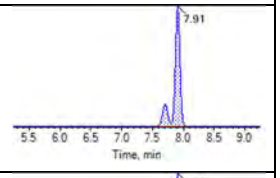
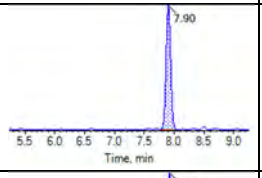
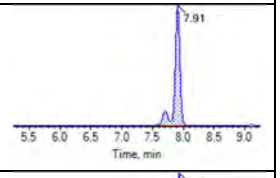
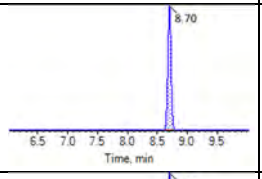
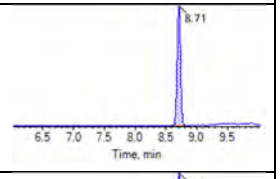
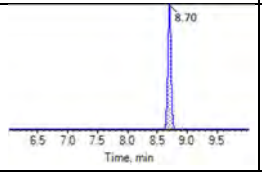
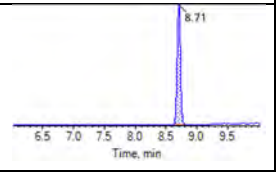
PFPeS	349.0 / 80.0	6.99 (7.02)	1569000	13C3_PFHxS	72450	940.0	1034.4	110.0	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	552900	13C3_PFHxS	72450	940.0	1043.3	111.0	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1194000	13C3_PFHxS	72450	912.0	854.9	93.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	316300	13C3_PFHxS	72450	912.0	896.3	98.3	0.26/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	917800	13C8_PFOA	234900	1000.0	925.9	92.6	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	366300	13C8_PFOA	234900	1000.0	990.4	99.0	0.40/ 0.37		

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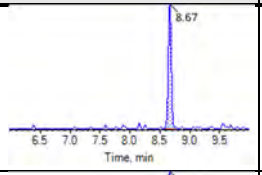
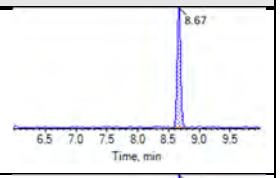
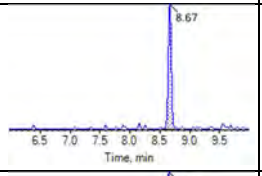
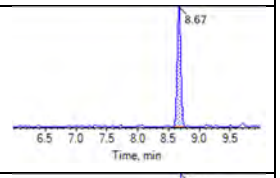
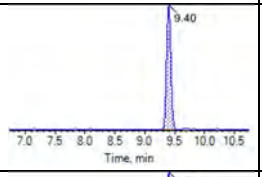
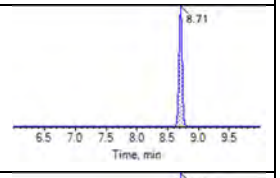
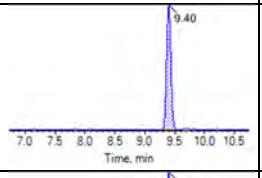
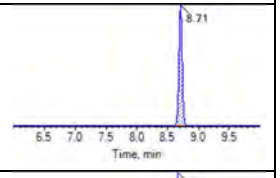
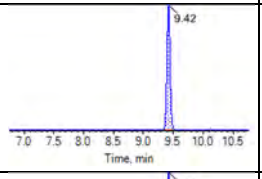
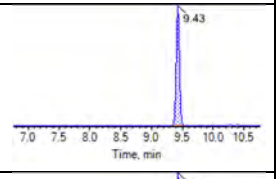
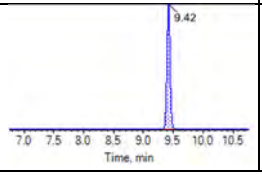
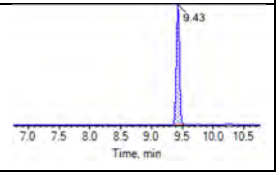
6:2 FTS	427.0 / 407.0	8.67 (8.72)	138800	13C2_6:2 FTS	29250	950.0	899.7	94.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	117900	13C2_6:2 FTS	29250	950.0	851.3	89.6	0.85/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1139000	13C8_PFOS	58680	950.0	995.8	104.8	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	218600	13C8_PFOS	58680	950.0	949.1	99.9	0.19/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	813900	13C9_PFNA	213800	1000.0	1132.7	113.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	171500	13C9_PFNA	213800	1000.0	989.8	99.0	0.21/ 0.24		

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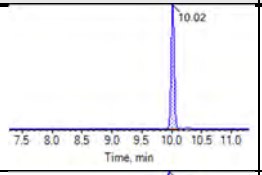
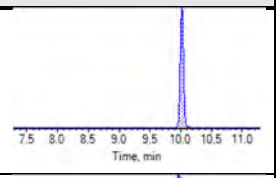
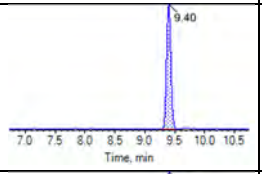
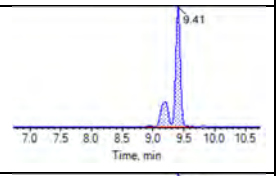
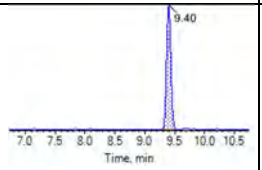
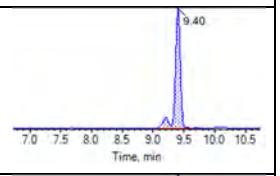
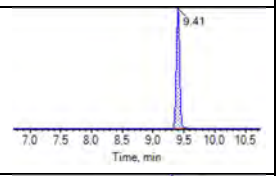
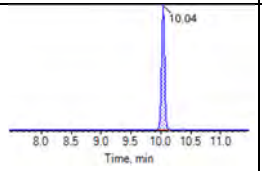
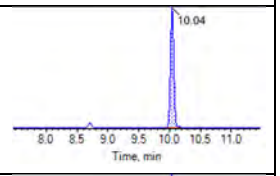
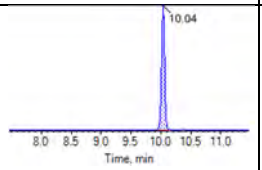
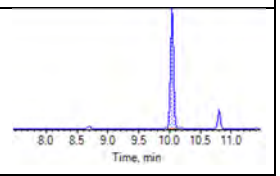
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1758000	13C8_PFOSA	532500	925.5	882.3	95.3	1.00/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	1051000	13C8_PFOS	58680	1000.0	1102.7	110.3	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.40 (9.45)	165800	13C8_PFOS	58680	1000.0	1177.5	117.8	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1591000	N/A	N/A	1000.0	949.0	94.9	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	777700	13C6_PFDA	126700	1000.0	1191.2	119.1	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	97820	13C6_PFDA	126700	1000.0	1196.3	119.6	0.13/ 0.13		

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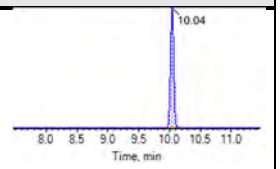
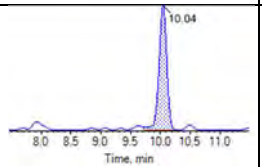
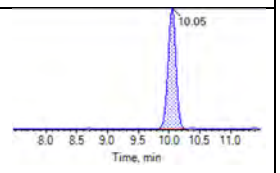
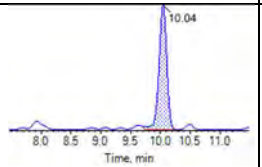
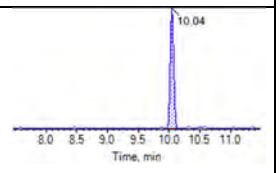
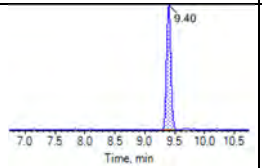
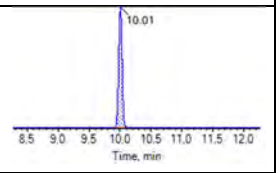
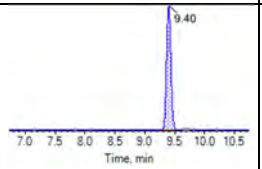
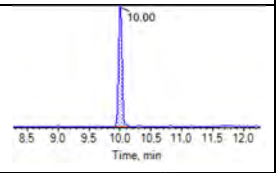
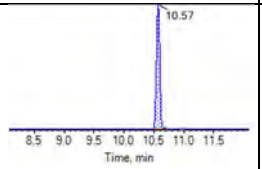
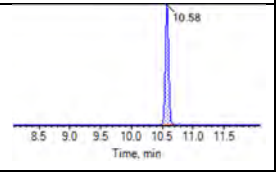
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1084000	N/A	N/A	1000.0	939.6	94.0	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	113800	13C2_8:2 FTS	20660	960.0	1068.7	111.3	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	101200	13C2_8:2 FTS	20660	960.0	980.3	102.1	0.89/ 0.96		
PFNS	549.0 / 80.0	10.01 (10.49)	1035000	13C8_PFOS	58680	960.0	1117.4	116.4	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	198600	13C8_PFOS	58680	960.0	1177.0	122.6	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	673000	13C7_PFUdA	187000	1000.0	1010.6	101.1	1.00/ 1.00		

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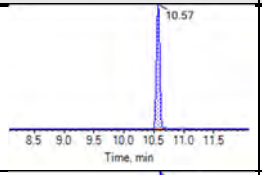
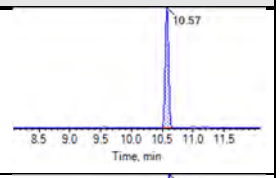
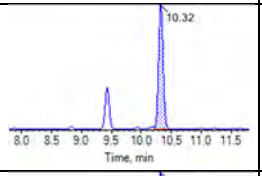
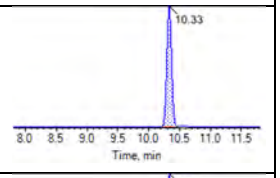
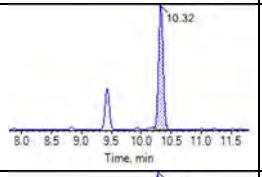
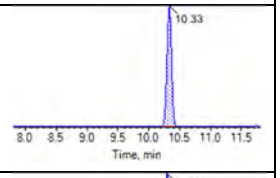
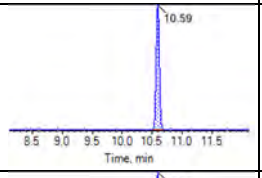
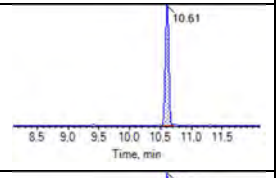
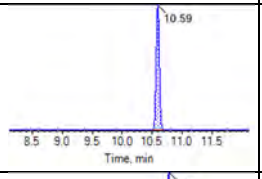
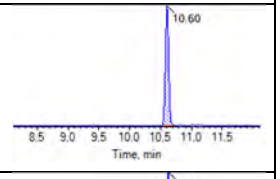
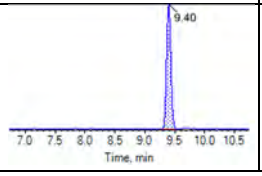
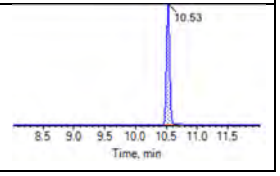
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.57 (10.62)	109400	13C7_PFUdA	187000	1000.0	1379.2	137.9	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	171900	d3-N-MeFOSAA	48290	1000.0	897.6	89.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	92670	d3-N-MeFOSAA	48290	1000.0	982.3	98.2	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	182500	d5-N-EtFOSAA	57390	1000.0	783.5	78.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	79200	d5-N-EtFOSAA	57390	1000.0	715.4	71.5	0.43/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1134000	13C8_PFOS	58680	965.0	1003.6	104.0	1.00/ 1.00		

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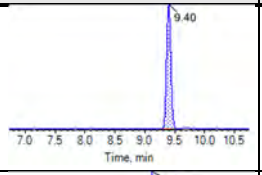
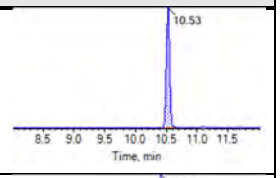
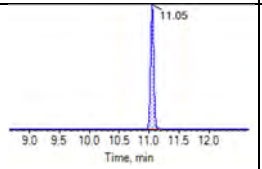
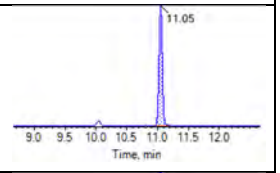
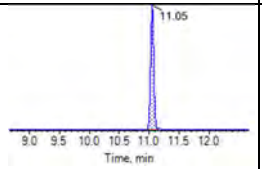
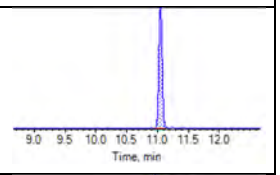
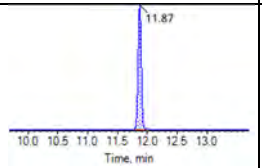
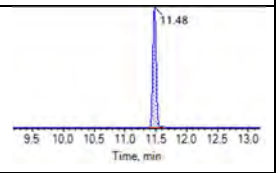
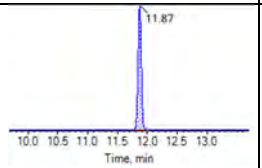
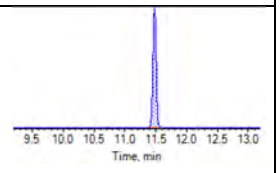
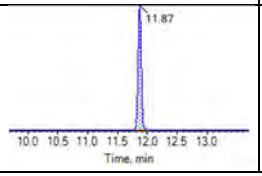
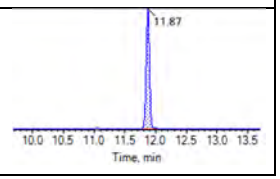
PFDS_2	599.0 / 99.0	10.53 (10.93)	305800	13C8_PFOS	58680	965.0	1016.0	105.3	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	592600	13C2_PFDoA	168200	1000.0	935.2	93.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	106100	13C2_PFDoA	168200	1000.0	1024.2	102.4	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	618500	13C2_PFTeDA	125300	1000.0	1004.3	100.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	146600	13C2_PFTeDA	125300	1000.0	1076.6	107.7	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.87 (11.91)	413700	13C2_PFTeDA	125300	1000.0	917.0	91.7	1.00/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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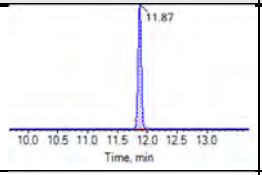
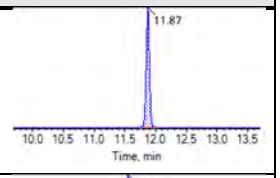
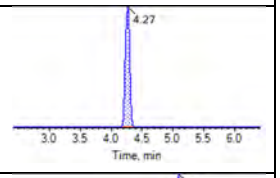
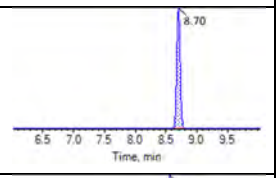
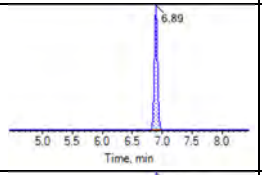
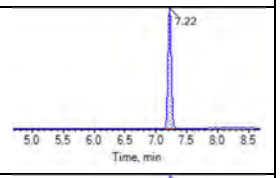
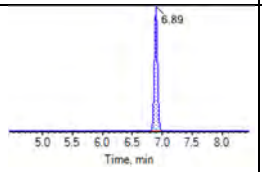
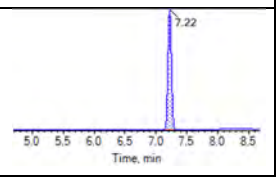
PFC103117086.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.87 (11.91)	94280	13C2_PFTeDA	125300	1000.0	949.1	94.9	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1682000	N/A	N/A	1000.0	972.0	97.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1174000	N/A	N/A	1000.0	954.5	95.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	625900	13C5_PFHxA	271900	1000.0	925.6	92.6	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	508300	13C5_PFHxA	271900	1000.0	999.1	99.9	0.81/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 03:28

Data File: PFC103117098.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	904.511	90.5	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	968.048	96.8	
Perfluorotetradecanoic acid (PFTeDA)	1000	892.403	89.2	
Perfluorotridecanoic acid (PFTrDA)	1000	920.358	92	
Perfluorododecanoic acid (PFDoA)	1000	981.207	98.1	
Perfluoroundecanoic acid (PFUdA)	1000	905.015	90.5	
Perfluorodecanoic acid (PFDA)	1000	1027.408	102.7	
Perfluorononanoic acid (PFNA)	1000	1072.747	107.3	
Perfluoroheptanoic acid (PFHpA)	1000	866.383	86.6	
Perfluorooctanoic acid (PFOA)	1000	971.183	97.1	
Perfluorooctanesulfonate (PFOS)	1000	1138.829	113.9	
Perfluorohexanoic acid (PFHxA)	1000	1064.013	106.4	
Perfluorohexanesulfonate (PFHxS)	912	905.974	99.3	
Perfluorobutanesulfonate (PFBS)	885	933.986	105.5	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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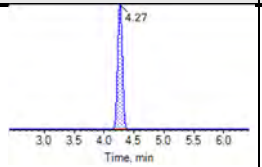
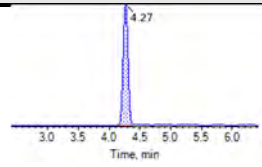
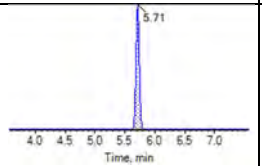
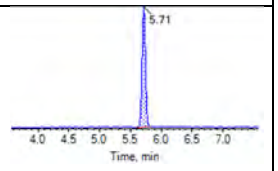
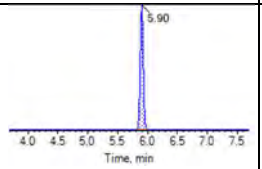
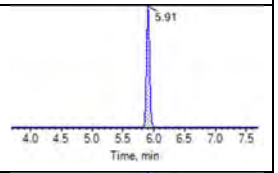
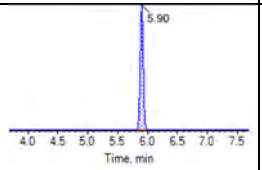
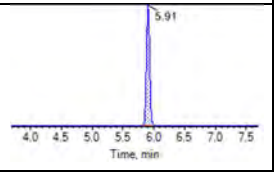
PFC103117098.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	21
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117098.wiff
Acquisition Date	11/2/2017 03:28:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117098.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1111000	13C4_PFBA	153300	1000.0	1028.1	102.8	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	1031000	13C5_PFPeA	234200	1000.0	1023.3	102.3	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	1449000	13C3_PFBS	157500	885.0	934.0	105.5	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	610400	13C3_PFBS	157500	885.0	876.0	99.0	0.42/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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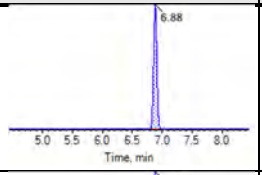
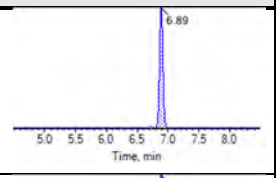
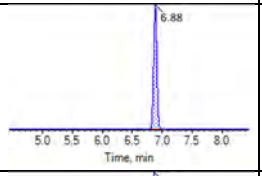
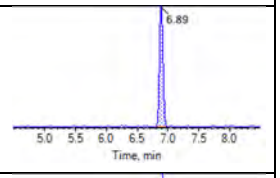
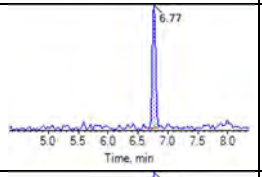
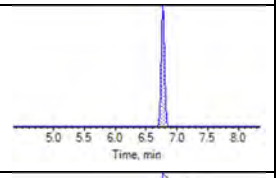
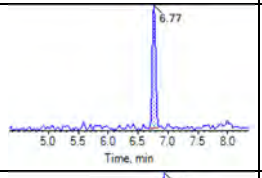
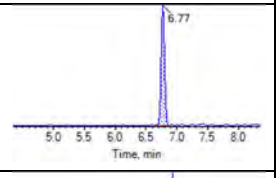
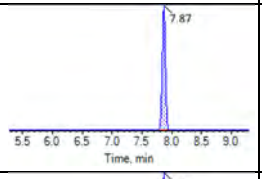
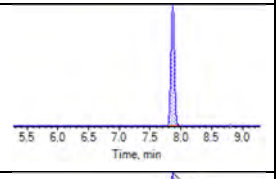
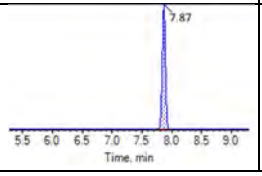
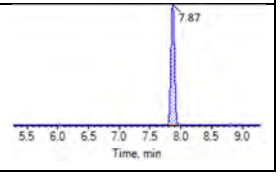
PFC103117098.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1114000	13C5_PFHxA	275700	1000.0	1064.0	106.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	83320	13C5_PFHxA	275700	1000.0	1126.1	112.6	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	148900	13C2_4:2 FTS	30880	935.0	805.6	86.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	111800	13C2_4:2 FTS	30880	935.0	841.7	90.0	0.75/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	897900	13C4_PFHpA	247800	1000.0	866.4	86.6	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	258700	13C4_PFHpA	247800	1000.0	954.6	95.5	0.29/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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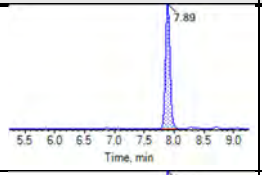
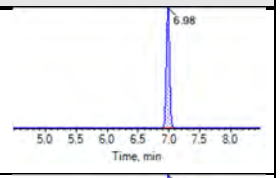
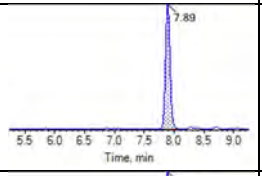
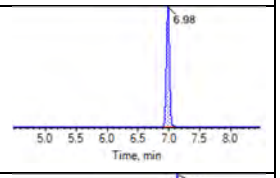
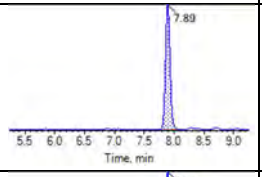
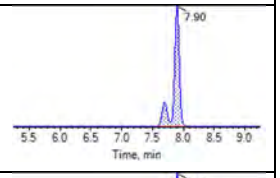
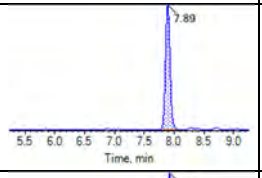
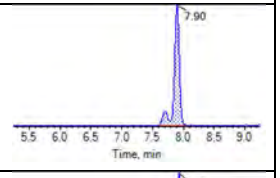
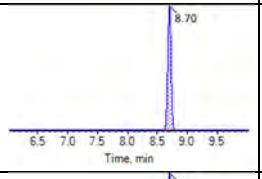
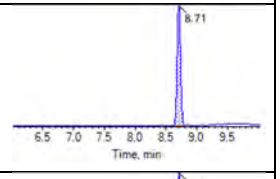
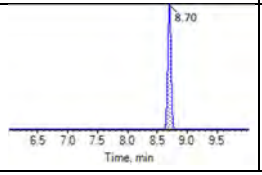
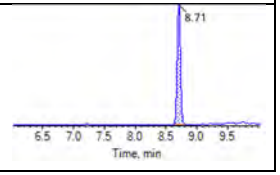
PFC103117098.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1511000	13C3_PFHxS	71260	940.0	1012.6	107.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	562300	13C3_PFHxS	71260	940.0	1078.6	114.7	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1245000	13C3_PFHxS	71260	912.0	906.0	99.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	332100	13C3_PFHxS	71260	912.0	956.8	104.9	0.27/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	1002000	13C8_PFOA	244600	1000.0	971.2	97.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	367100	13C8_PFOA	244600	1000.0	953.4	95.3	0.37/ 0.37		

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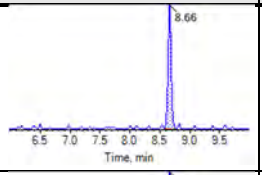
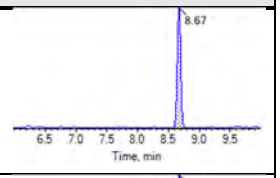
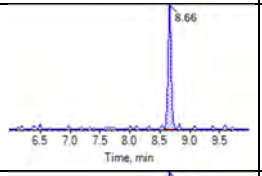
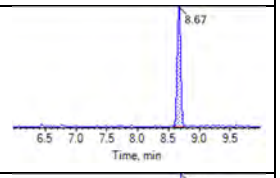
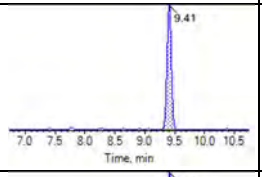
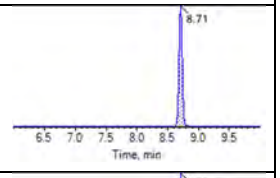
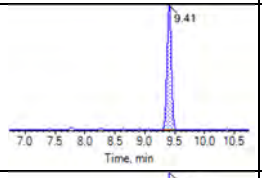
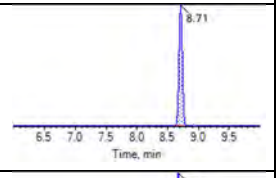
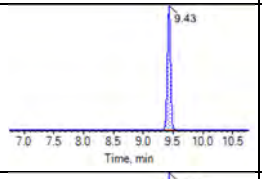
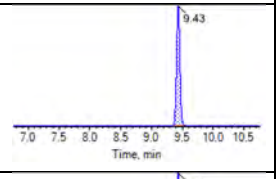
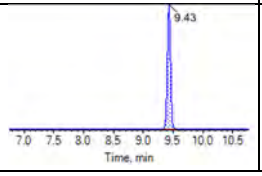
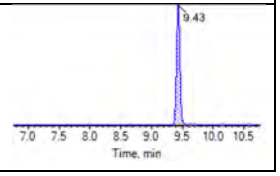
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	163600	13C2_6:2 FTS	33070	950.0	937.8	98.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	132800	13C2_6:2 FTS	33070	950.0	847.8	89.2	0.81/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1216000	13C8_PFOS	59220	950.0	1053.4	110.9	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	254500	13C8_PFOS	59220	950.0	1095.0	115.3	0.21/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	838200	13C9_PFNA	232500	1000.0	1072.7	107.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	192100	13C9_PFNA	232500	1000.0	1019.4	101.9	0.23/ 0.24		

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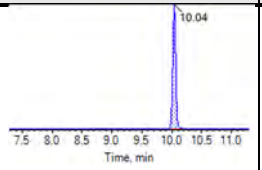
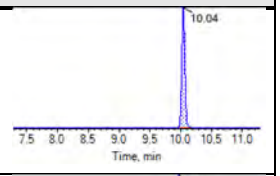
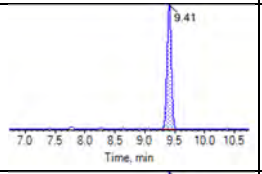
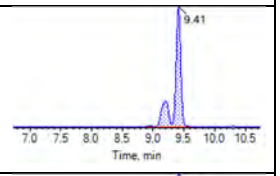
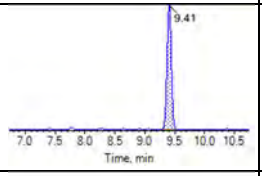
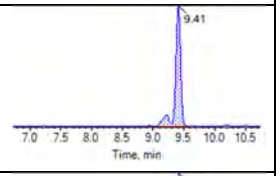
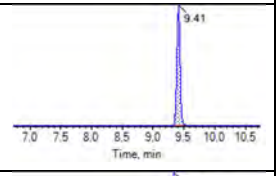
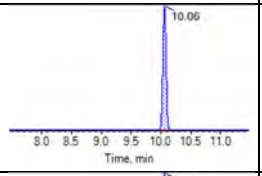
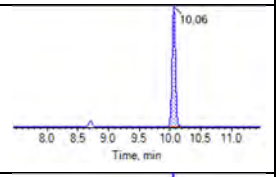
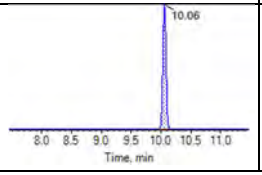
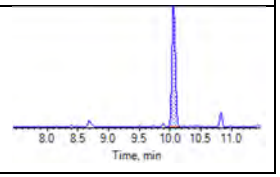
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	2020000	13C8_PFOSA	521400	925.5	1035.8	111.9	1.00/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	1096000	13C8_PFOS	59220	1000.0	1138.8	113.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	167400	13C8_PFOS	59220	1000.0	1178.0	117.8	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1645000	N/A	N/A	1000.0	980.8	98.1	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.06 (10.08)	779000	13C6_PFDA	147100	1000.0	1027.4	102.7	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.06 (10.08)	92220	13C6_PFDA	147100	1000.0	971.0	97.1	0.12/ 0.13		

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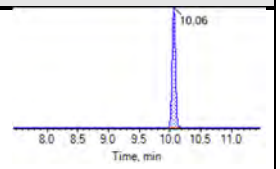
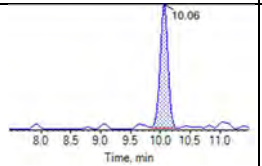
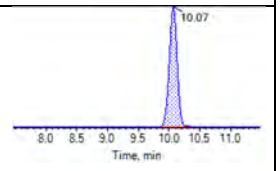
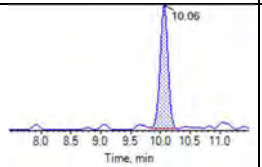
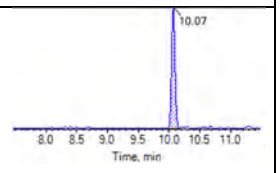
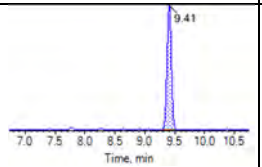
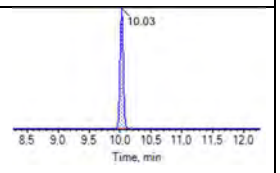
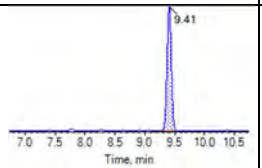
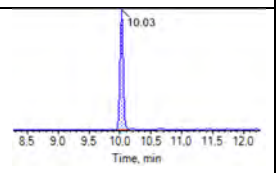
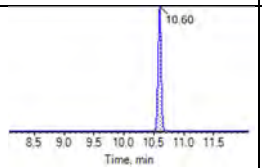
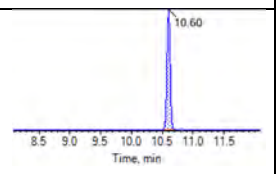
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1114000	N/A	N/A	1000.0	965.7	96.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	123800	13C2_8:2 FTS	20790	960.0	1155.3	120.3	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	97850	13C2_8:2 FTS	20790	960.0	942.1	98.1	0.79/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1059000	13C8_PFOS	59220	960.0	1132.9	118.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	206900	13C8_PFOS	59220	960.0	1215.1	126.6	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	659400	13C7_PFUdA	204600	1000.0	905.0	90.5	1.00/ 1.00		

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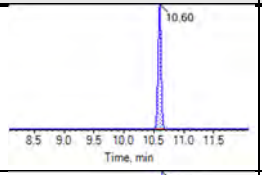
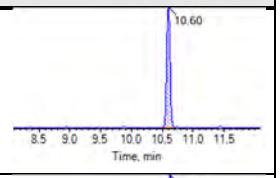
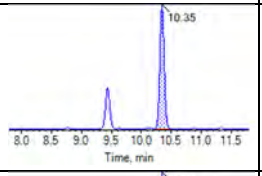
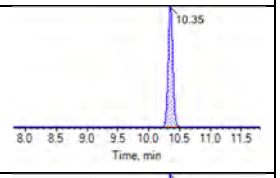
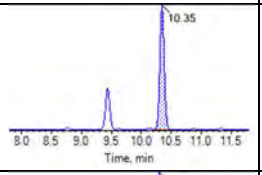
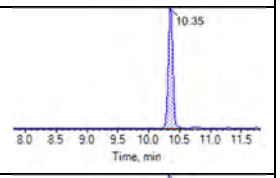
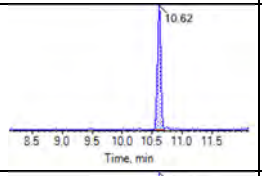
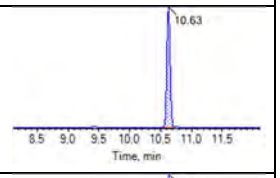
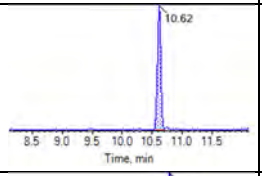
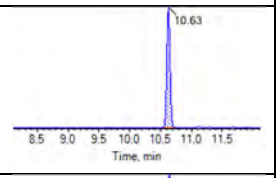
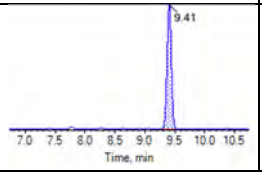
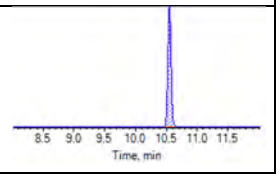
PFC103117098.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	82690	13C7_PFUdA	204600	1000.0	952.4	95.2	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.35 (10.37)	201000	d3-N-MeFOSAA	52360	1000.0	968.0	96.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	88110	d3-N-MeFOSAA	52360	1000.0	861.4	86.1	0.44/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	184200	d5-N-EtFOSAA	50180	1000.0	904.5	90.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	87910	d5-N-EtFOSAA	50180	1000.0	908.1	90.8	0.48/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	1153000	13C8_PFOS	59220	965.0	1011.6	104.8	1.00/ 1.00		

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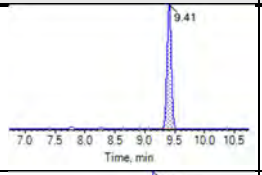
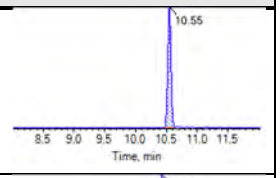
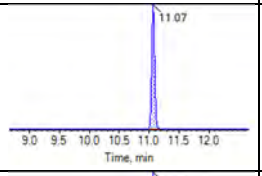
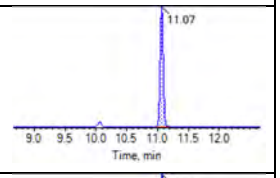
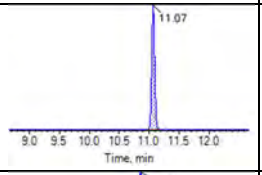
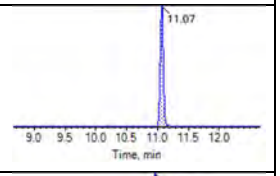
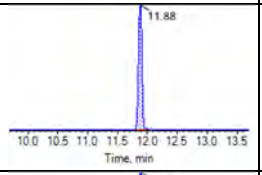
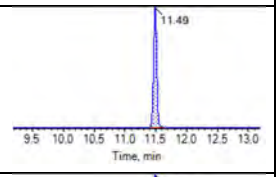
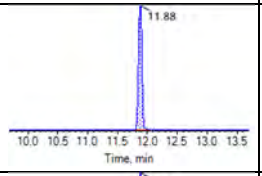
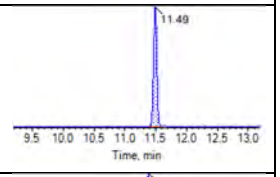
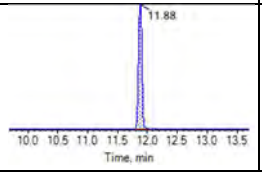
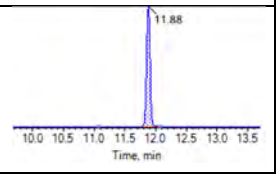
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	299400	13C8_PFOS	59220	965.0	985.6	102.1	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	624100	13C2_PFDoA	168900	1000.0	981.2	98.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	112400	13C2_PFDoA	168900	1000.0	1080.8	108.1	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.49 (11.82)	583800	13C2_PFTeDA	129000	1000.0	920.4	92.0	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.49 (11.82)	135800	13C2_PFTeDA	129000	1000.0	968.2	96.8	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.88 (11.91)	414700	13C2_PFTeDA	129000	1000.0	892.4	89.2	1.00/ 1.00		

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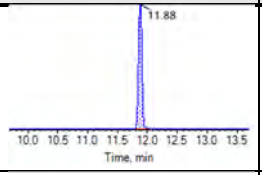
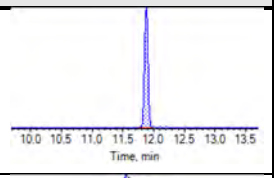
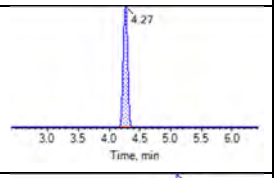
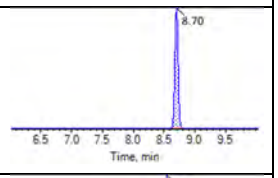
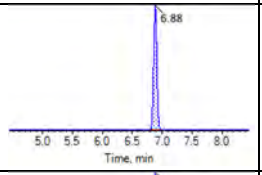
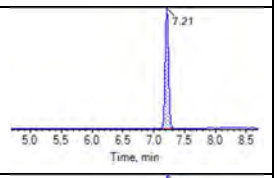
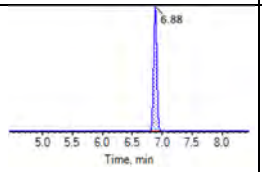
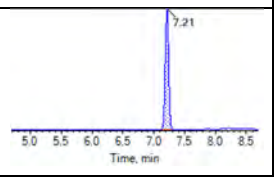
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.88 (11.91)	100500	13C2_PFTeDA	129000	1000.0	982.2	98.2	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1740000	N/A	N/A	1000.0	1005.6	100.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1289000	N/A	N/A	1000.0	1048.0	104.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	642800	13C5_PFHxA	275700	1000.0	937.5	93.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	496200	13C5_PFHxA	275700	1000.0	961.6	96.2	0.77/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 07:44

Data File: PFC103117110.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	852.946	85.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	795.63	79.6	
Perfluorotetradecanoic acid (PFTeDA)	1000	897.468	89.7	
Perfluorotridecanoic acid (PFTrDA)	1000	1011.201	101.1	
Perfluorododecanoic acid (PFDoA)	1000	991.476	99.1	
Perfluoroundecanoic acid (PFUdA)	1000	1142.492	114.2	
Perfluorononanoic acid (PFNA)	1000	1120.6	112.1	
Perfluorodecanoic acid (PFDA)	1000	1164.287	116.4	
Perfluorooctanoic acid (PFOA)	1000	938.219	93.8	
Perfluoroheptanoic acid (PFHpA)	1000	1073.323	107.3	
Perfluorooctanesulfonate (PFOS)	1000	1139.587	114	
Perfluorohexanoic acid (PFHxA)	1000	996.82	99.7	
Perfluorobutanesulfonate (PFBS)	885	846.906	95.7	
Perfluorohexanesulfonate (PFHxS)	912	890.863	97.7	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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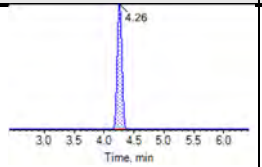
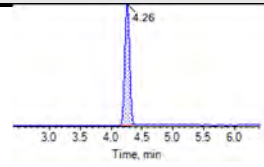
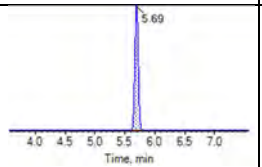
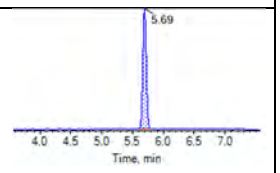
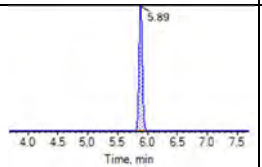
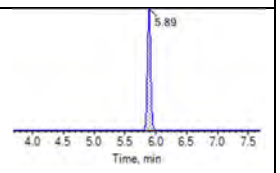
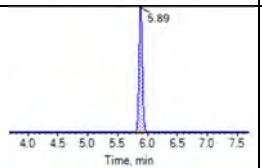
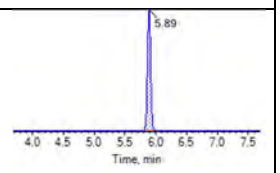
PFC103117110.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	43
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117110.wiff
Acquisition Date	11/2/2017 07:44:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117110.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	1043000	13C4_PFBA	144100	1000.0	1027.2	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	931800	13C5_PFPeA	208900	1000.0	1037.0	103.7	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	1278000	13C3_PFBS	153100	885.0	846.9	95.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	553400	13C3_PFBS	153100	885.0	816.9	92.3	0.43/ 0.45		

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LCMSMS#6

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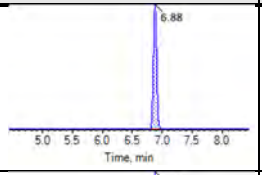
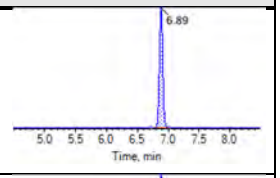
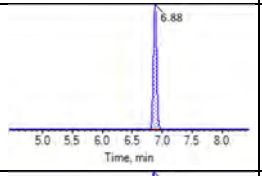
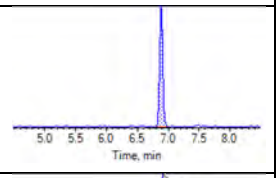
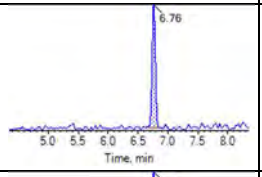
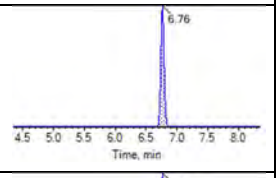
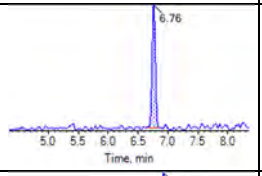
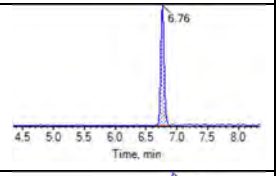
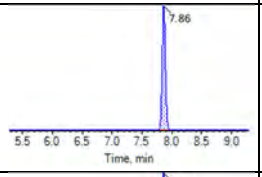
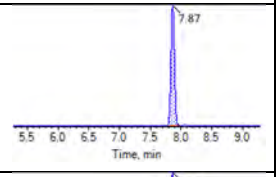
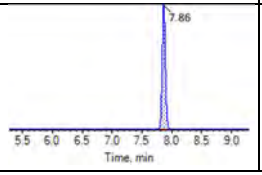
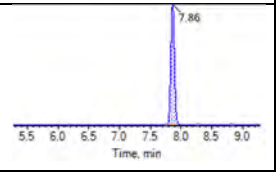
PFC103117110.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1039000	13C5_PFHxA	274500	1000.0	996.8	99.7	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	76930	13C5_PFHxA	274500	1000.0	1044.4	104.4	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.76 (6.80)	166900	13C2_4:2 FTS	31070	935.0	897.4	96.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.76 (6.80)	117300	13C2_4:2 FTS	31070	935.0	877.9	93.9	0.70/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	992900	13C4_PFHpA	221200	1000.0	1073.3	107.3	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.86 (7.93)	241300	13C4_PFHpA	221200	1000.0	997.6	99.8	0.24/ 0.26		

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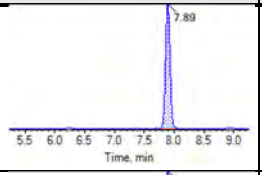
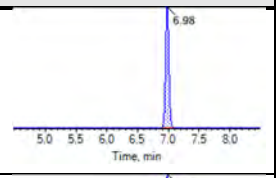
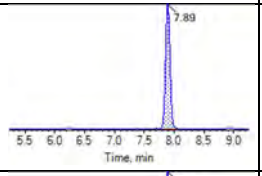
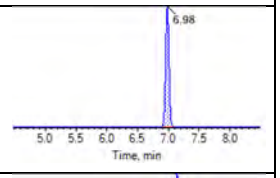
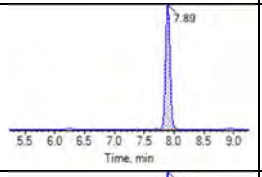
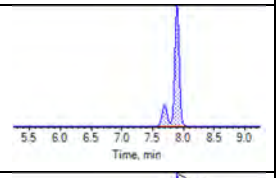
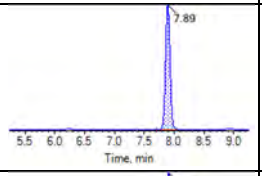
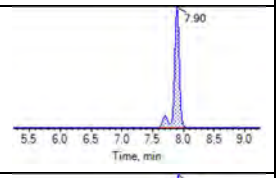
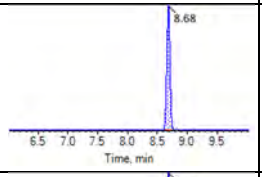
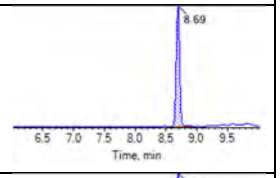
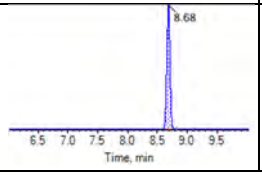
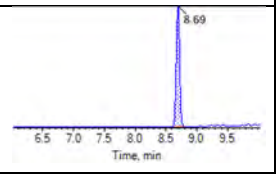
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1457000	13C3_PFHxS	74950	940.0	928.3	98.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	546200	13C3_PFHxS	74950	940.0	996.2	106.0	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1288000	13C3_PFHxS	74950	912.0	890.9	97.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	346700	13C3_PFHxS	74950	912.0	949.7	104.1	0.27/ 0.25		
PFOA	413.0 / 369.0	8.69 (8.75)	911300	13C8_PFOA	230200	1000.0	938.2	93.8	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.69 (8.75)	351600	13C8_PFOA	230200	1000.0	970.1	97.0	0.39/ 0.37		

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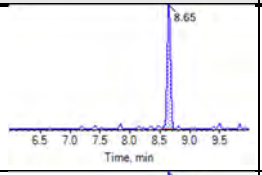
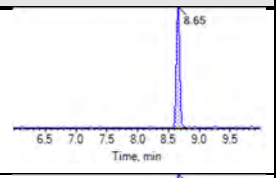
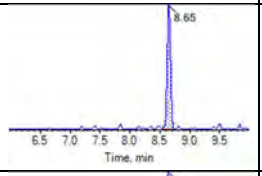
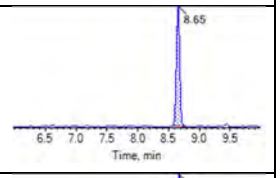
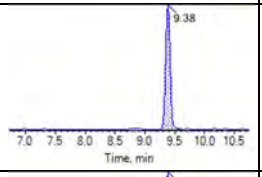
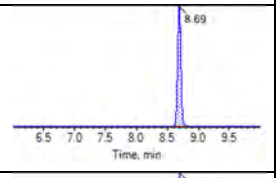
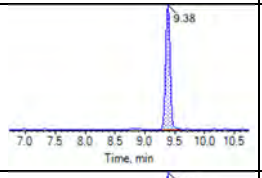
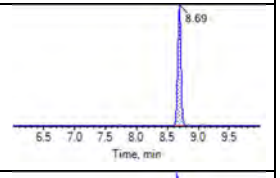
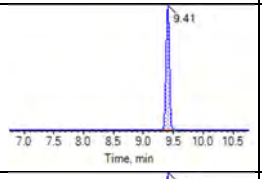
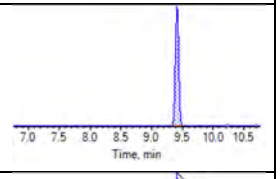
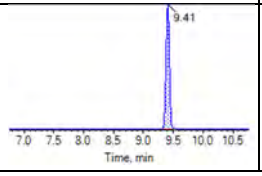
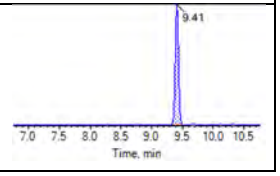
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.65 (8.72)	160000	13C2_6:2 FTS	39260	950.0	773.1	81.4	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.65 (8.72)	130700	13C2_6:2 FTS	39260	950.0	703.3	74.0	0.82/ 0.91		
PFHpS	449.0 / 80.0	8.69 (8.76)	1127000	13C8_PFOS	55450	950.0	1042.2	109.7	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.69 (8.76)	238100	13C8_PFOS	55450	950.0	1094.0	115.2	0.21/ 0.20		
PFNA	463.0 / 419.0	9.41 (9.47)	766900	13C9_PFNA	203600	1000.0	1120.6	112.1	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.41 (9.47)	193200	13C9_PFNA	203600	1000.0	1170.5	117.1	0.25/ 0.24		

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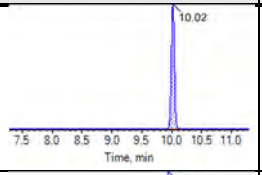
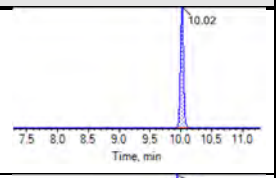
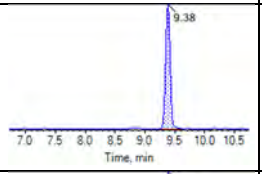
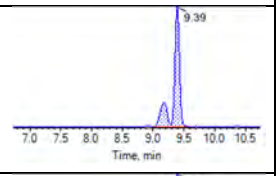
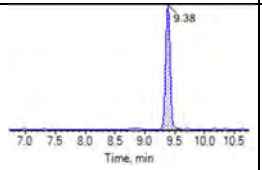
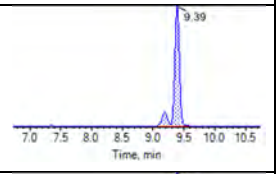
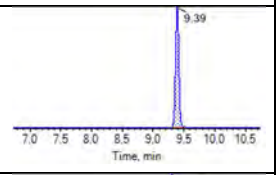
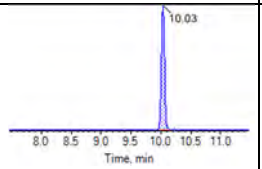
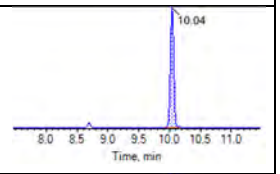
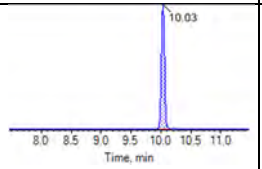
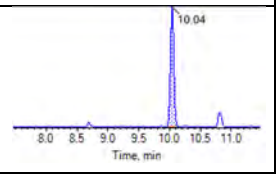
PFOSA	498.0 / 78.0	10.02 (10.04)	1748000	13C8_PFOSA	483100	925.5	967.2	104.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	1027000	13C8_PFOS	55450	1000.0	1139.6	114.0	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	163000	13C8_PFOS	55450	1000.0	1224.9	122.5	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1574000	N/A	N/A	1000.0	938.6	93.9	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	786300	13C6_PFDA	131000	1000.0	1164.3	116.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	85320	13C6_PFDA	131000	1000.0	1008.7	100.9	0.11/ 0.13		

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LCMSMS#6

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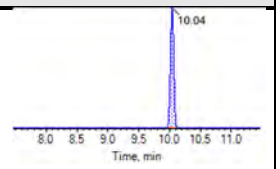
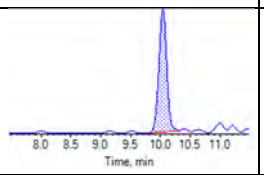
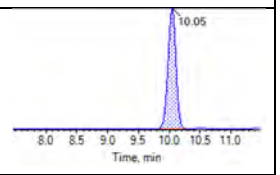
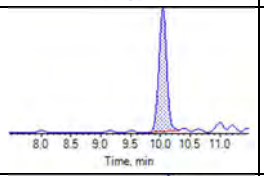
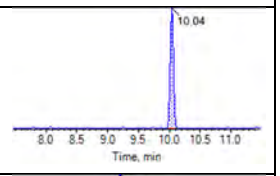
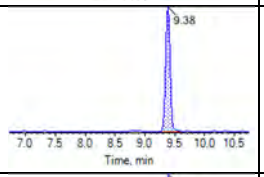
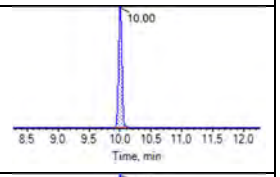
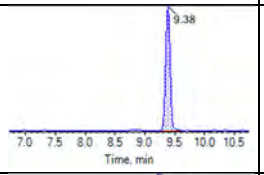
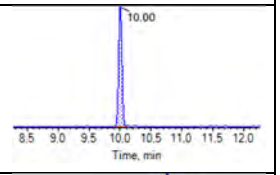
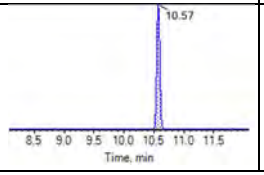
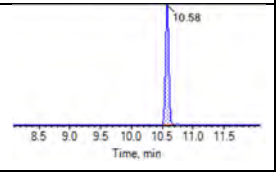
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1075000	N/A	N/A	1000.0	931.5	93.2	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	102200	13C2_8:2 FTS	16840	960.0	1177.5	122.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	98560	13C2_8:2 FTS	16840	960.0	1171.6	122.0	0.96/ 0.96		
PFNS	549.0 / 80.0	10.00 (10.49)	1030000	13C8_PFOS	55450	960.0	1176.8	122.6	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	195200	13C8_PFOS	55450	960.0	1224.2	127.5	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	634600	13C7_PFUdA	156000	1000.0	1142.5	114.2	1.00/ 1.00		

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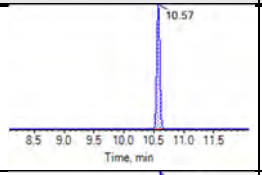
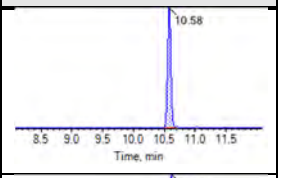
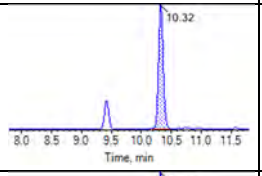
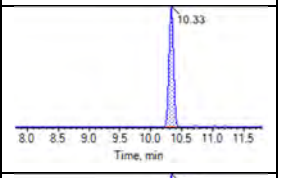
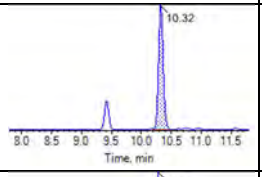
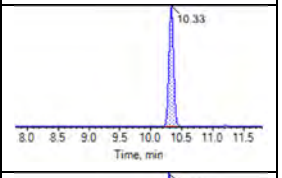
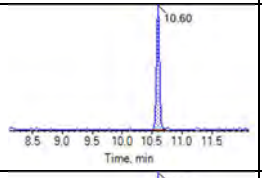
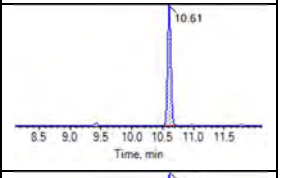
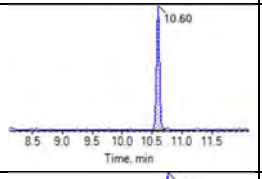
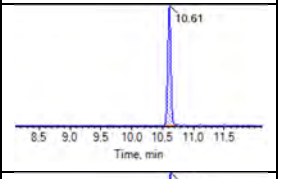
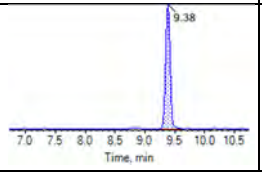
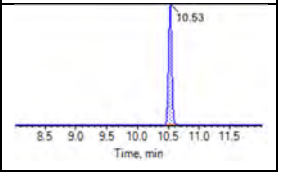
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.58 (10.62)	89020	13C7_PFUdA	156000	1000.0	1345.1	134.5	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	176700	d3-N-MeFOSAA	56010	1000.0	795.6	79.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	84090	d3-N-MeFOSAA	56010	1000.0	768.6	76.9	0.48/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	172200	d5-N-EtFOSAA	49740	1000.0	852.9	85.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.61 (10.64)	88910	d5-N-EtFOSAA	49740	1000.0	926.6	92.7	0.52/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1129000	13C8_PFOS	55450	965.0	1057.2	109.5	1.00/ 1.00		

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LCMSMS#6

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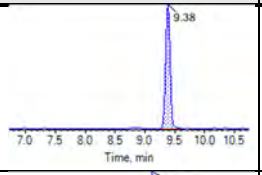
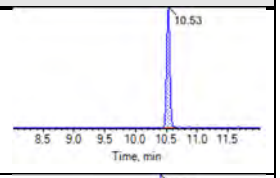
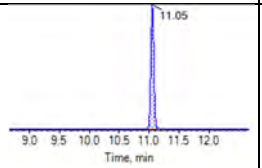
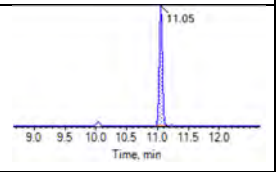
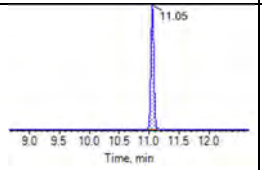
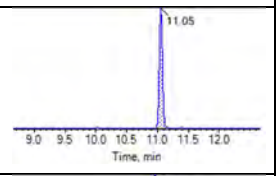
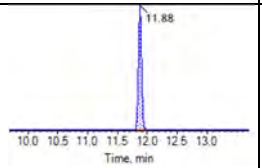
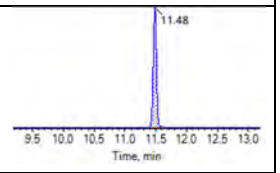
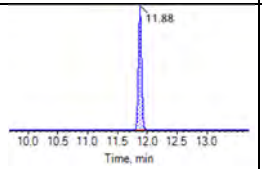
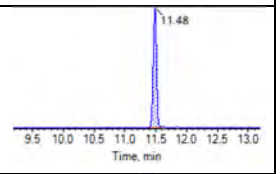
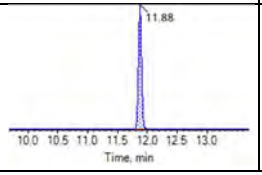
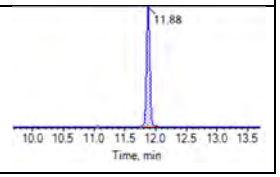
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	306400	13C8_PFOS	55450	965.0	1077.4	111.6	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	629500	13C2_PFDoA	168600	1000.0	991.5	99.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	108600	13C2_PFDoA	168600	1000.0	1046.0	104.6	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	596200	13C2_PFTeDA	119900	1000.0	1011.2	101.1	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	142800	13C2_PFTeDA	119900	1000.0	1095.5	109.6	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.88 (11.91)	387600	13C2_PFTeDA	119900	1000.0	897.5	89.7	1.00/ 1.00		

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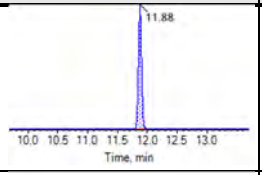
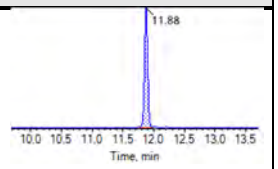
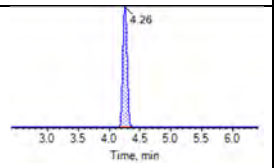
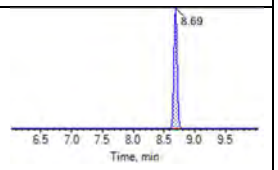
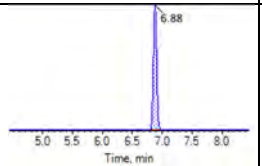
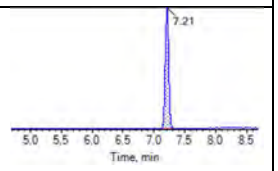
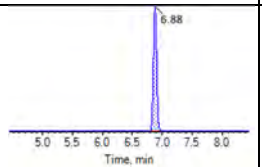
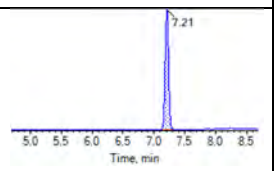
PFTeDA_2	713.0 / 169.0	11.88 (11.91)	95290	13C2_PFTeDA	119900	1000.0	1001.9	100.2	0.25/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1733000	N/A	N/A	1000.0	1001.6	100.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1247000	N/A	N/A	1000.0	1013.5	101.4	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	616800	13C5_PFHxA	274500	1000.0	903.4	90.3	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	465900	13C5_PFHxA	274500	1000.0	906.9	90.7	0.76/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 11:39

Data File: PFC103117121.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	887.467	88.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	835.057	83.5	
Perfluorotetradecanoic acid (PFTeDA)	1000	997.756	99.8	
Perfluorotridecanoic acid (PFTrDA)	1000	988.917	98.9	
Perfluorododecanoic acid (PFDoA)	1000	1074.002	107.4	
Perfluoroundecanoic acid (PFUdA)	1000	1099.226	109.9	
Perfluorononanoic acid (PFNA)	1000	987.906	98.8	
Perfluorodecanoic acid (PFDA)	1000	1089.382	108.9	
Perfluorooctanoic acid (PFOA)	1000	884.286	88.4	
Perfluoroheptanoic acid (PFHpA)	1000	980.47	98	
Perfluorooctanesulfonate (PFOS)	1000	1139.37	113.9	
Perfluorohexanoic acid (PFHxA)	1000	1126.515	112.7	
Perfluorohexanesulfonate (PFHxS)	912	830.145	91	
Perfluorobutanesulfonate (PFBS)	885	900.243	101.7	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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LCMSMS#6

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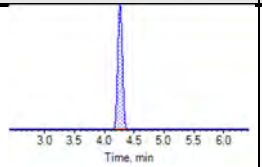
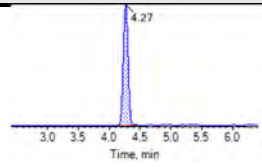
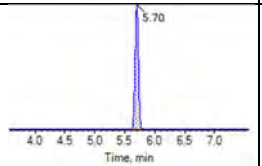
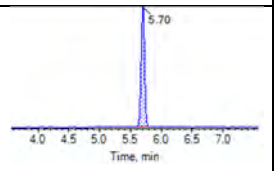
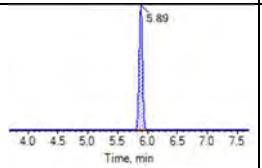
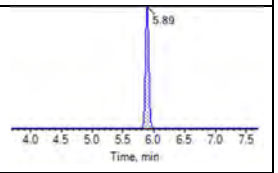
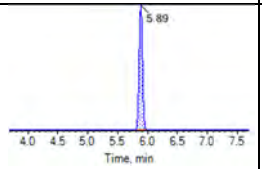
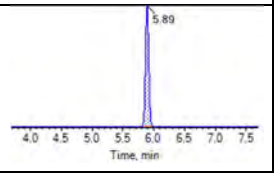
PFC103117121.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	43
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117121.wiff
Acquisition Date	11/2/2017 11:39:58	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117121.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1055000	13C4_PFBA	143500	1000.0	1043.4	104.3	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	936500	13C5_PFPeA	216500	1000.0	1005.5	100.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	1267000	13C3_PFBS	142800	885.0	900.2	101.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	592300	13C3_PFBS	142800	885.0	937.6	105.9	0.47/ 0.45		

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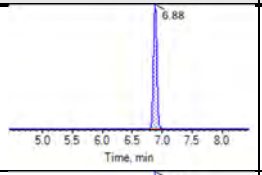
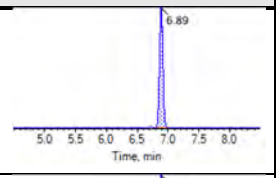
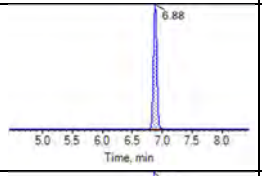
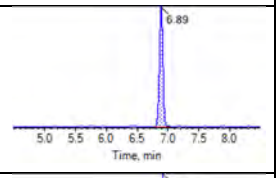
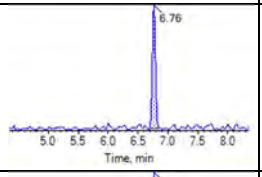
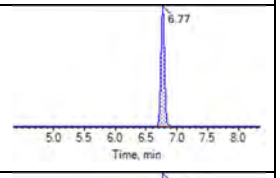
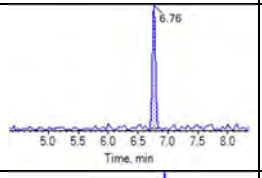
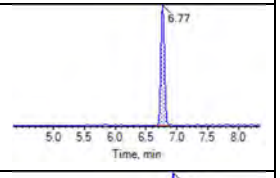
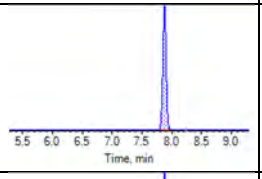
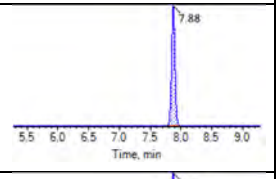
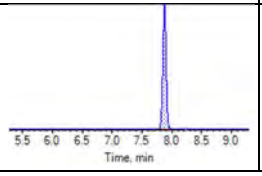
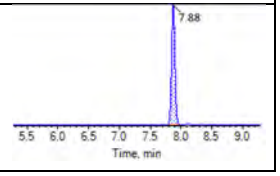
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1130000	13C5_PFHxA	264200	1000.0	1126.5	112.7	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	90240	13C5_PFHxA	264200	1000.0	1272.8	127.3	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	155000	13C2_4:2 FTS	31330	935.0	826.5	88.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	113300	13C2_4:2 FTS	31330	935.0	841.1	90.0	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	952400	13C4_PFHpA	232200	1000.0	980.5	98.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	254800	13C4_PFHpA	232200	1000.0	1003.3	100.3	0.27/ 0.26		

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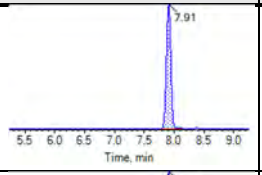
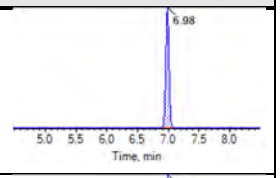
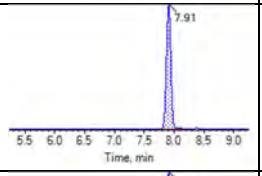
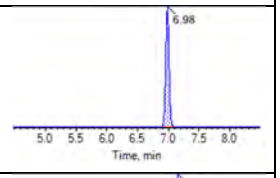
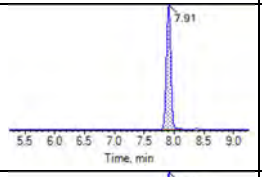
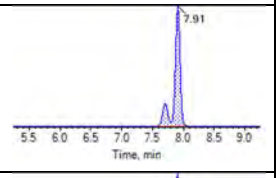
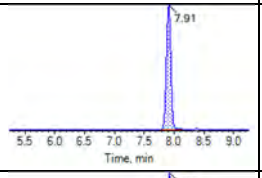
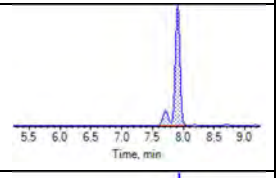
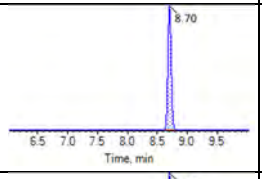
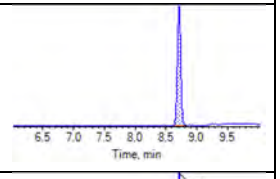
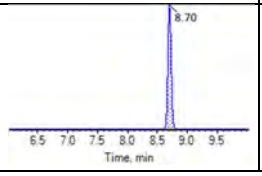
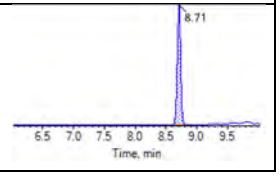
PFC103117121.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1486000	13C3_PFHxS	77900	940.0	911.2	96.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	564000	13C3_PFHxS	77900	940.0	989.8	105.3	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1247000	13C3_PFHxS	77900	912.0	830.1	91.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	348700	13C3_PFHxS	77900	912.0	918.9	100.8	0.28/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	879800	13C8_PFOA	235800	1000.0	884.3	88.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	355100	13C8_PFOA	235800	1000.0	956.6	95.7	0.40/ 0.37		

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LCMSMS#6

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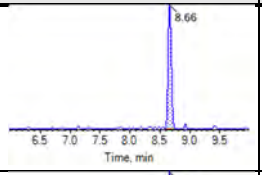
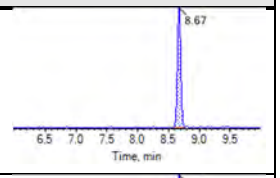
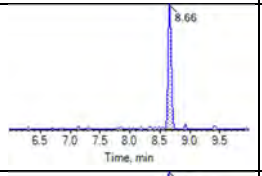
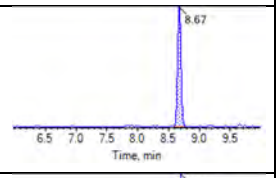
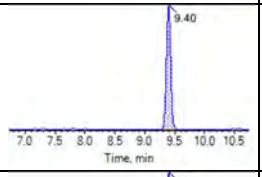
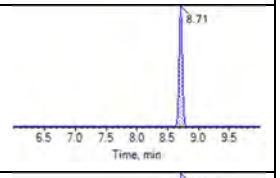
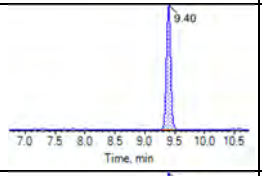
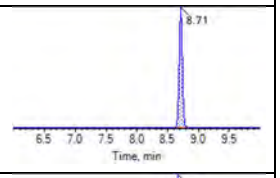
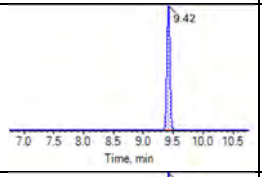
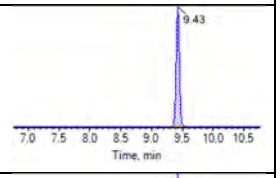
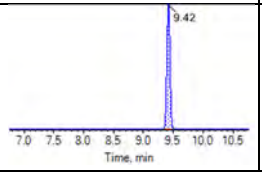
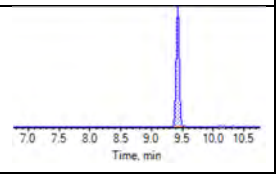
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	170200	13C2_6:2 FTS	36610	950.0	881.4	92.8	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	123500	13C2_6:2 FTS	36610	950.0	712.6	75.0	0.73/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1140000	13C8_PFOS	58180	950.0	1005.1	105.8	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	212800	13C8_PFOS	58180	950.0	932.1	98.1	0.19/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	754600	13C9_PFNA	227300	1000.0	987.9	98.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	206000	13C9_PFNA	227300	1000.0	1118.3	111.8	0.27/ 0.24		

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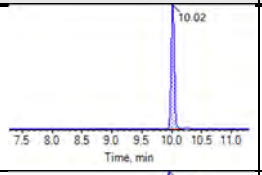
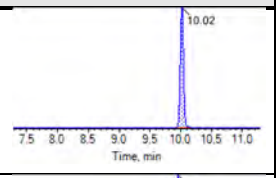
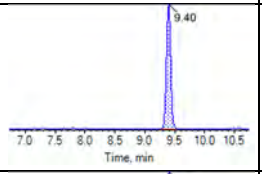
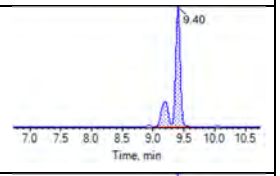
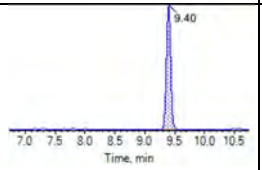
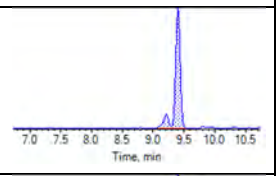
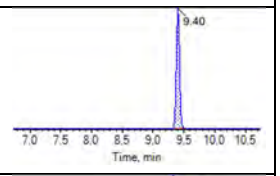
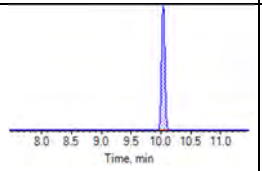
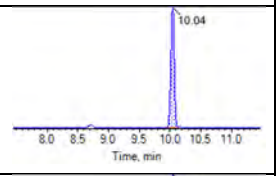
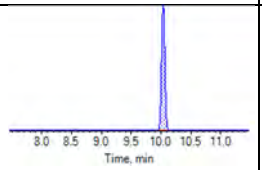
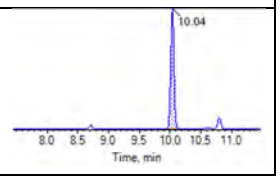
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1834000	13C8_PFOSA	482100	925.5	1016.9	109.9	1.00/ 1.00		
PFOS	499.0 / 80.0	9.40 (9.45)	1077000	13C8_PFOS	58180	1000.0	1139.4	113.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.40 (9.45)	156400	13C8_PFOS	58180	1000.0	1120.4	112.0	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1638000	N/A	N/A	1000.0	976.8	97.7	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	773300	13C6_PFDA	137700	1000.0	1089.4	108.9	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	102000	13C6_PFDA	137700	1000.0	1147.0	114.7	0.13/ 0.13		

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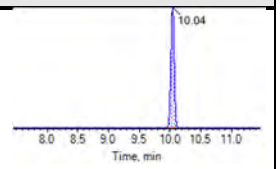
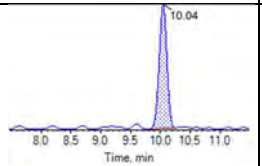
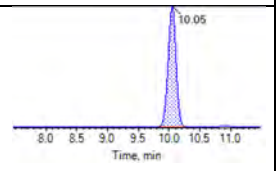
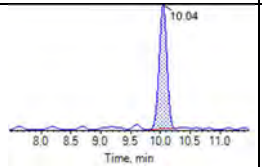
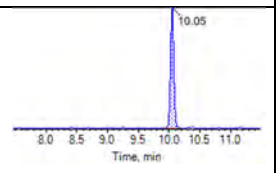
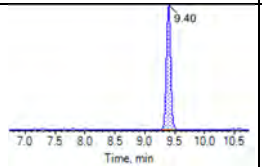
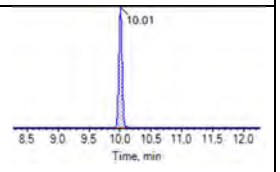
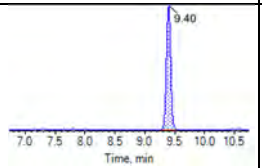
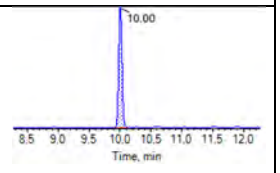
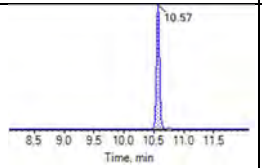
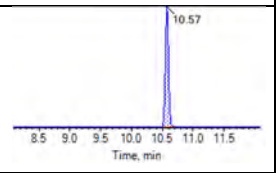
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1144000	N/A	N/A	1000.0	992.0	99.2	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	104600	13C2_8:2 FTS	21490	960.0	944.2	98.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.05 (10.09)	113000	13C2_8:2 FTS	21490	960.0	1052.5	109.6	1.08/ 0.96		
PFNS	549.0 / 80.0	10.01 (10.49)	1005000	13C8_PFOS	58180	960.0	1094.2	114.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	183400	13C8_PFOS	58180	960.0	1096.4	114.2	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.57 (10.62)	680800	13C7_PFUdA	173900	1000.0	1099.2	109.9	1.00/ 1.00		

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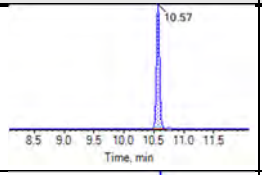
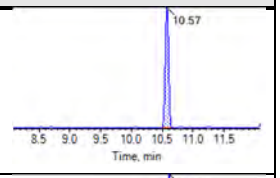
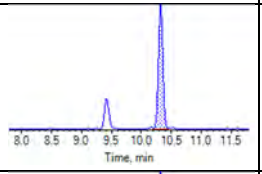
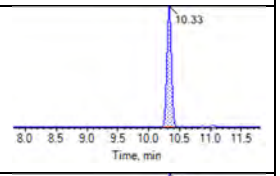
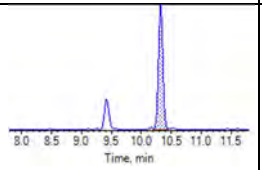
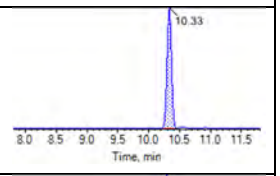
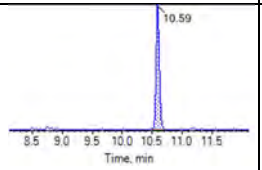
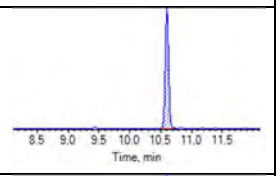
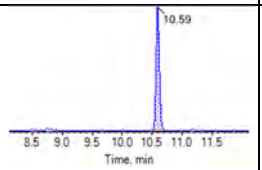
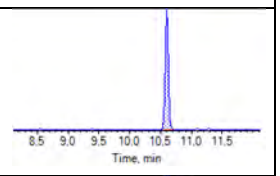
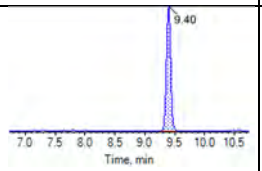
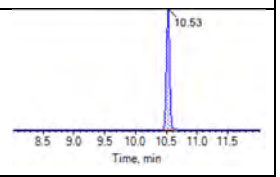
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.57 (10.62)	94320	13C7_PFUdA	173900	1000.0	1278.0	127.8	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	193800	d3-N-MeFOSAA	58520	1000.0	835.1	83.5	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	89490	d3-N-MeFOSAA	58520	1000.0	782.8	78.3	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.60 (10.64)	182400	d5-N-EtFOSAA	50640	1000.0	887.5	88.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	88100	d5-N-EtFOSAA	50640	1000.0	901.8	90.2	0.48/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1122000	13C8_PFOS	58180	965.0	1001.5	103.8	1.00/ 1.00		

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LCMSMS#6

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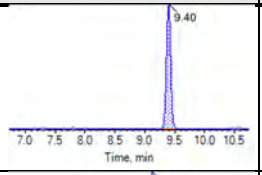
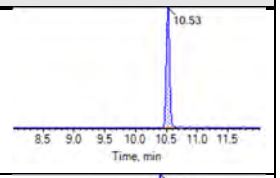
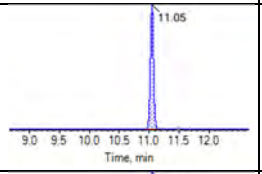
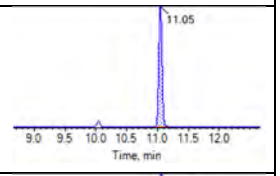
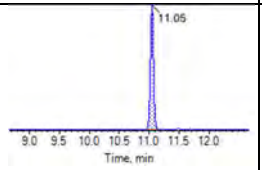
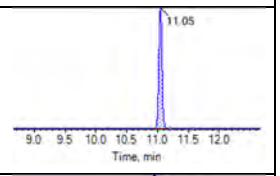
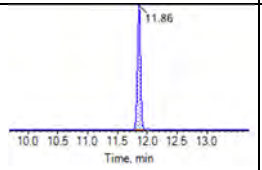
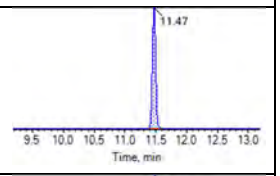
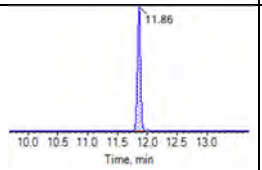
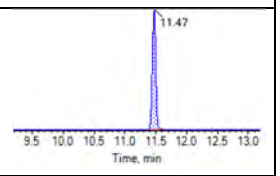
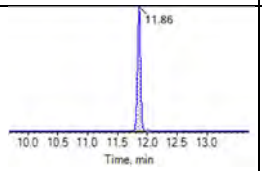
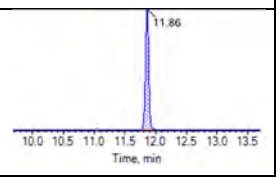
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	323400	13C8_PFOS	58180	965.0	1083.8	112.3	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	644600	13C2_PFDoA	159400	1000.0	1074.0	107.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	116500	13C2_PFDoA	159400	1000.0	1187.3	118.7	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	593800	13C2_PFTeDA	122100	1000.0	988.9	98.9	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	137500	13C2_PFTeDA	122100	1000.0	1035.9	103.6	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.86 (11.91)	438800	13C2_PFTeDA	122100	1000.0	997.8	99.8	1.00/ 1.00		

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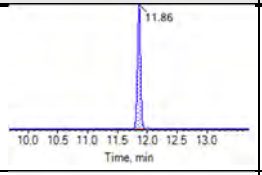
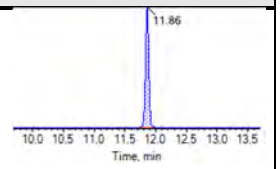
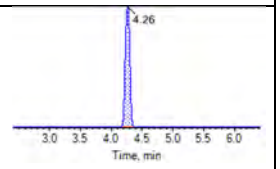
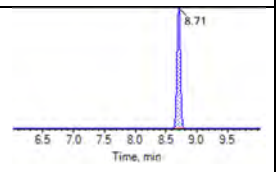
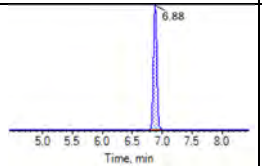
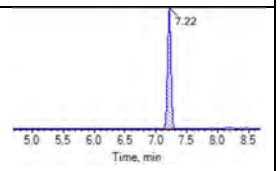
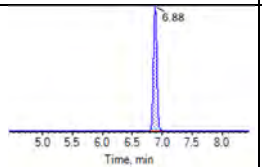
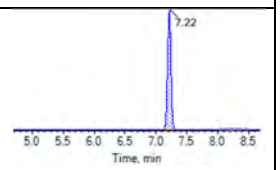
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.86 (11.91)	101800	13C2_PFTeDA	122100	1000.0	1050.6	105.1	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1721000	N/A	N/A	1000.0	995.1	99.5	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1205000	N/A	N/A	1000.0	979.0	97.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	646800	13C5_PFHxA	264200	1000.0	984.4	98.4	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	519800	13C5_PFHxA	264200	1000.0	1051.3	105.1	0.80/ 0.75		

Continuing Calibration Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 15:56

Data File: PFC103117133.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	805.904	80.6	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1018.473	101.8	
Perfluorotetradecanoic acid (PFTeDA)	1000	900.809	90.1	
Perfluorotridecanoic acid (PFTrDA)	1000	862.87	86.3	
Perfluoroundecanoic acid (PFUdA)	1000	1014.575	101.5	
Perfluorododecanoic acid (PFDoA)	1000	1064.592	106.5	
Perfluorodecanoic acid (PFDA)	1000	1173.7	117.4	
Perfluorononanoic acid (PFNA)	1000	1072.325	107.2	
Perfluorooctanoic acid (PFOA)	1000	1001.285	100.1	
Perfluoroheptanoic acid (PFHpA)	1000	1083.591	108.4	
Perfluorooctanesulfonate (PFOS)	1000	1000.173	100	
Perfluorohexanoic acid (PFHxA)	1000	958.913	95.9	
Perfluorohexanesulfonate (PFHxS)	912	922.592	101.2	
Perfluorobutanesulfonate (PFBS)	885	893.964	101	

Recovery criteria is 70% - 130%

JISB
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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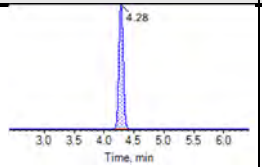
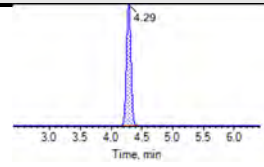
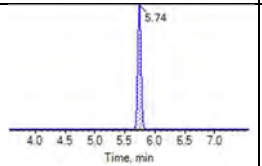
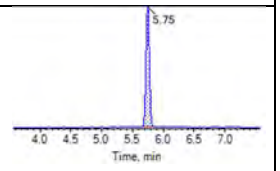
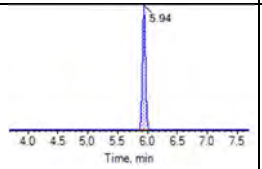
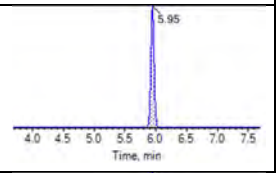
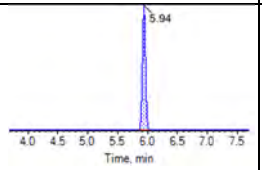
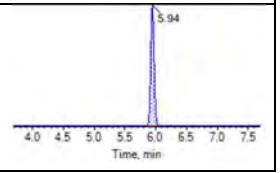
PFC103117133.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	11
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117133.wiff
Acquisition Date	11/2/2017 15:56:43	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117133.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	1172000	13C4_PFBA	152000	1000.0	1094.3	109.4	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	1023000	13C5_PFPeA	247100	1000.0	962.5	96.2	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	1423000	13C3_PFBS	161500	885.0	894.0	101.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.94 (5.89)	652400	13C3_PFBS	161500	885.0	912.8	103.1	0.46/ 0.45		

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LCMSMS#6

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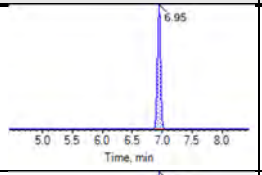
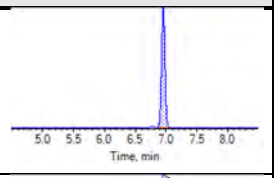
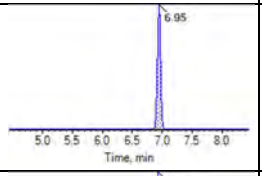
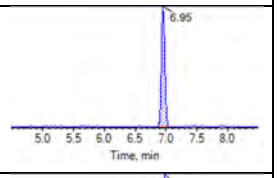
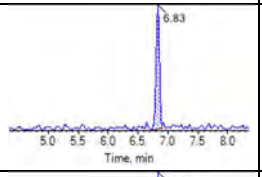
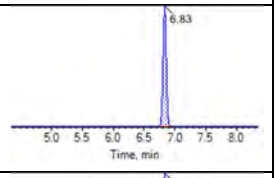
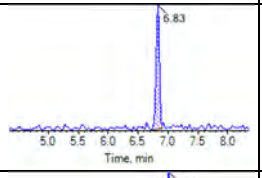
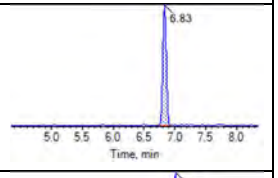
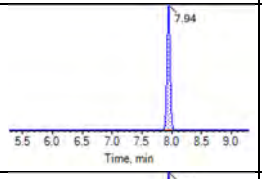
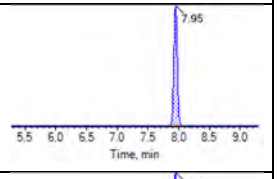
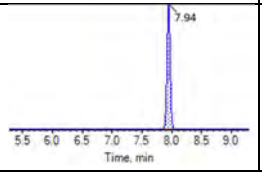
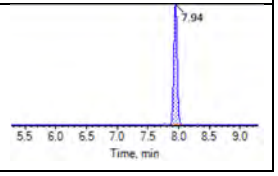
PFC103117133.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	1157000	13C5_PFHxA	317700	1000.0	958.9	95.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	85120	13C5_PFHxA	317700	1000.0	998.3	99.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.83 (6.80)	164300	13C2_4:2 FTS	31300	935.0	876.9	93.8	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.83 (6.80)	125600	13C2_4:2 FTS	31300	935.0	932.9	99.8	0.76/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	1089000	13C4_PFHpA	240200	1000.0	1083.6	108.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.94 (7.93)	271900	13C4_PFHpA	240200	1000.0	1035.1	103.5	0.25/ 0.26		

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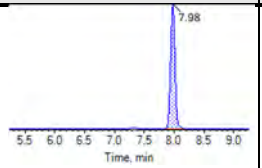
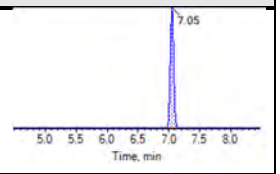
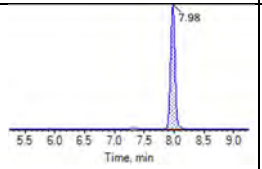
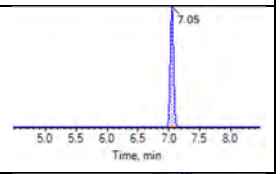
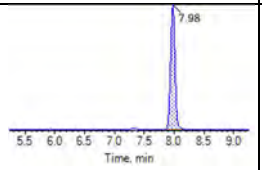
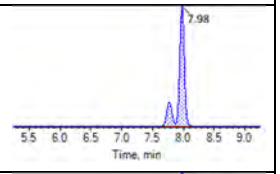
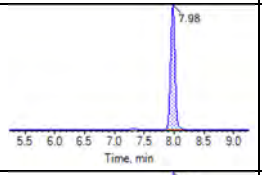
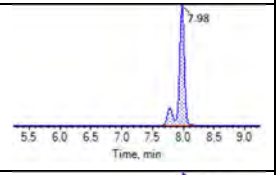
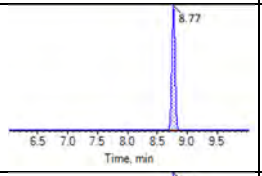
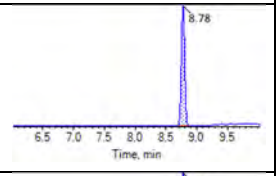
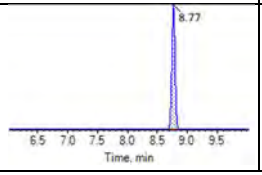
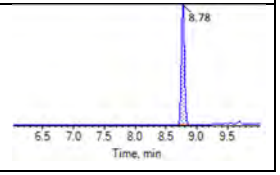
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.05 (7.02)	1677000	13C3_PFHxS	77070	940.0	1039.6	110.6	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.05 (7.02)	601500	13C3_PFHxS	77070	940.0	1067.0	113.5	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.98 (7.96)	1371000	13C3_PFHxS	77070	912.0	922.6	101.2	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.98 (7.96)	379900	13C3_PFHxS	77070	912.0	1012.0	111.0	0.28/ 0.25		
PFOA	413.0 / 369.0	8.78 (8.75)	1021000	13C8_PFOA	241600	1000.0	1001.3	100.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.78 (8.75)	386700	13C8_PFOA	241600	1000.0	1016.6	101.7	0.38/ 0.37		

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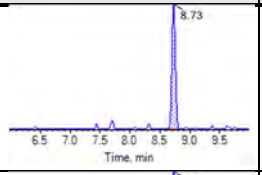
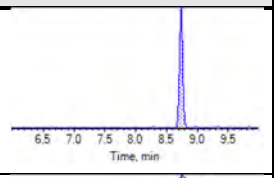
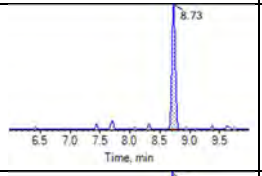
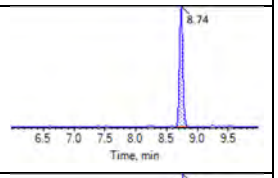
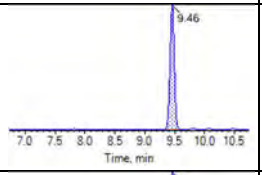
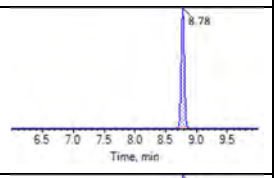
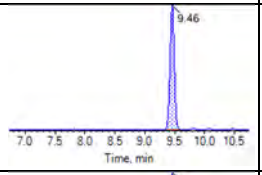
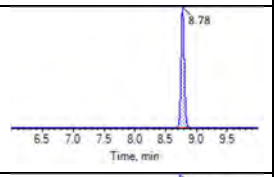
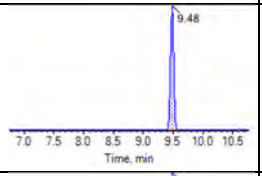
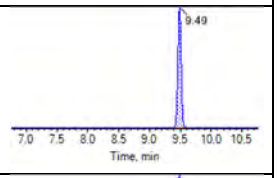
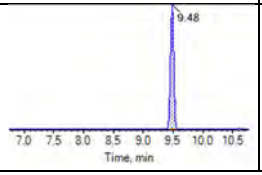
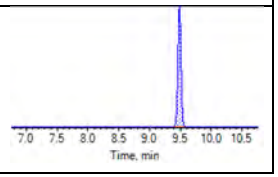
6:2 FTS	427.0 / 407.0	8.74 (8.72)	174300	13C2_6:2 FTS	35600	950.0	928.2	97.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.74 (8.72)	152200	13C2_6:2 FTS	35600	950.0	902.6	95.0	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.78 (8.76)	1268000	13C8_PFOS	69820	950.0	931.6	98.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.78 (8.76)	264400	13C8_PFOS	69820	950.0	964.7	101.5	0.21/ 0.20		
PFNA	463.0 / 419.0	9.49 (9.47)	910600	13C9_PFNA	252700	1000.0	1072.3	107.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	209700	13C9_PFNA	252700	1000.0	1024.1	102.4	0.23/ 0.24		

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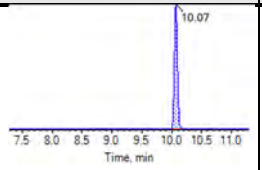
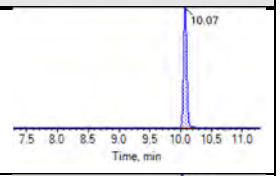
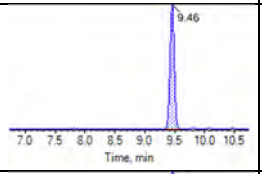
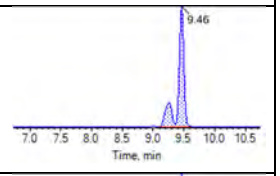
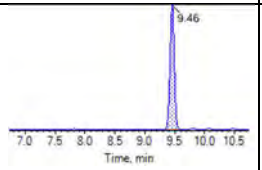
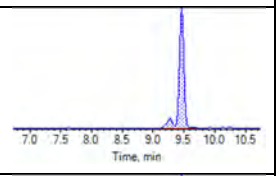
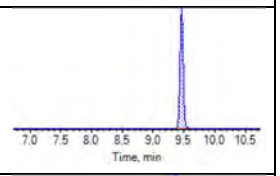
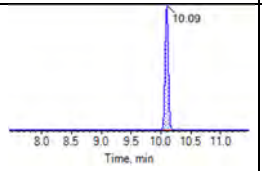
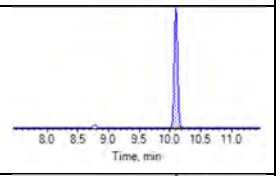
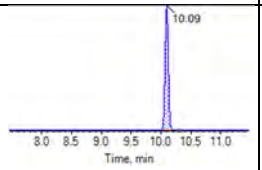
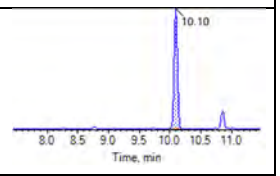
PFOSA	498.0 / 78.0	10.07 (10.04)	2017000	13C8_PFOSA	580300	925.5	929.1	100.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1134000	13C8_PFOS	69820	1000.0	1000.2	100.0	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	166700	13C8_PFOS	69820	1000.0	995.1	99.5	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1718000	N/A	N/A	1000.0	1024.5	102.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	875000	13C6_PFDA	144600	1000.0	1173.7	117.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	104500	13C6_PFDA	144600	1000.0	1119.1	111.9	0.12/ 0.13		

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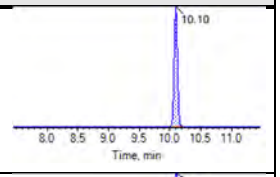
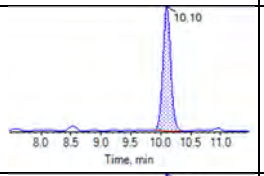
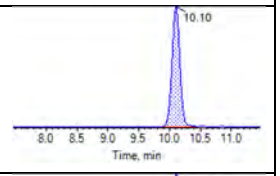
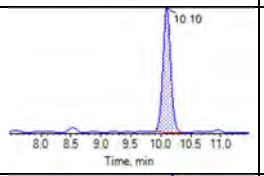
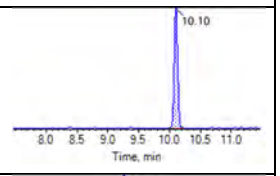
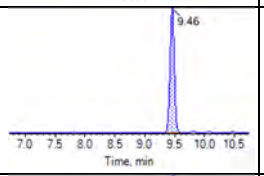
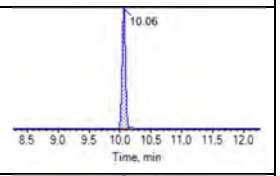
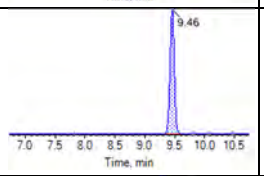
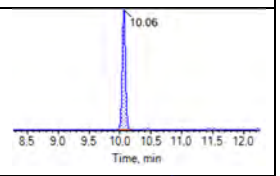
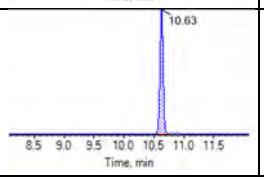
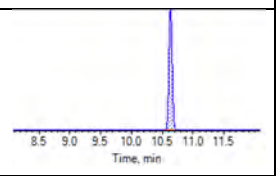
PFC103117133.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1145000	N/A	N/A	1000.0	992.8	99.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.10 (10.09)	102200	13C2_8:2 FTS	26730	960.0	741.5	77.2	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	103400	13C2_8:2 FTS	26730	960.0	774.4	80.7	1.01/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1139000	13C8_PFOS	69820	960.0	1033.3	107.6	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	224100	13C8_PFOS	69820	960.0	1116.4	116.3	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.63 (10.62)	700000	13C7_PFUdA	193700	1000.0	1014.6	101.5	1.00/ 1.00		

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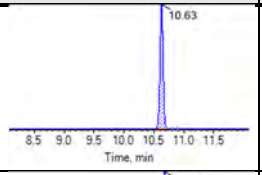
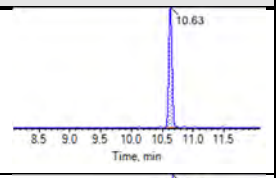
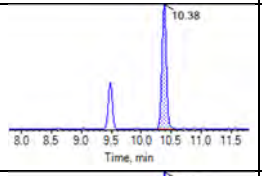
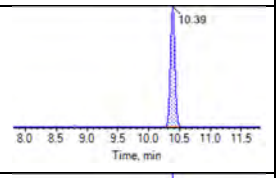
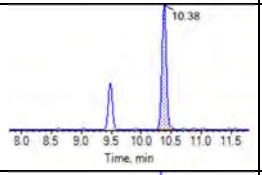
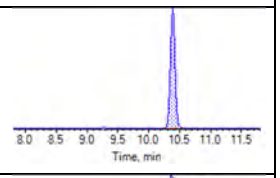
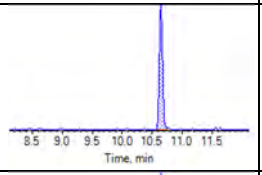
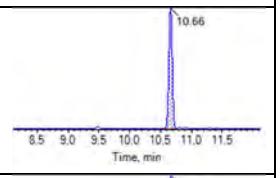
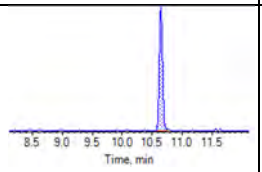
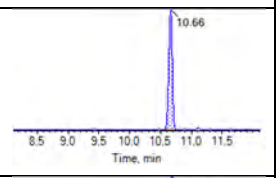
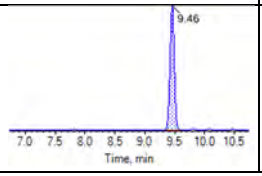
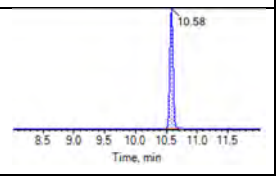
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	112500	13C7_PFUdA	193700	1000.0	1368.6	136.9	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	202200	d3-N-MeFOSAA	50070	1000.0	1018.5	101.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	108700	d3-N-MeFOSAA	50070	1000.0	1111.7	111.2	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	184300	d5-N-EtFOSAA	56350	1000.0	805.9	80.6	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	94650	d5-N-EtFOSAA	56350	1000.0	870.7	87.1	0.51/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	1239000	13C8_PFOS	69820	965.0	922.0	95.5	1.00/ 1.00		

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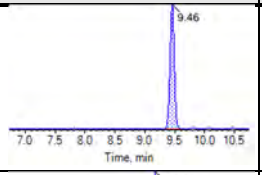
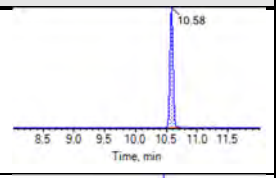
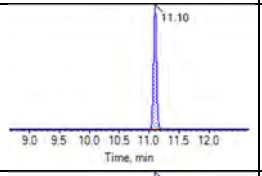
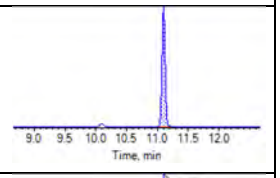
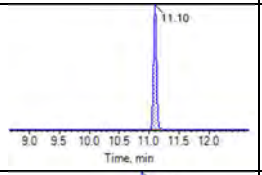
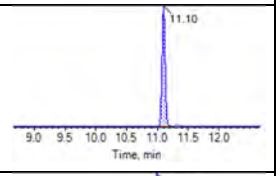
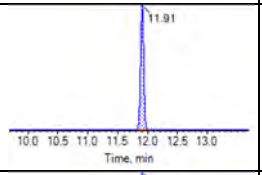
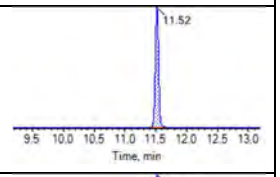
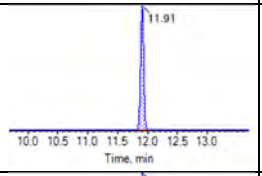
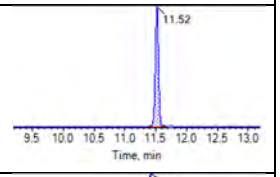
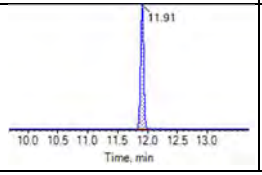
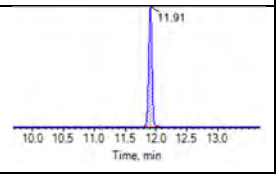
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	339800	13C8_PFOS	69820	965.0	949.0	98.3	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	707600	13C2_PFDoA	176500	1000.0	1064.6	106.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	122000	13C2_PFDoA	176500	1000.0	1123.0	112.3	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	577300	13C2_PFTeDA	136100	1000.0	862.9	86.3	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	140400	13C2_PFTeDA	136100	1000.0	949.2	94.9	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.91 (11.91)	441500	13C2_PFTeDA	136100	1000.0	900.8	90.1	1.00/ 1.00		

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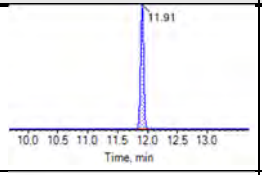
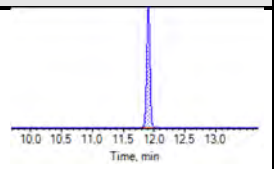
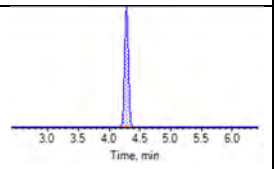
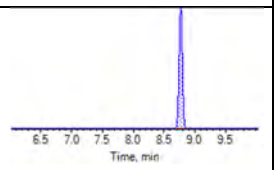
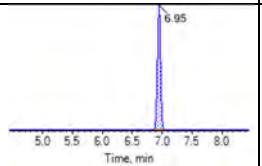
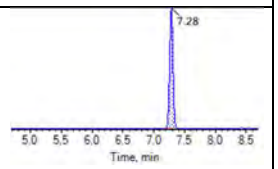
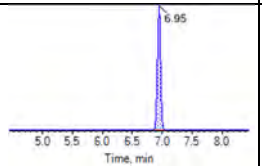
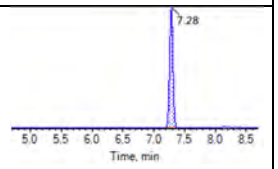
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.91 (11.91)	97680	13C2_PFTeDA	136100	1000.0	905.1	90.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1812000	N/A	N/A	1000.0	1047.2	104.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1229000	N/A	N/A	1000.0	998.6	99.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.28 (7.26)	719000	13C5_PFHxA	317700	1000.0	910.0	91.0	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.28 (7.26)	572700	13C5_PFHxA	317700	1000.0	963.2	96.3	0.80/ 0.75		

Quality Control Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**			**Matrix:**	**WATER**
Lab Sample ID:	**1203908641**				
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**MB for batch 1714400**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/01/2017 23:54**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**251.8 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117088.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00264	ug/L	0.00131	0.00264	0.00397
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00264	ug/L	0.00131	0.00264	0.00397
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00133	ug/L	0.000655	0.00133	0.00177
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00133	ug/L	0.000774	0.00133	0.00199
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00121	ug/L	0.000655	0.00121	0.00181
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00131	ug/L	0.000655	0.00131	0.00199
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00131	ug/L	0.000695	0.00131	0.00199
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00131	ug/L	0.000655	0.00131	0.00199

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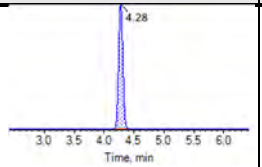
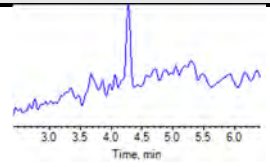
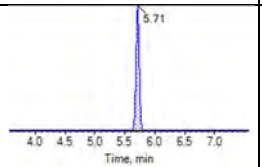
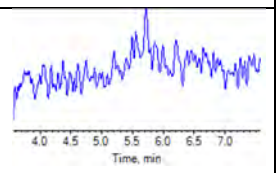
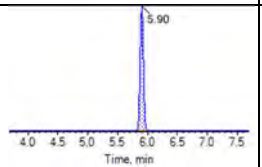
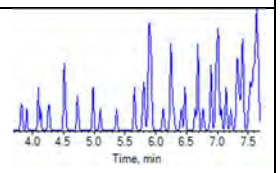
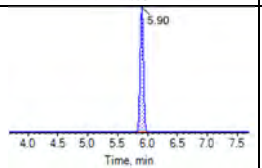
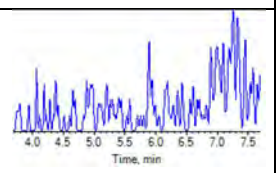
Sample Name	1203908641	**Injection Vial**	23
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117088.wiff
Acquisition Date	11/1/2017 23:54:09	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117088.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	138900	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	242500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	169100	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	169100	N/A	N/A	N/A	N/A/ 0.45		

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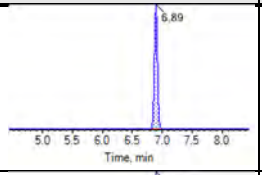
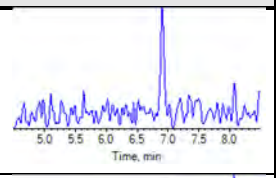
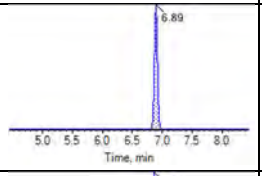
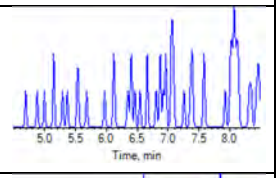
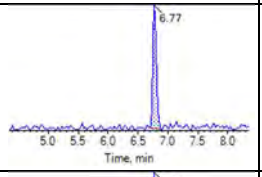
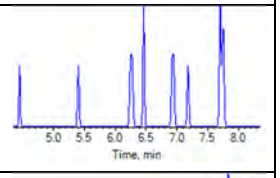
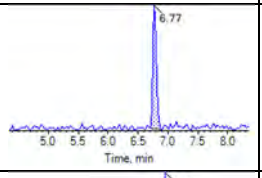
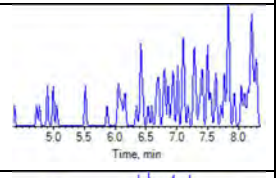
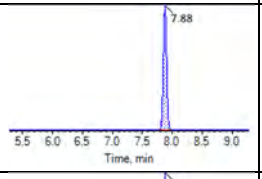
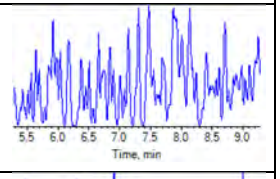
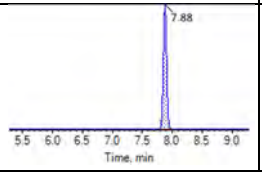
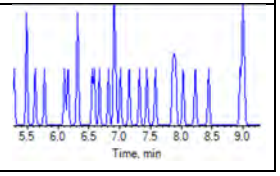
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	33960	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	33960	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	280600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	280600	N/A	N/A	N/A	N/A/ 0.26		

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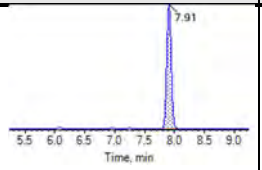
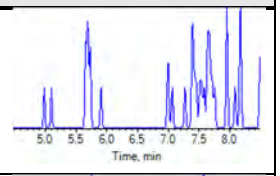
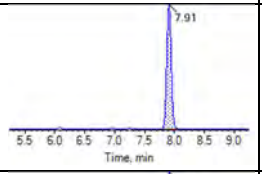
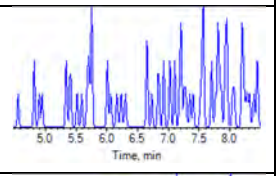
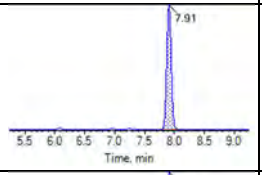
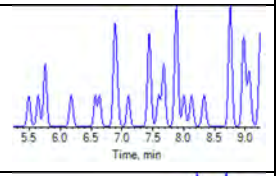
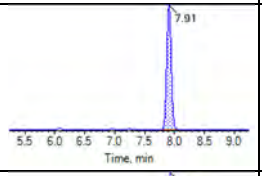
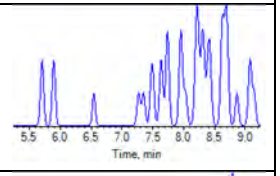
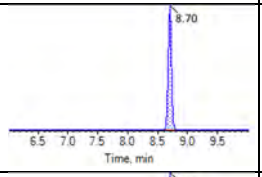
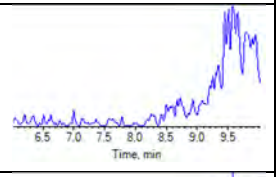
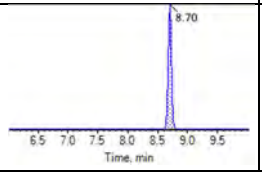
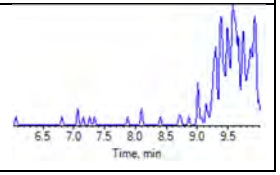
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	257800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	257800	N/A	N/A	N/A	N/A/ 0.37		

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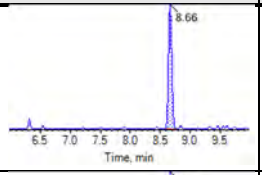
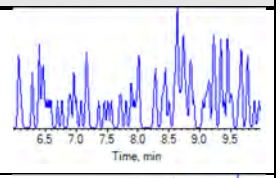
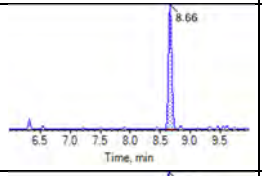
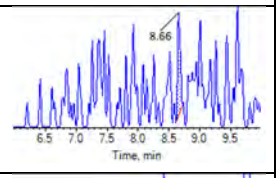
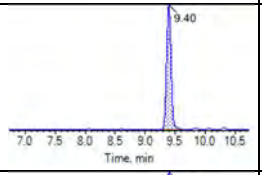
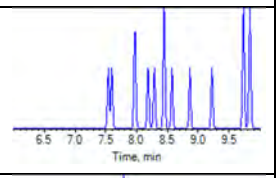
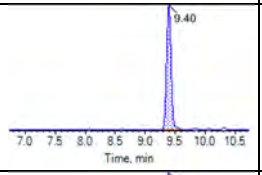
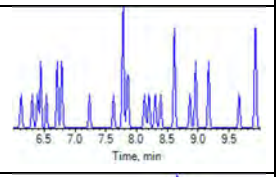
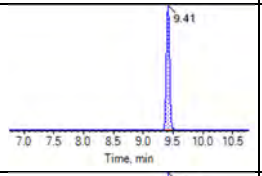
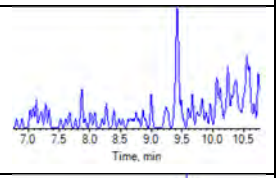
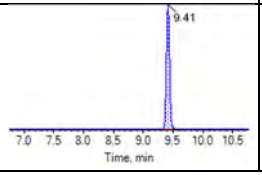
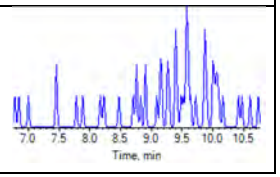
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	37530	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	1725	13C2_6:2 FTS	37530	N/A	9.7	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	264000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	264000	N/A	N/A	N/A	N/A/ 0.24		

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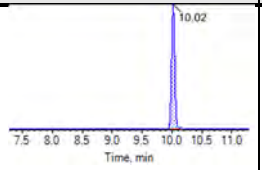
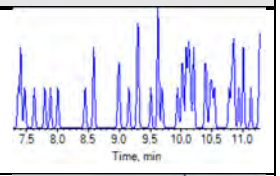
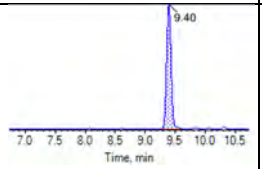
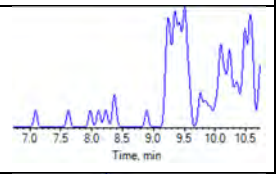
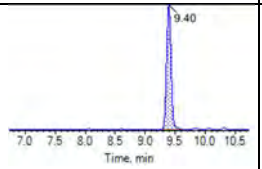
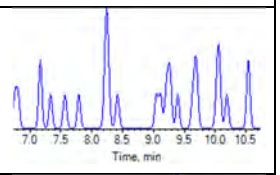
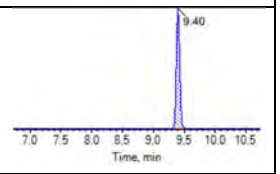
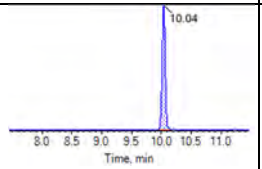
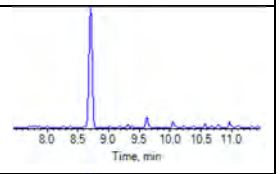
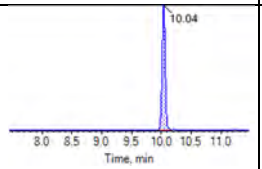
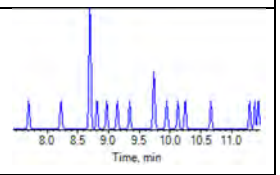
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	447200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1576000	N/A	N/A	N/A	939.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	140300	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	140300	N/A	N/A	N/A	N/A/ 0.13		

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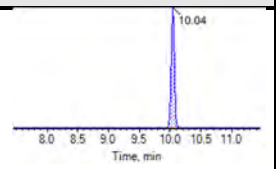
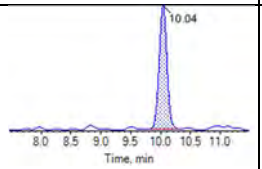
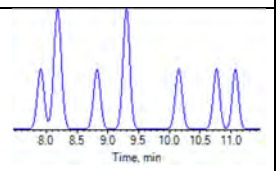
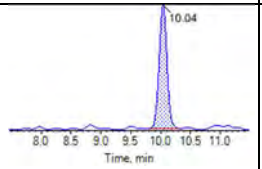
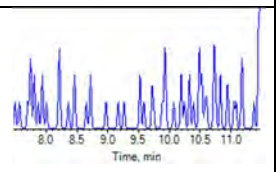
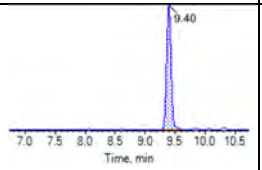
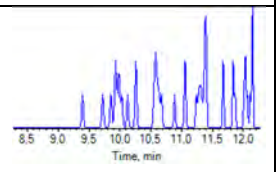
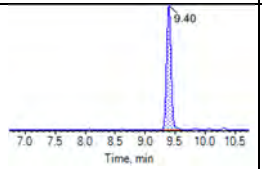
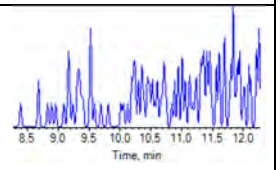
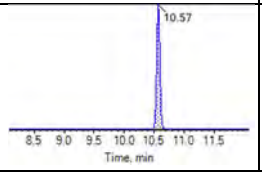
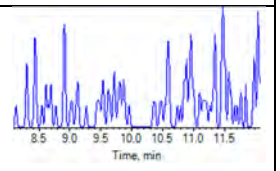
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1138000	N/A	N/A	N/A	986.7	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25830	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25830	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	197900	N/A	N/A	N/A	N/A/ 1.00		

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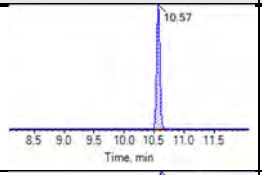
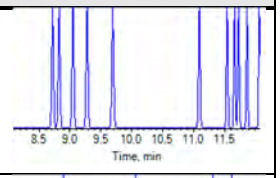
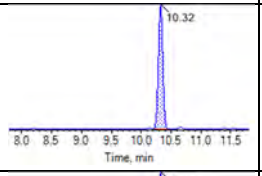
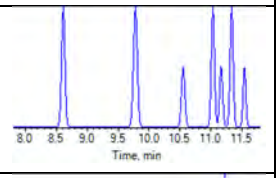
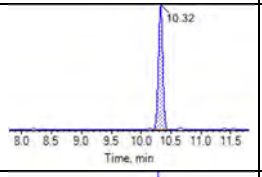
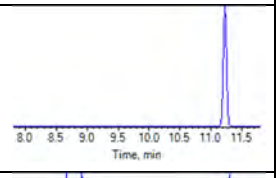
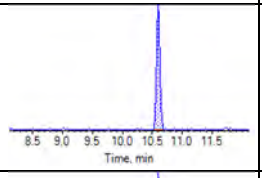
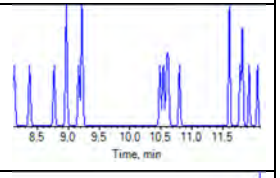
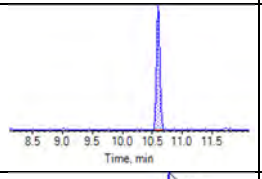
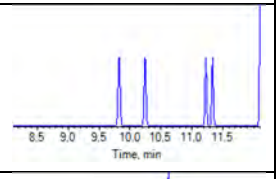
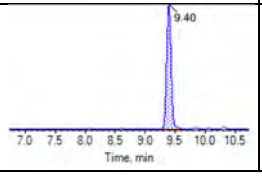
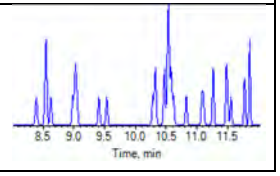
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	197900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	45530	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	45530	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47950	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47950	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		

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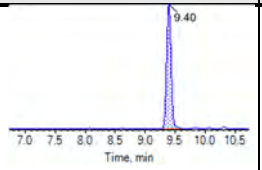
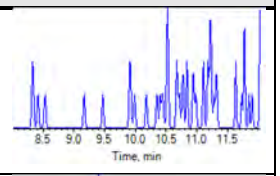
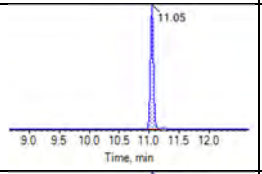
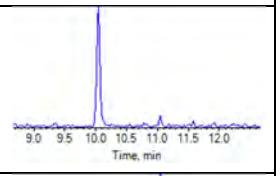
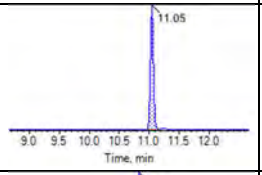
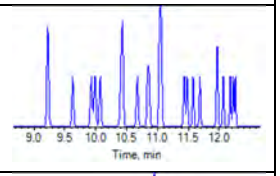
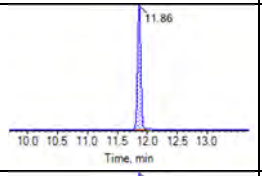
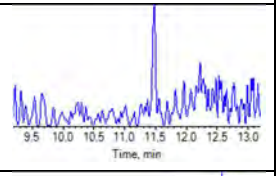
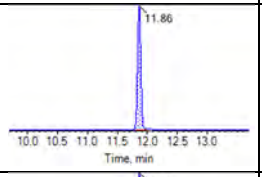
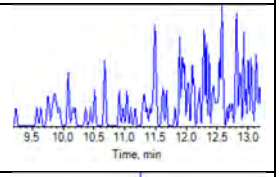
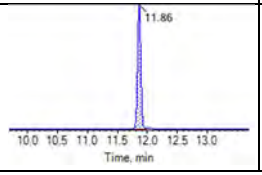
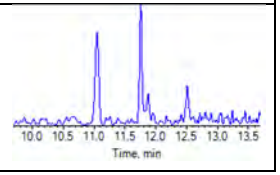
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	158200	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	158200	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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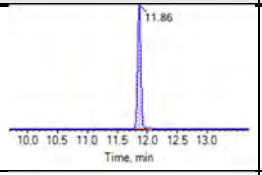
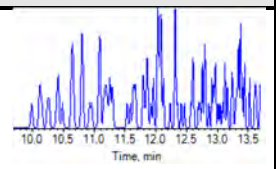
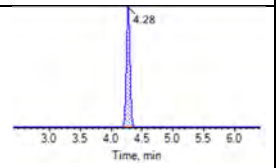
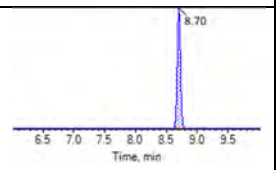
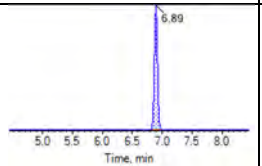
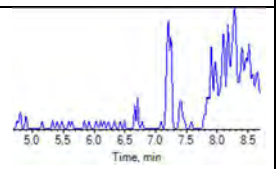
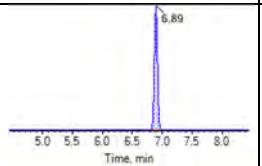
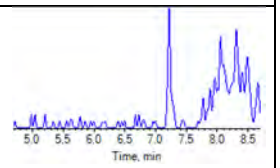
PFC103117088.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1723000	N/A	N/A	N/A	996.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1190000	N/A	N/A	N/A	967.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**			**Matrix:**	**WATER**
Lab Sample ID:	**1203908642**				
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**LCS for batch 1714400**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 00:15**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**251.37 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117089.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0165	ug/L	0.00131	0.00265	0.00398
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0185	ug/L	0.00131	0.00265	0.00398
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0171	ug/L	0.000656	0.00133	0.00177
335-76-2	Perfluorodecanoic acid (PFDA)		0.0172	ug/L	0.000776	0.00133	0.00199
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0207	ug/L	0.000656	0.00133	0.00199
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0169	ug/L	0.000656	0.00133	0.00199
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.015	ug/L	0.000656	0.00121	0.00181
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0192	ug/L	0.000656	0.00133	0.00199
375-95-1	Perfluorononanoic acid (PFNA)		0.0195	ug/L	0.000656	0.00131	0.00199
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0175	ug/L	0.000656	0.00131	0.00199
335-67-1	Perfluorooctanoic acid (PFOA)		0.0173	ug/L	0.000696	0.00131	0.00199
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0178	ug/L	0.000656	0.00131	0.00199
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0173	ug/L	0.000656	0.00131	0.00199
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0173	ug/L	0.000656	0.00131	0.00199

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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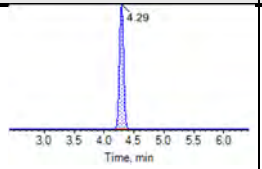
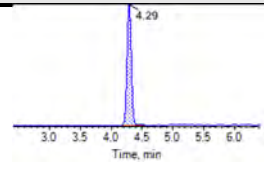
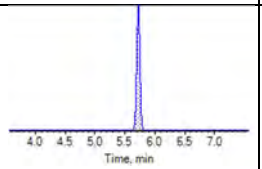
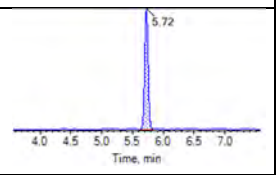
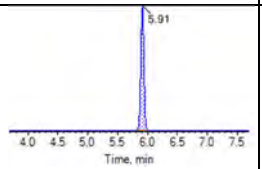
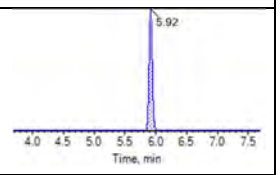
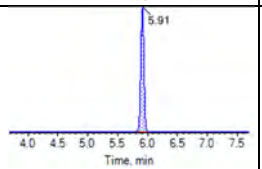
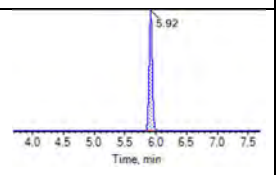
PFC103117089.wiff			
Sample Name	1203908642	**Injection Vial**	24
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117089.wiff
Acquisition Date	11/2/2017 00:15:33	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117089.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	963300	13C4_PFBA	153000	N/A	893.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	1050000	13C5_PFPeA	257600	N/A	947.6	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.92 (5.89)	1482000	13C3_PFBS	174900	N/A	859.8	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.92 (5.89)	639500	13C3_PFBS	174900	N/A	826.4	N/A	0.43/ 0.45		

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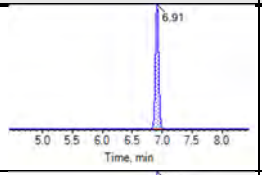
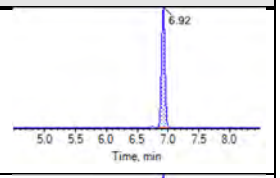
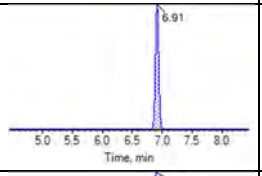
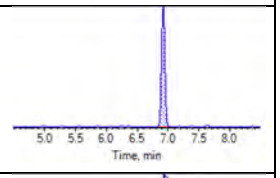
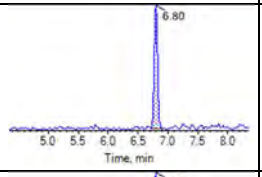
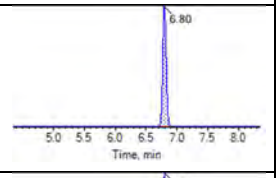
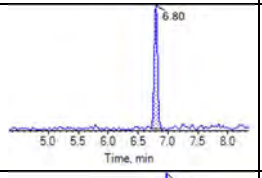
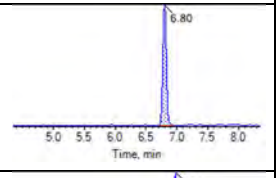
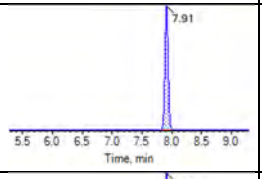
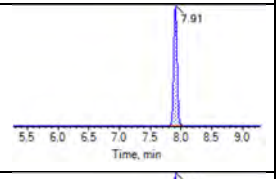
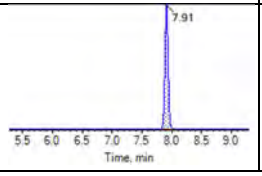
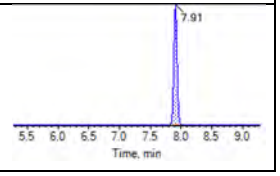
PFC103117089.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1196000	13C5_PFHxA	326600	N/A	964.3	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	91100	13C5_PFHxA	326600	N/A	1039.3	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	170500	13C2_4:2 FTS	38990	N/A	730.6	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	136800	13C2_4:2 FTS	38990	N/A	815.7	N/A	0.80/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	1041000	13C4_PFHpA	293100	N/A	848.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.91 (7.93)	302200	13C4_PFHpA	293100	N/A	942.9	N/A	0.29/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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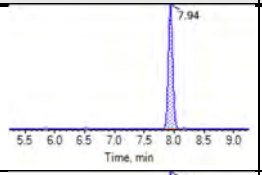
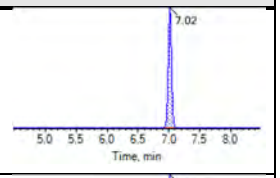
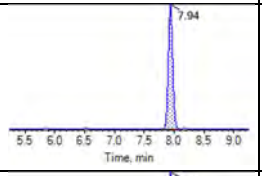
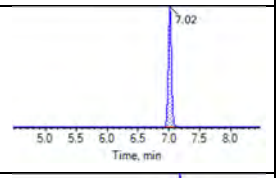
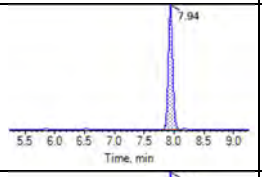
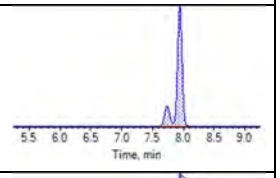
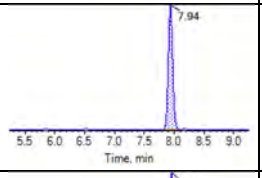
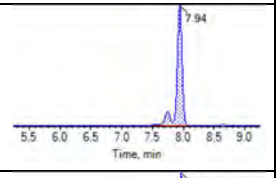
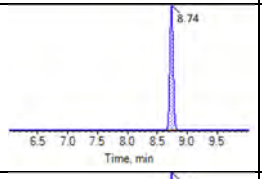
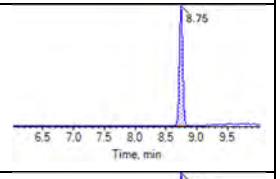
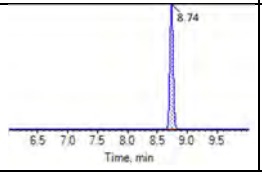
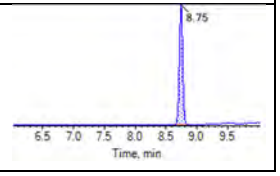
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1510000	13C3_PFHxS	90660	N/A	795.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	570300	13C3_PFHxS	90660	N/A	860.0	N/A	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.94 (7.96)	1315000	13C3_PFHxS	90660	N/A	752.1	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.94 (7.96)	345000	13C3_PFHxS	90660	N/A	781.2	N/A	0.26/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	1005000	13C8_PFOA	273200	N/A	871.9	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	407900	13C8_PFOA	273200	N/A	948.5	N/A	0.41/ 0.37		

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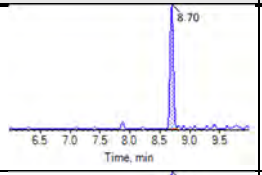
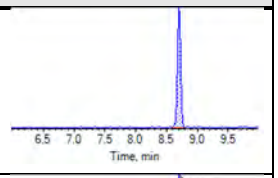
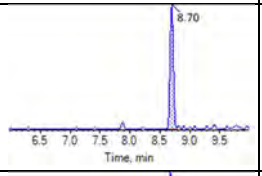
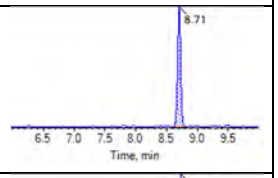
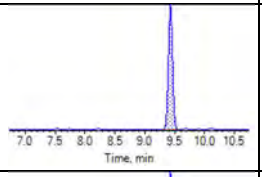
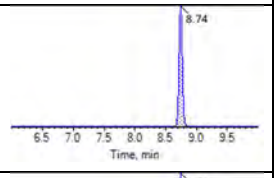
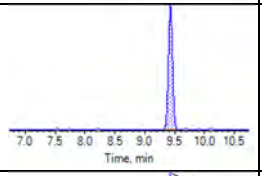
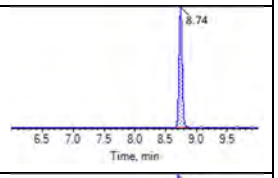
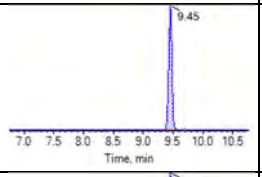
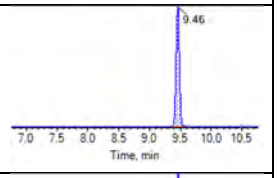
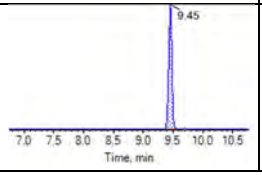
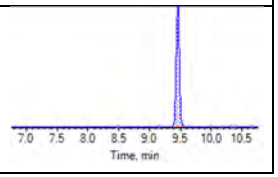
6:2 FTS	427.0 / 407.0	8.70 (8.72)	196400	13C2_6:2 FTS	35310	N/A	1054.8	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	151300	13C2_6:2 FTS	35310	N/A	905.1	N/A	0.77/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	1201000	13C8_PFOS	69290	N/A	888.8	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	256000	13C8_PFOS	69290	N/A	941.5	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	850500	13C9_PFNA	257900	N/A	981.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	205100	13C9_PFNA	257900	N/A	981.4	N/A	0.24/ 0.24		

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LCMSMS#6

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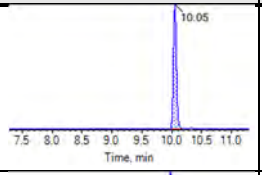
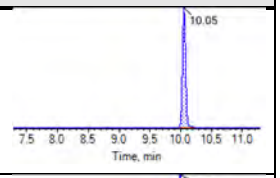
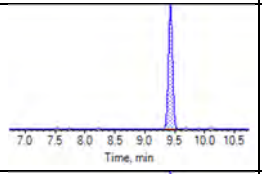
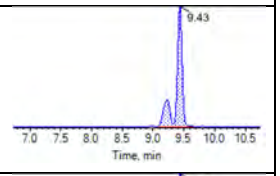
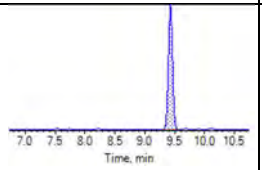
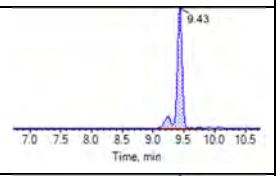
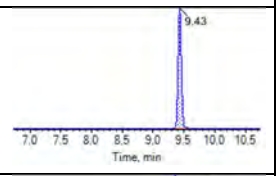
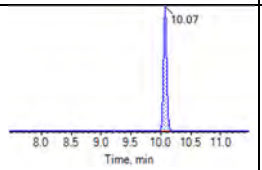
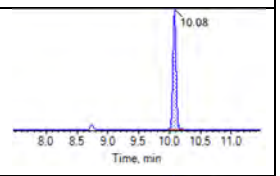
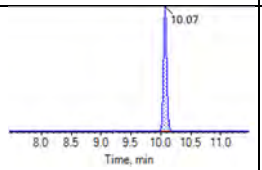
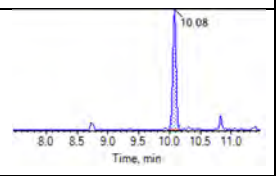
PFOSA	498.0 / 78.0	10.05 (10.04)	1561000	13C8_PFOSA	496200	N/A	840.8	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	992200	13C8_PFOS	69290	N/A	881.4	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	163600	13C8_PFOS	69290	N/A	983.8	N/A	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1597000	N/A	N/A	N/A	952.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	742400	13C6_PFDA	166400	N/A	865.6	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	80890	13C6_PFDA	166400	N/A	752.9	N/A	0.11/ 0.13		

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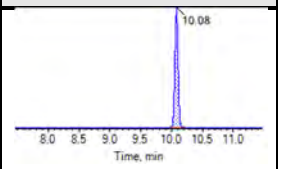
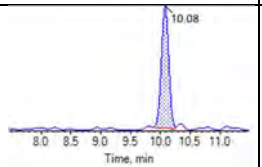
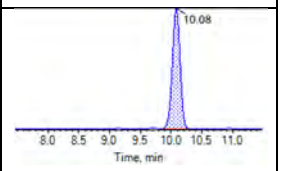
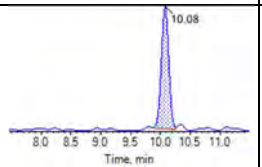
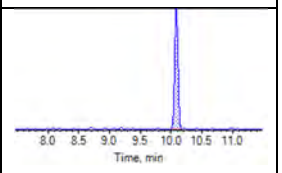
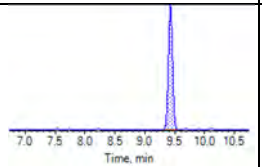
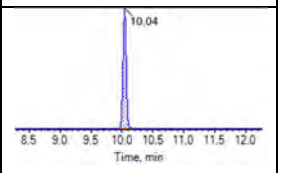
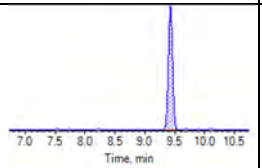
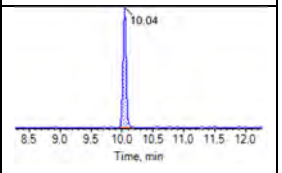
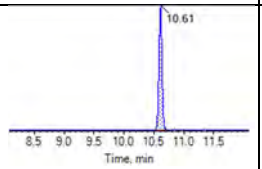
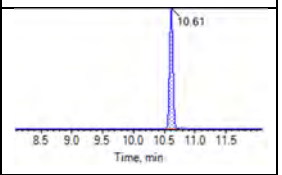
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1100000	N/A	N/A	N/A	953.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	111400	13C2_8:2 FTS	26780	N/A	807.2	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	106100	13C2_8:2 FTS	26780	N/A	793.5	N/A	0.95/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	1084000	13C8_PFOS	69290	N/A	991.3	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	200700	13C8_PFOS	69290	N/A	1007.4	N/A	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	603500	13C7_PFUdA	195000	N/A	868.9	N/A	1.00/ 1.00		

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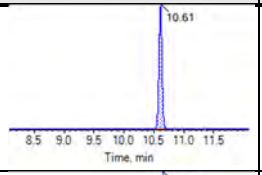
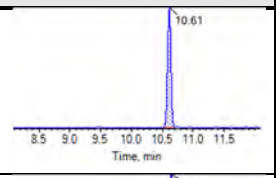
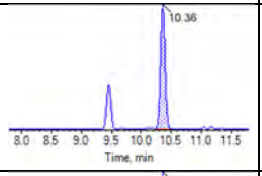
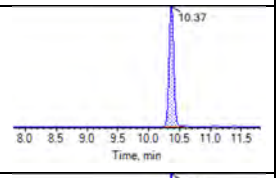
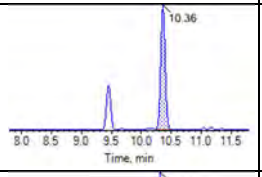
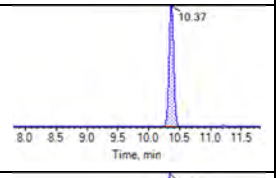
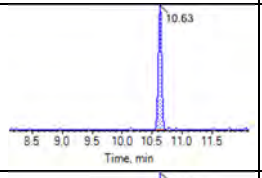
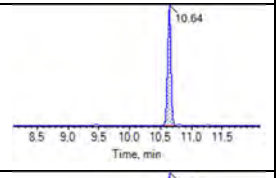
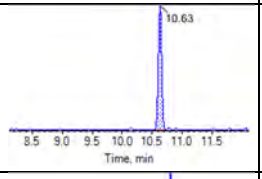
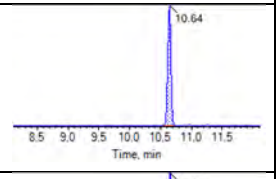
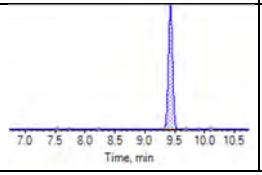
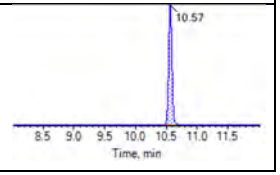
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.61 (10.62)	95590	13C7_PFUdA	195000	N/A	1155.1	N/A	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	182200	d3-N-MeFOSAA	49380	N/A	930.2	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.37 (10.37)	84630	d3-N-MeFOSAA	49380	N/A	877.3	N/A	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	170400	d5-N-EtFOSAA	50590	N/A	829.6	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	95500	d5-N-EtFOSAA	50590	N/A	978.5	N/A	0.56/ 0.48		
PFDS	599.0 / 80.0	10.57 (10.93)	1231000	13C8_PFOS	69290	N/A	922.4	N/A	1.00/ 1.00		

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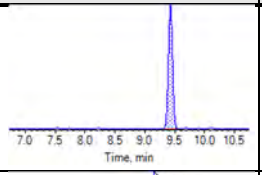
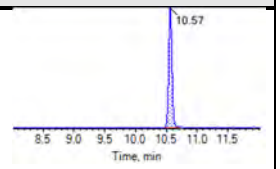
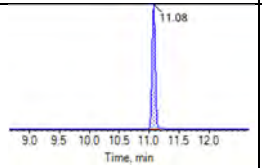
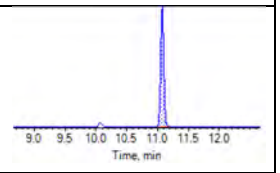
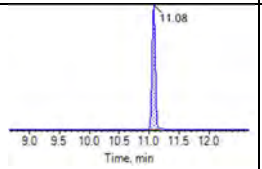
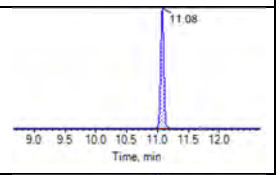
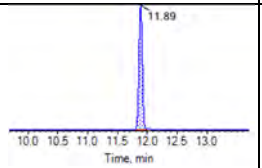
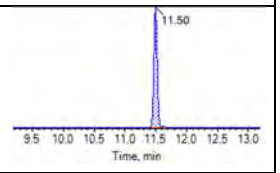
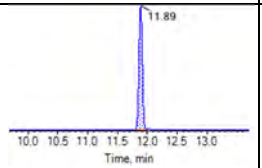
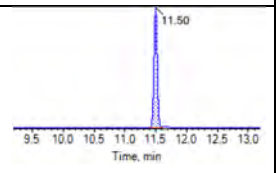
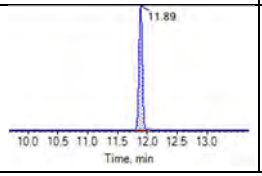
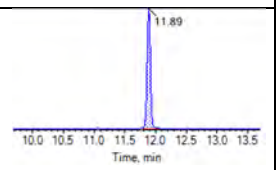
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.57 (10.93)	302200	13C8_PFOS	69290	N/A	850.5	N/A	0.25/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	655400	13C2_PFDoA	167300	N/A	1040.0	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	111400	13C2_PFDoA	167300	N/A	1081.7	N/A	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	539700	13C2_PFTeDA	126100	N/A	870.2	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	124100	13C2_PFTeDA	126100	N/A	904.8	N/A	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	406200	13C2_PFTeDA	126100	N/A	894.1	N/A	1.00/ 1.00		

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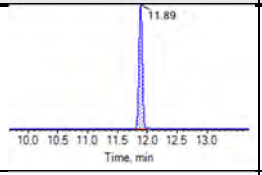
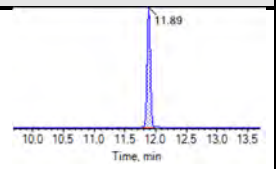
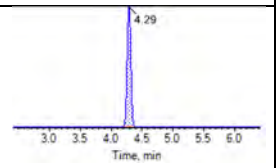
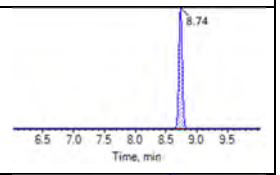
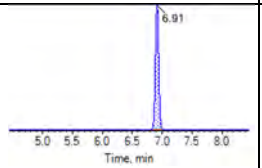
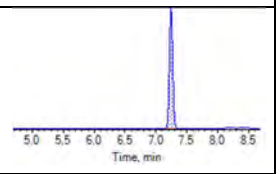
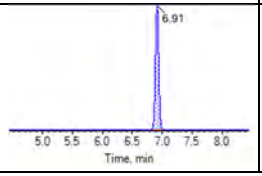
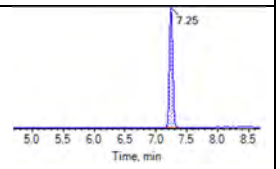
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	95100	13C2_PFTeDA	126100	N/A	950.7	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1712000	N/A	N/A	N/A	989.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1243000	N/A	N/A	N/A	1010.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	770200	13C5_PFHxA	326600	N/A	948.1	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	604700	13C5_PFHxA	326600	N/A	989.3	N/A	0.79/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**1203908644**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**16MW06_1017MS**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 02:45**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**266.33 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117096.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0196	ug/L	0.00124	0.0025	0.00375
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0153	ug/L	0.00124	0.0025	0.00375
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0166	ug/L	0.00062	0.00126	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)		0.0178	ug/L	0.000732	0.00126	0.00188
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0185	ug/L	0.00062	0.00126	0.00188
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0205	ug/L	0.00062	0.00126	0.00188
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0213	ug/L	0.00062	0.00115	0.00171
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0217	ug/L	0.00062	0.00126	0.00188
375-95-1	Perfluorononanoic acid (PFNA)		0.0191	ug/L	0.00062	0.00124	0.00188
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0466	ug/L	0.00062	0.00124	0.00188
335-67-1	Perfluorooctanoic acid (PFOA)		0.0287	ug/L	0.000657	0.00124	0.00188
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0169	ug/L	0.00062	0.00124	0.00188
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0168	ug/L	0.00062	0.00124	0.00188
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0173	ug/L	0.00062	0.00124	0.00188

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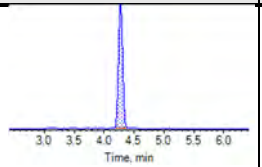
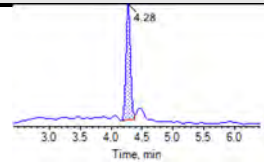
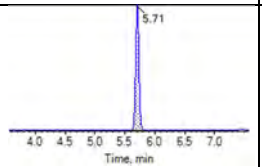
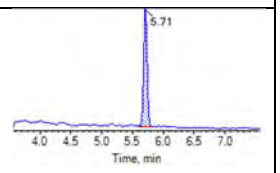
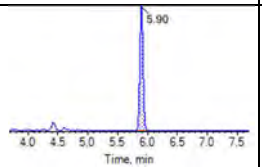
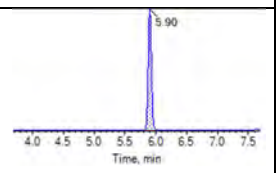
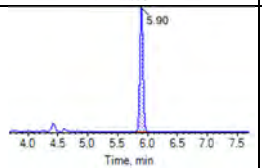
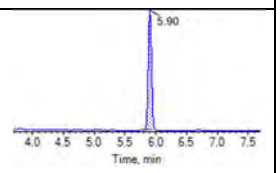
PFC103117096.wiff			
Sample Name	1203908644	**Injection Vial**	31
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117096.wiff
Acquisition Date	11/2/2017 02:45:18	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117096.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	1093000	13C4_PFBA	131800	N/A	1176.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	1093000	13C5_PFPeA	243700	N/A	1042.9	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1442000	13C3_PFBS	165000	N/A	886.5	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	629900	13C3_PFBS	165000	N/A	862.6	N/A	0.44/ 0.45		

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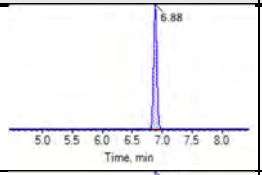
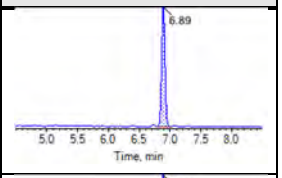
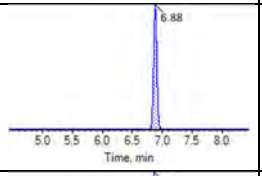
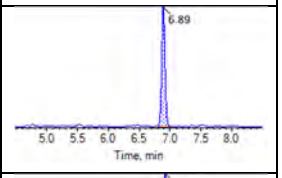
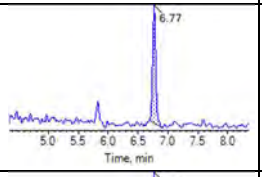
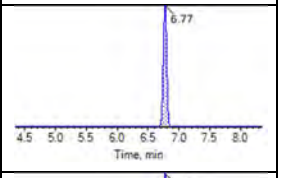
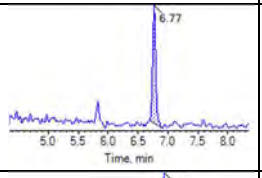
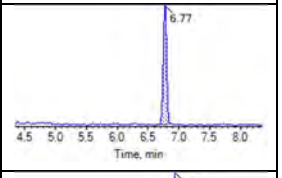
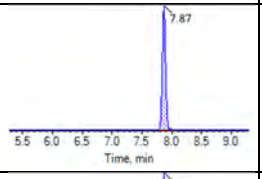
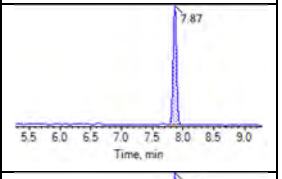
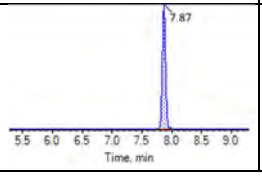
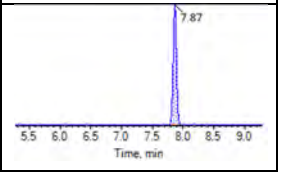
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1228000	13C5_PFHxA	280600	N/A	1153.4	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	99910	13C5_PFHxA	280600	N/A	1326.9	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	273700	13C2_4:2 FTS	45620	N/A	1002.1	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	204100	13C2_4:2 FTS	45620	N/A	1039.9	N/A	0.75/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	1131000	13C4_PFHpA	247500	N/A	1092.4	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	284300	13C4_PFHpA	247500	N/A	1050.3	N/A	0.25/ 0.26		

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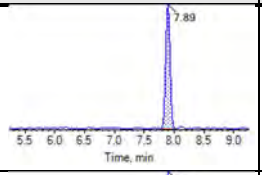
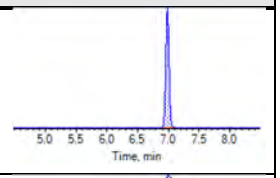
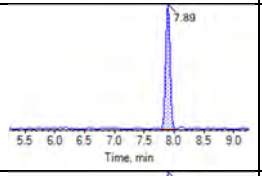
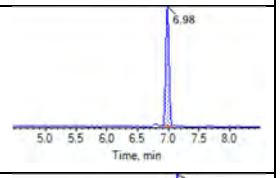
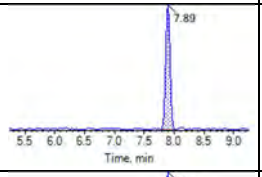
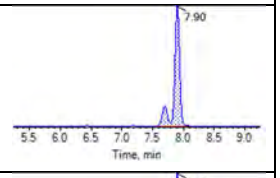
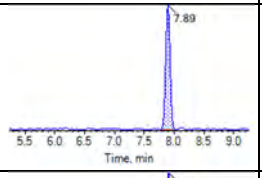
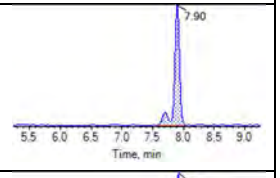
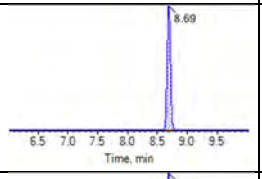
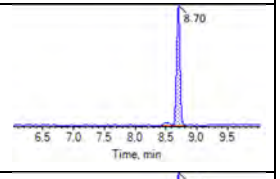
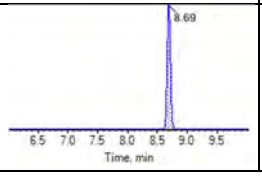
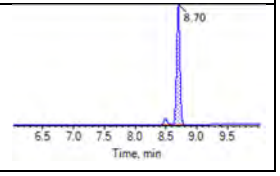
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1502000	13C3_PFHxS	74140	N/A	967.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	513800	13C3_PFHxS	74140	N/A	947.4	N/A	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1624000	13C3_PFHxS	74140	N/A	1135.5	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	451800	13C3_PFHxS	74140	N/A	1251.1	N/A	0.28/ 0.25		
PFOA	413.0 / 369.0	8.70 (8.75)	1581000	13C8_PFOA	244800	N/A	1530.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.70 (8.75)	639800	13C8_PFOA	244800	N/A	1659.9	N/A	0.40/ 0.37		

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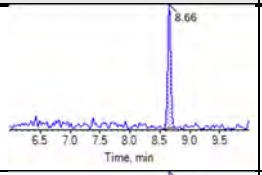
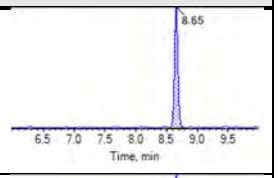
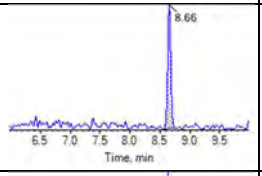
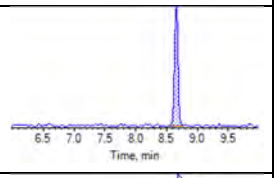
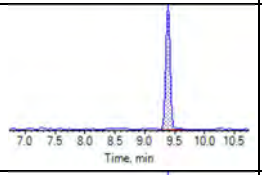
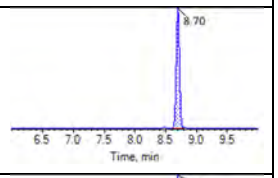
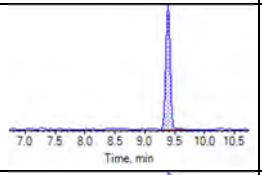
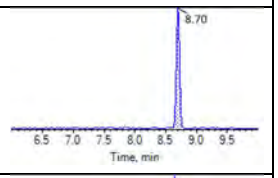
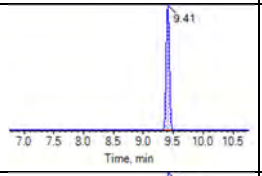
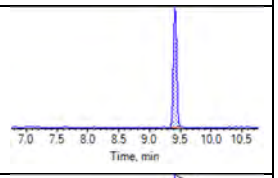
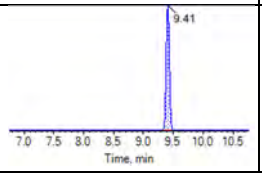
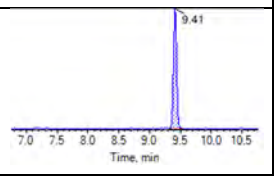
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.65 (8.72)	169900	13C2_6:2 FTS	37250	N/A	865.1	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	136300	13C2_6:2 FTS	37250	N/A	772.7	N/A	0.80/ 0.91		
PFHpS	449.0 / 80.0	8.70 (8.76)	1127000	13C8_PFOS	54700	N/A	1056.9	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.70 (8.76)	240400	13C8_PFOS	54700	N/A	1119.6	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.41 (9.47)	787500	13C9_PFNA	229900	N/A	1019.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.41 (9.47)	193600	13C9_PFNA	229900	N/A	1039.5	N/A	0.25/ 0.24		

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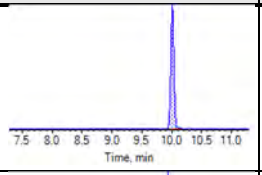
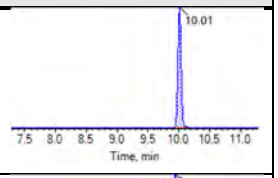
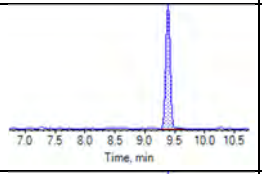
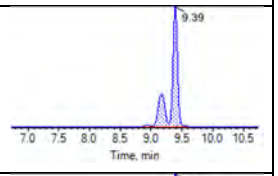
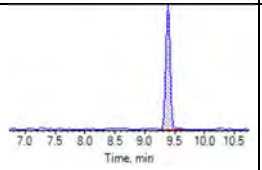
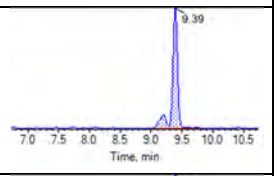
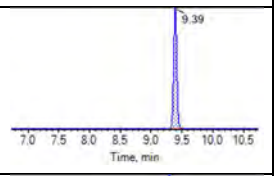
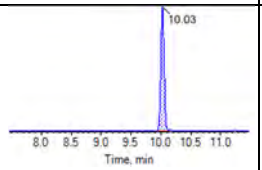
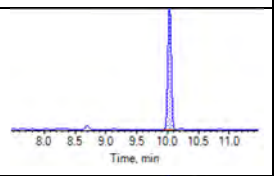
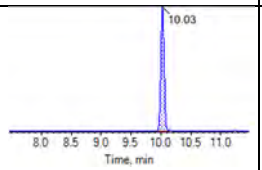
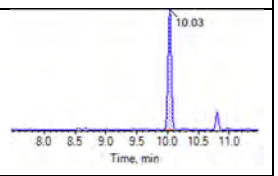
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.01 (10.04)	1383000	13C8_PFOSA	435800	N/A	848.3	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	2206000	13C8_PFOS	54700	N/A	2482.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	325700	13C8_PFOS	54700	N/A	2481.5	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1581000	N/A	N/A	N/A	942.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.03 (10.08)	620400	13C6_PFDA	126700	N/A	950.3	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	78630	13C6_PFDA	126700	N/A	961.5	N/A	0.13/ 0.13		

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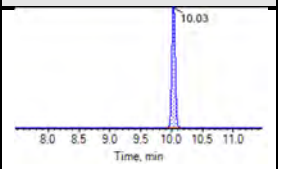
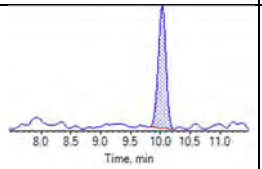
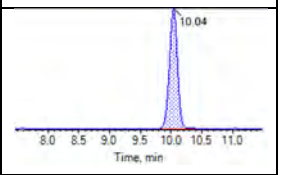
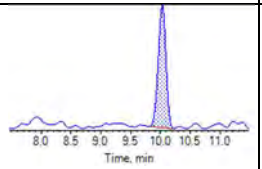
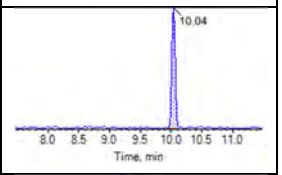
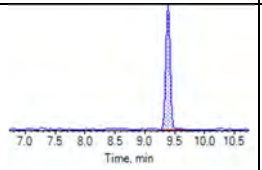
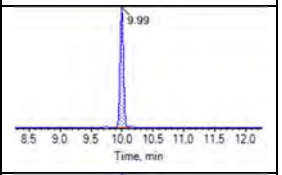
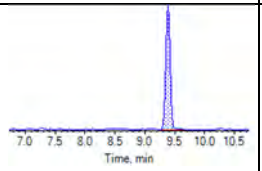
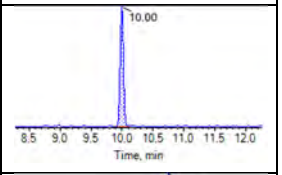
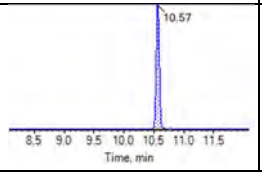
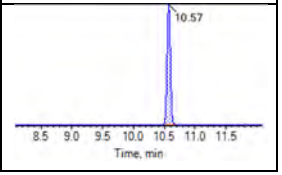
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.03 (10.02)	1004000	N/A	N/A	N/A	869.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.04 (10.09)	105200	13C2_8:2 FTS	25200	N/A	809.8	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	98010	13C2_8:2 FTS	25200	N/A	778.6	N/A	0.93/ 0.96		
PFNS	549.0 / 80.0	9.99 (10.49)	856600	13C8_PFOS	54700	N/A	992.1	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	176900	13C8_PFOS	54700	N/A	1124.8	N/A	0.21/ 0.18		
PFUdA	563.0 / 519.0	10.57 (10.62)	557500	13C7_PFUdA	169700	N/A	922.2	N/A	1.00/ 1.00		

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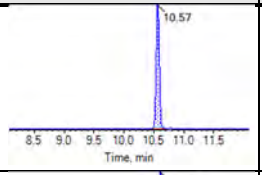
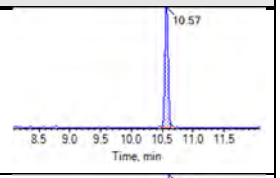
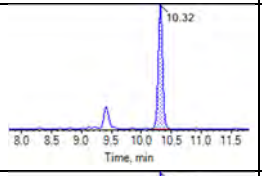
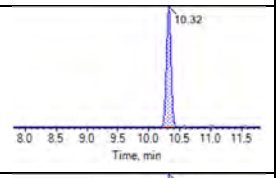
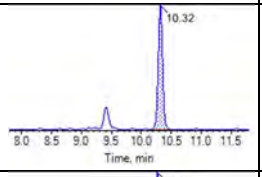
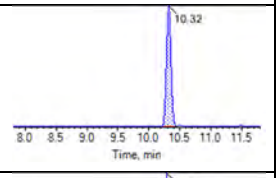
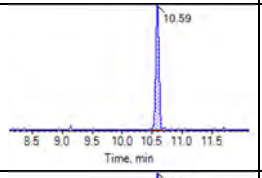
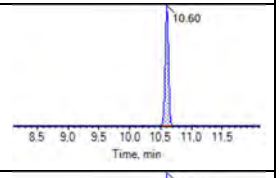
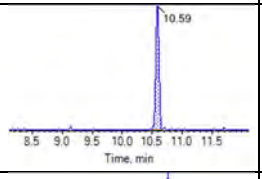
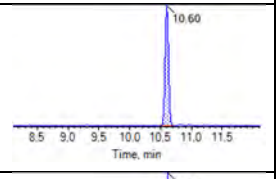
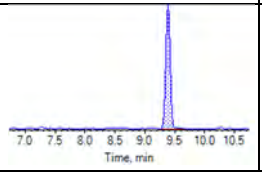
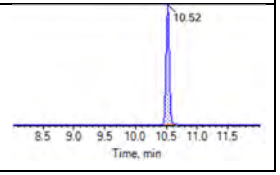
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.57 (10.62)	82550	13C7_PFUdA	169700	N/A	1146.0	N/A	0.15/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.32 (10.37)	145700	d3-N-MeFOSAA	45210	N/A	812.6	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.32 (10.37)	77670	d3-N-MeFOSAA	45210	N/A	879.4	N/A	0.53/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.60 (10.64)	155600	d5-N-EtFOSAA	36660	N/A	1045.7	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	83010	d5-N-EtFOSAA	36660	N/A	1173.6	N/A	0.53/ 0.48		
PFDS	599.0 / 80.0	10.52 (10.93)	960500	13C8_PFOS	54700	N/A	912.0	N/A	1.00/ 1.00		

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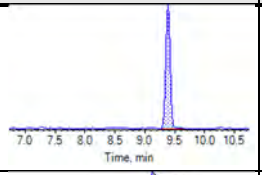
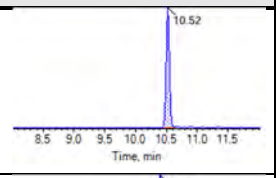
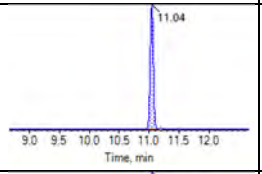
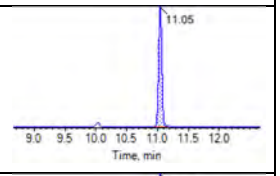
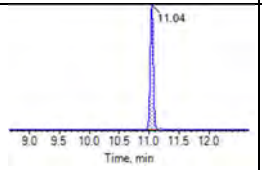
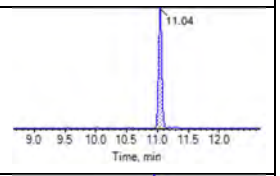
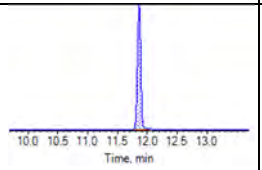
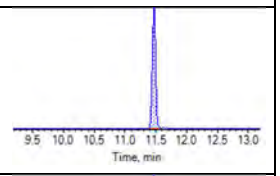
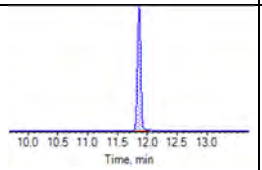
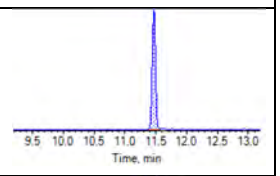
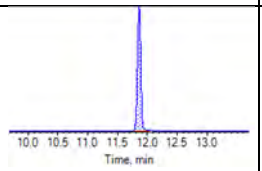
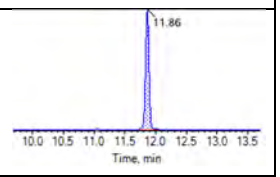
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.52 (10.93)	268800	13C8_PFOS	54700	N/A	958.2	N/A	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	527300	13C2_PFDoA	141800	N/A	987.3	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.04 (11.09)	95320	13C2_PFDoA	141800	N/A	1091.9	N/A	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	443500	13C2_PFTeDA	101000	N/A	893.4	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	104600	13C2_PFTeDA	101000	N/A	953.1	N/A	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.86 (11.91)	327100	13C2_PFTeDA	101000	N/A	899.7	N/A	1.00/ 1.00		

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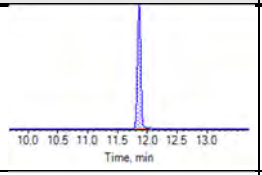
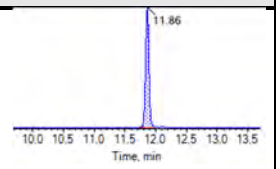
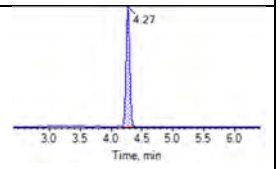
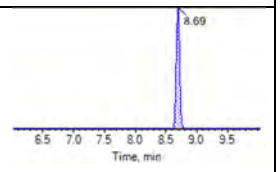
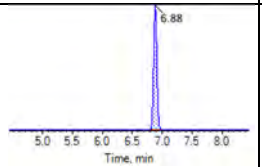
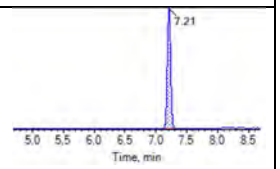
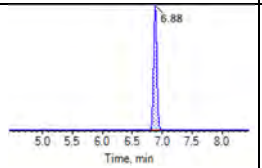
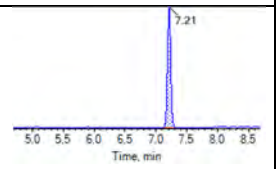
PFC103117096.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.86 (11.91)	76520	13C2_PFTeDA	101000	N/A	955.7	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1414000	N/A	N/A	N/A	817.2	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1138000	N/A	N/A	N/A	925.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	838900	13C5_PFHxA	280600	N/A	1202.2	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	563700	13C5_PFHxA	280600	N/A	1073.7	N/A	0.67/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436488**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**1203908646**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**16MW06_1017MSD**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 03:06**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**274.66 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117097.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0156	ug/L	0.0012	0.00242	0.00364
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0151	ug/L	0.0012	0.00242	0.00364
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0151	ug/L	0.000601	0.00122	0.00162
335-76-2	Perfluorodecanoic acid (PFDA)		0.0171	ug/L	0.00071	0.00122	0.00182
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0202	ug/L	0.000601	0.00122	0.00182
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.018	ug/L	0.000601	0.00122	0.00182
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0172	ug/L	0.000601	0.00111	0.00166
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0194	ug/L	0.000601	0.00122	0.00182
375-95-1	Perfluorononanoic acid (PFNA)		0.0184	ug/L	0.000601	0.0012	0.00182
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0458	ug/L	0.000601	0.0012	0.00182
335-67-1	Perfluorooctanoic acid (PFOA)		0.0251	ug/L	0.000637	0.0012	0.00182
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0169	ug/L	0.000601	0.0012	0.00182
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0171	ug/L	0.000601	0.0012	0.00182
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0195	ug/L	0.000601	0.0012	0.00182

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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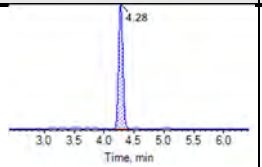
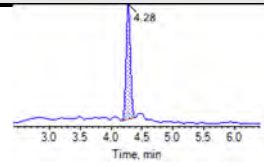
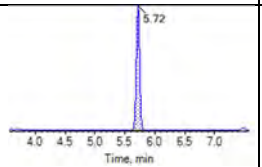
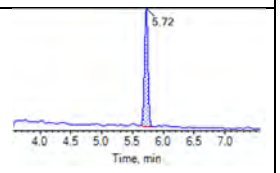
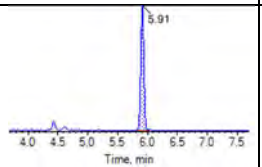
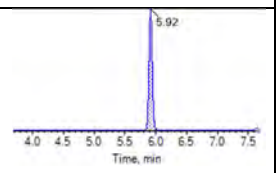
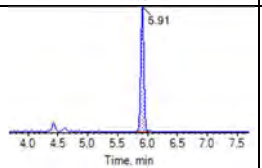
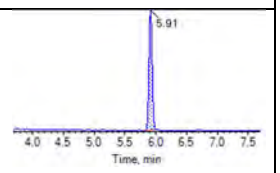
PFC103117097.wiff			
Sample Name	1203908646	**Injection Vial**	32
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117097.wiff
Acquisition Date	11/2/2017 03:06:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117097.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	1038000	13C4_PFBA	133300	N/A	1105.1	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	1058000	13C5_PFPeA	237500	N/A	1035.7	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.92 (5.89)	1349000	13C3_PFBS	164500	N/A	832.0	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	615300	13C3_PFBS	164500	N/A	845.4	N/A	0.46/ 0.45		

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LCMSMS#6

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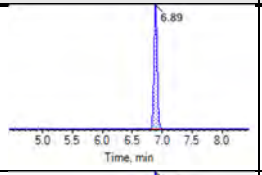
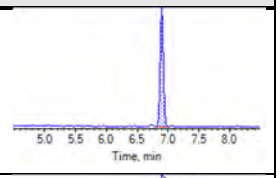
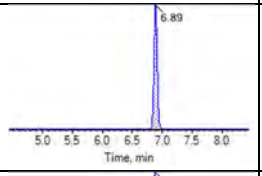
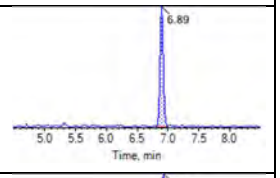
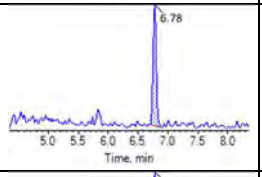
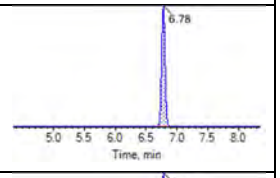
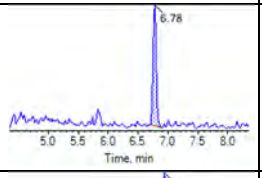
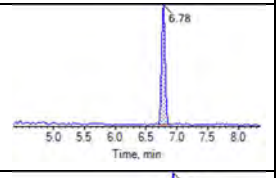
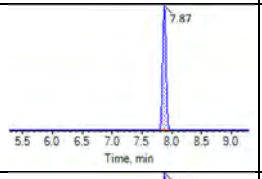
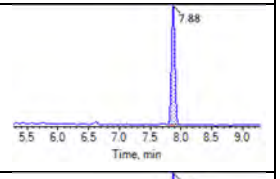
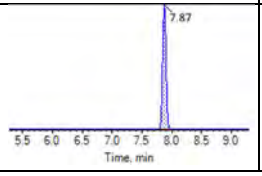
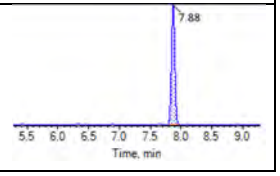
PFC103117097.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	1210000	13C5_PFHxA	298800	N/A	1066.8	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	83230	13C5_PFHxA	298800	N/A	1037.8	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.78 (6.80)	278800	13C2_4:2 FTS	52400	N/A	888.8	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	176700	13C2_4:2 FTS	52400	N/A	784.1	N/A	0.63/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	1085000	13C4_PFHpA	261800	N/A	990.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	280800	13C4_PFHpA	261800	N/A	981.0	N/A	0.26/ 0.26		

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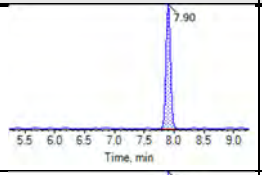
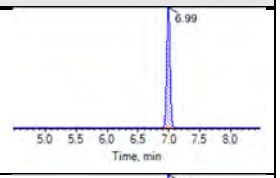
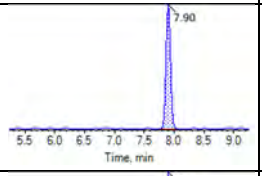
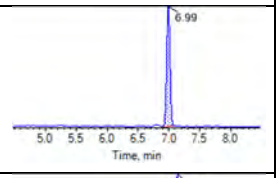
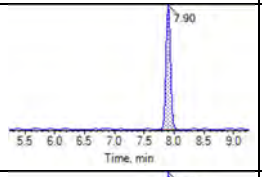
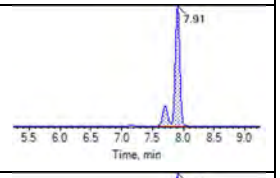
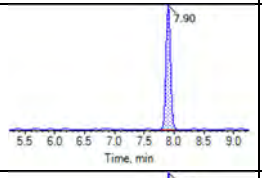
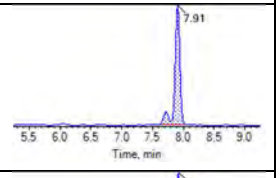
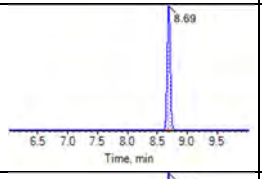
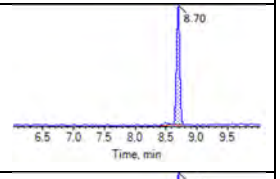
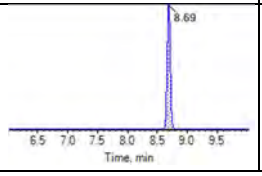
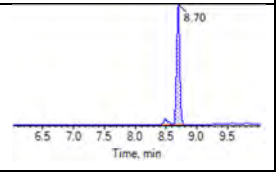
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	1423000	13C3_PFHxS	84340	N/A	806.0	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	511900	13C3_PFHxS	84340	N/A	829.8	N/A	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1539000	13C3_PFHxS	84340	N/A	946.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	413700	13C3_PFHxS	84340	N/A	1007.0	N/A	0.27/ 0.25		
PFOA	413.0 / 369.0	8.70 (8.75)	1435000	13C8_PFOA	246800	N/A	1378.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.70 (8.75)	584100	13C8_PFOA	246800	N/A	1503.4	N/A	0.41/ 0.37		

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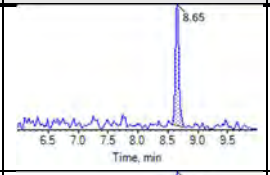
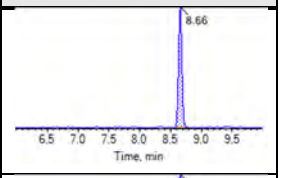
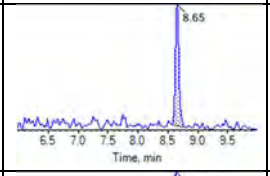
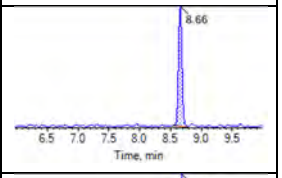
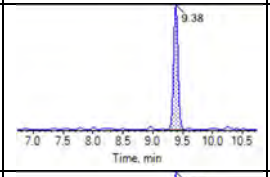
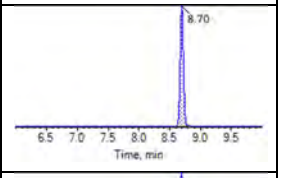
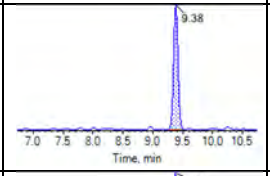
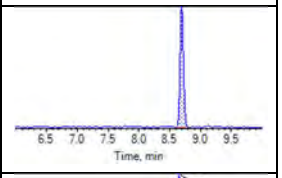
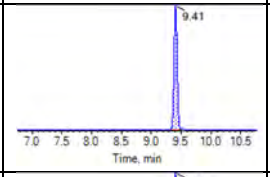
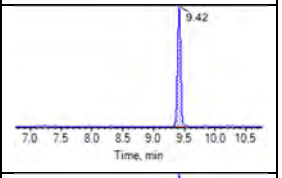
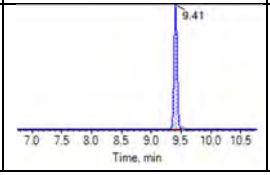
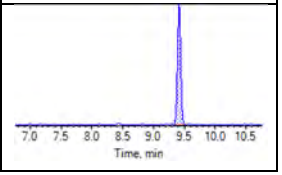
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.66 (8.72)	184100	13C2_6:2 FTS	37790	N/A	923.8	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	163000	13C2_6:2 FTS	37790	N/A	910.6	N/A	0.89/ 0.91		
PFHpS	449.0 / 80.0	8.70 (8.76)	1129000	13C8_PFOS	54430	N/A	1064.1	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.69 (8.76)	215000	13C8_PFOS	54430	N/A	1006.2	N/A	0.19/ 0.20		
PFNA	463.0 / 419.0	9.42 (9.47)	760800	13C9_PFNA	224500	N/A	1008.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	183500	13C9_PFNA	224500	N/A	1008.6	N/A	0.24/ 0.24		

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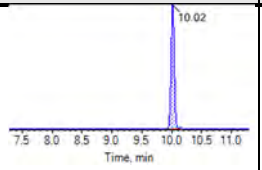
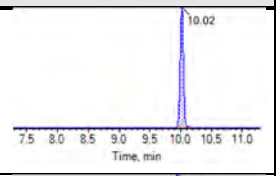
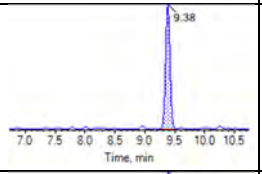
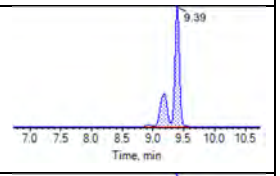
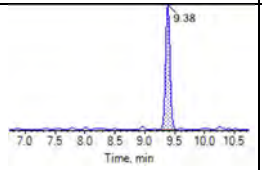
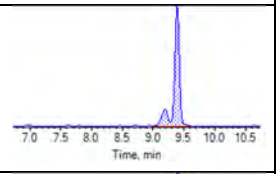
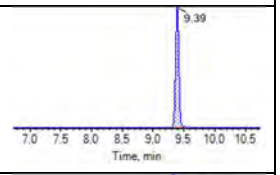
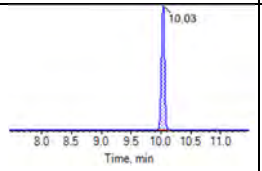
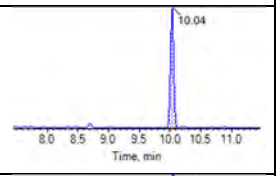
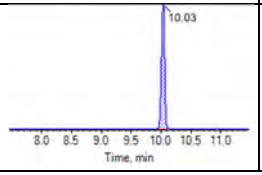
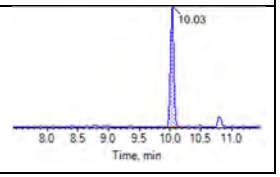
PFOSA	498.0 / 78.0	10.02 (10.04)	1339000	13C8_PFOSA	446300	N/A	801.9	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	2223000	13C8_PFOS	54430	N/A	2514.5	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	331400	13C8_PFOS	54430	N/A	2537.5	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1521000	N/A	N/A	N/A	906.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	644300	13C6_PFDA	132700	N/A	941.9	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	74670	13C6_PFDA	132700	N/A	871.5	N/A	0.12/ 0.13		

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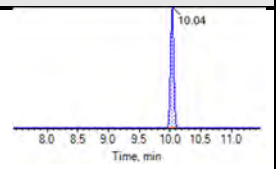
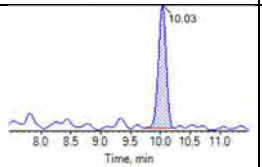
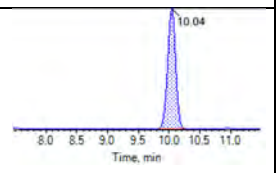
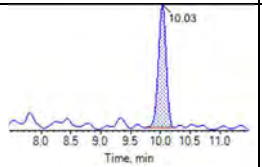
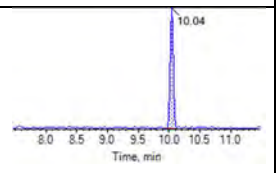
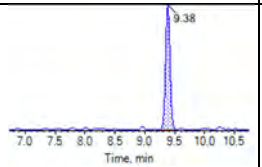
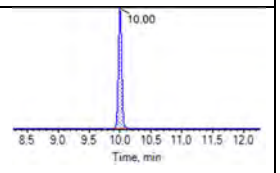
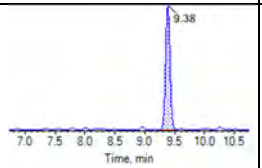
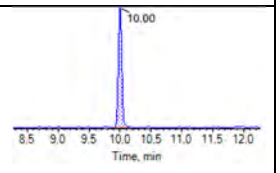
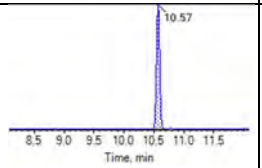
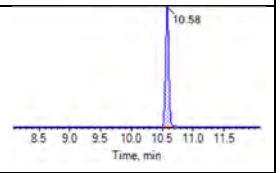
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1063000	N/A	N/A	N/A	921.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.04 (10.09)	103600	13C2_8:2 FTS	25040	N/A	802.7	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	81330	13C2_8:2 FTS	25040	N/A	650.1	N/A	0.78/ 0.96		
PFNS	549.0 / 80.0	10.00 (10.49)	836600	13C8_PFOS	54430	N/A	973.9	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	168200	13C8_PFOS	54430	N/A	1075.1	N/A	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	635000	13C7_PFUdA	166100	N/A	1073.8	N/A	1.00/ 1.00		

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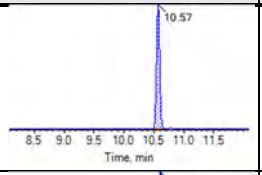
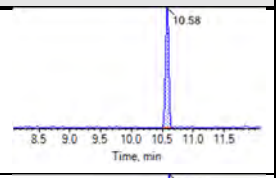
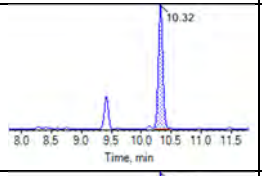
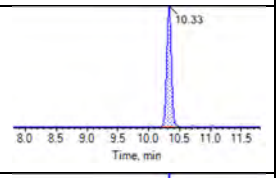
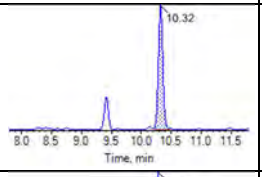
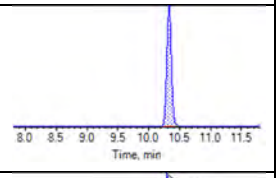
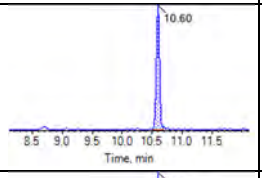
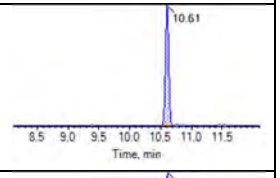
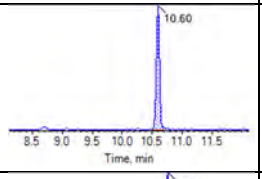
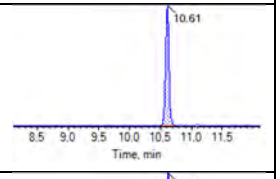
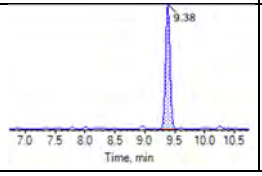
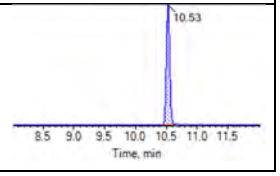
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.58 (10.62)	83090	13C7_PFUdA	166100	N/A	1179.1	N/A	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	154000	d3-N-MeFOSAA	46700	N/A	831.3	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	75000	d3-N-MeFOSAA	46700	N/A	822.1	N/A	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	161300	d5-N-EtFOSAA	46350	N/A	857.3	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.61 (10.64)	78990	d5-N-EtFOSAA	46350	N/A	883.3	N/A	0.49/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	997600	13C8_PFOS	54430	N/A	952.1	N/A	1.00/ 1.00		

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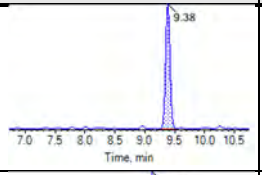
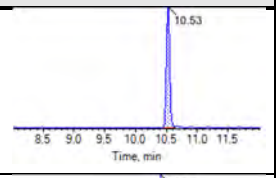
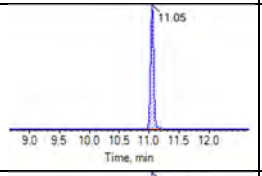
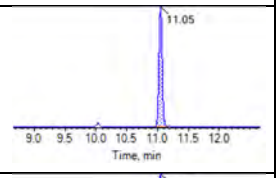
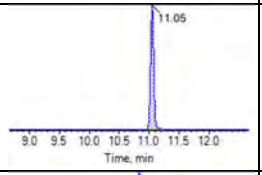
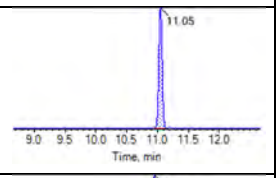
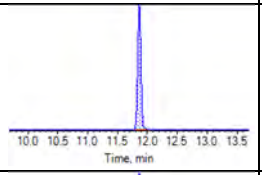
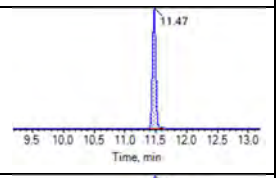
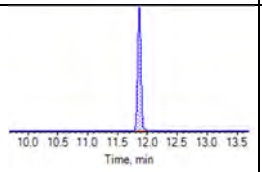
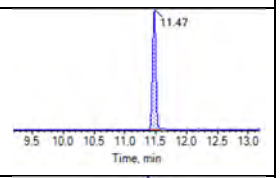
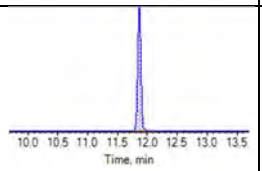
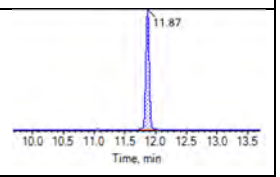
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	248600	13C8_PFOS	54430	N/A	890.6	N/A	0.25/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	573600	13C2_PFDoA	137000	N/A	1111.5	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	96920	13C2_PFDoA	137000	N/A	1149.0	N/A	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	481900	13C2_PFTeDA	104300	N/A	939.4	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	103300	13C2_PFTeDA	104300	N/A	910.1	N/A	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.87 (11.91)	349500	13C2_PFTeDA	104300	N/A	929.9	N/A	1.00/ 1.00		

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LCMSMS#6

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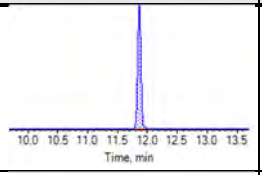
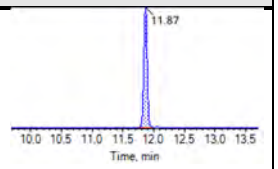
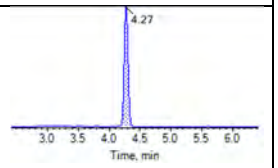
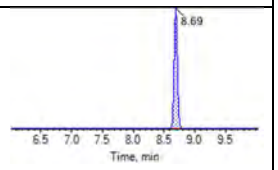
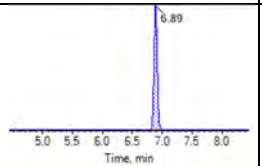
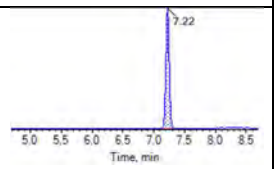
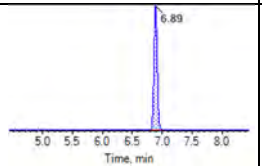
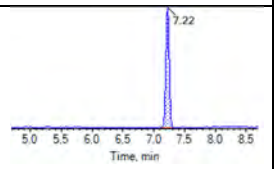
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.87 (11.91)	76610	13C2_PFTeDA	104300	N/A	925.7	N/A	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1429000	N/A	N/A	N/A	826.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1285000	N/A	N/A	N/A	1044.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	778500	13C5_PFHxA	298800	N/A	1047.5	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	498800	13C5_PFHxA	298800	N/A	892.0	N/A	0.64/ 0.75		

Initial Calibration Blank Summary

Instrument ID: LCMSMS6

Client SDG: 436488

Injection Date: 31-OCT-17 16:34

Data File: PFC103117002.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID ICB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

GC
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LCMSMS#6

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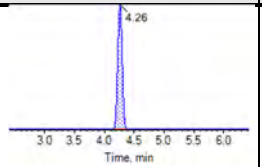
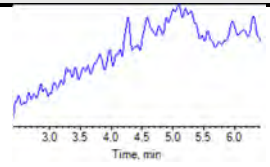
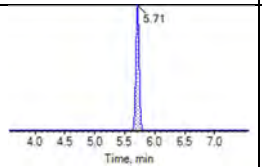
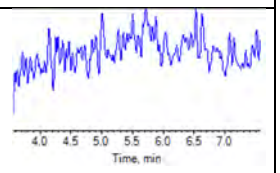
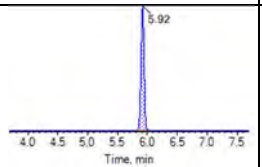
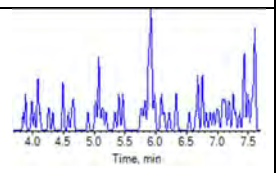
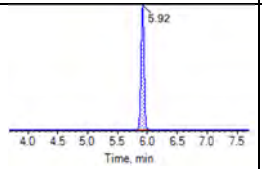
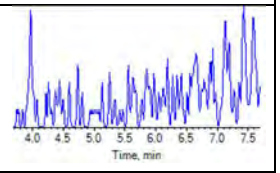
PFC103117002.wiff			
Sample Name	PFCIBLK01	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117002.wiff
Acquisition Date	10/31/2017 16:34:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117002.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	167800	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	266600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 0.45		

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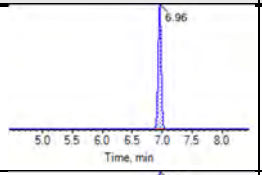
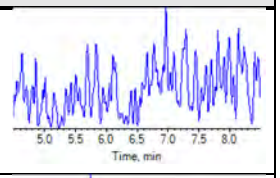
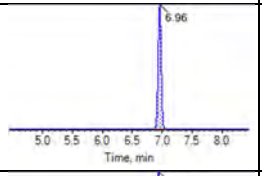
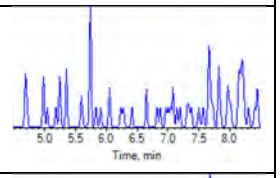
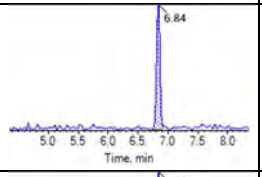
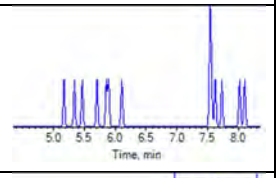
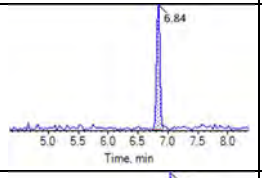
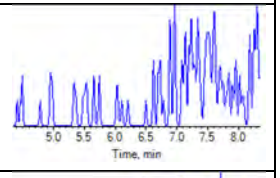
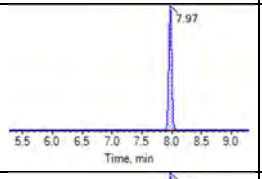
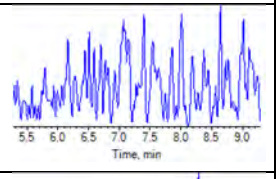
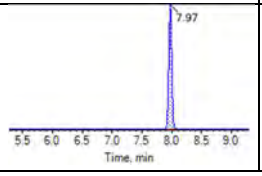
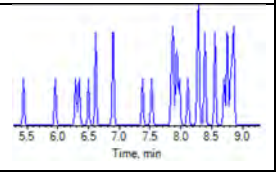
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 0.26		

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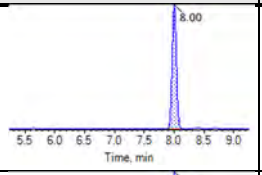
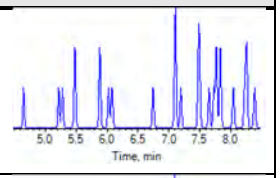
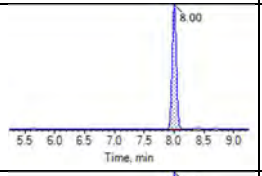
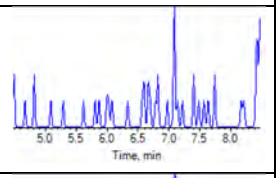
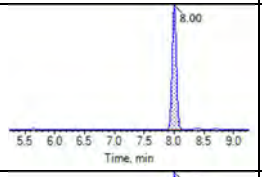
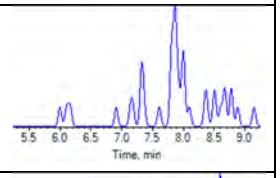
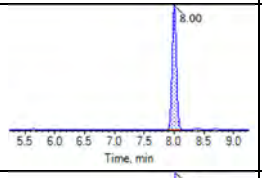
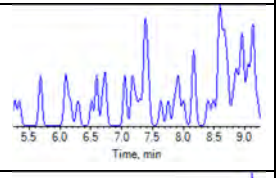
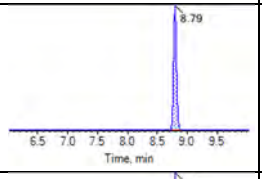
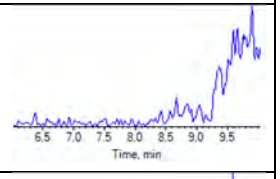
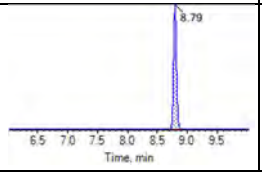
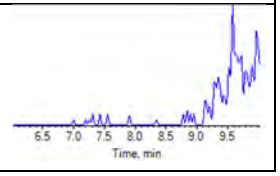
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 0.37		

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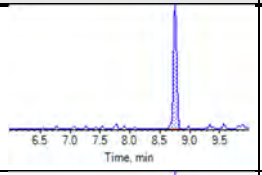
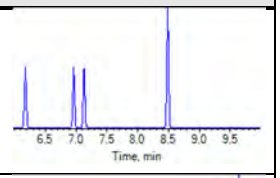
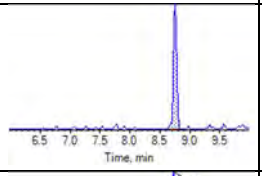
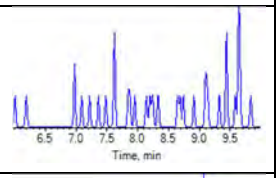
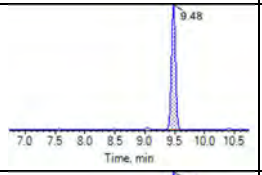
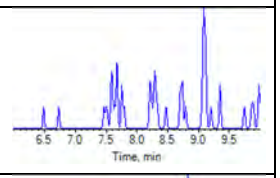
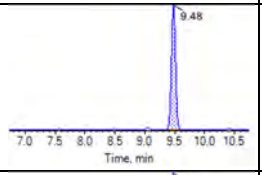
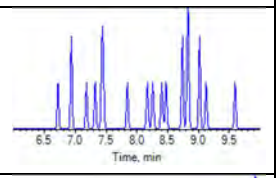
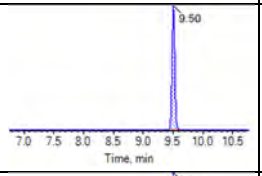
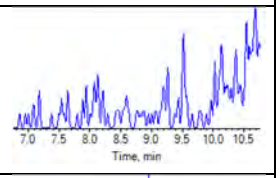
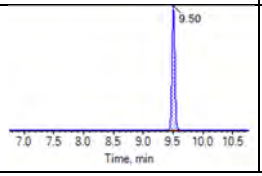
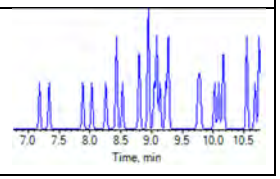
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 0.24		

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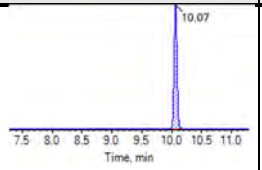
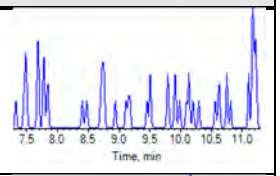
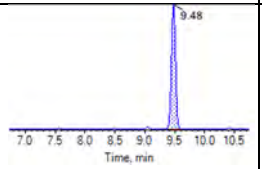
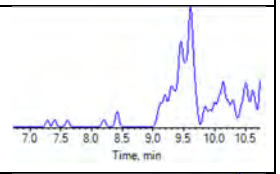
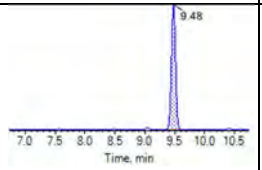
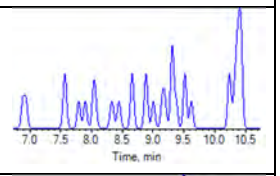
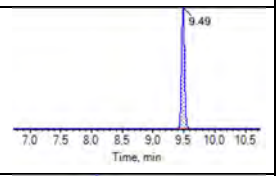
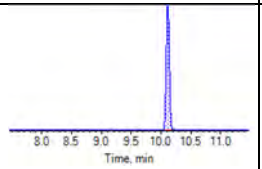
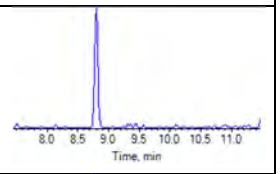
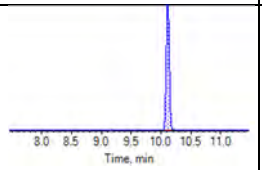
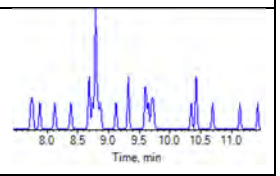
PFC103117002.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	601400	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.49 (9.45)	1652000	N/A	N/A	N/A	985.1	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 0.13		

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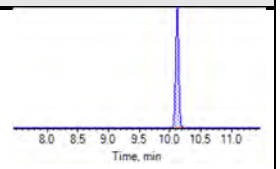
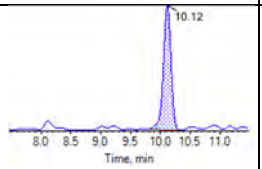
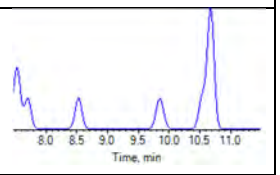
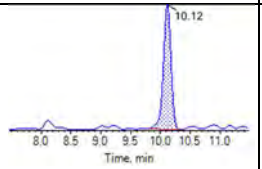
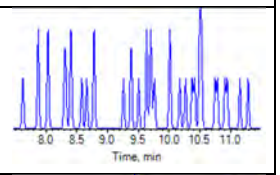
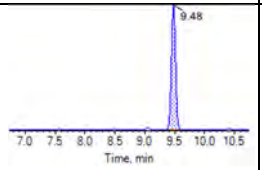
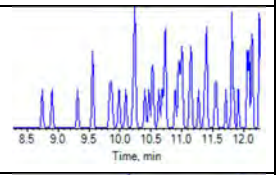
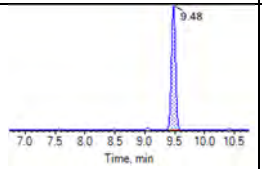
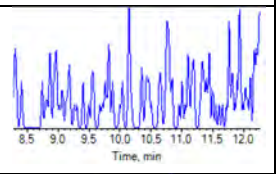
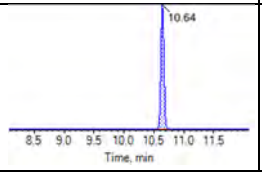
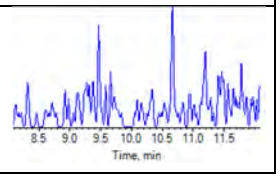
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.12 (10.02)	1236000	N/A	N/A	N/A	1071.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 1.00		

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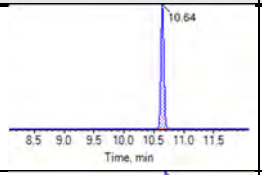
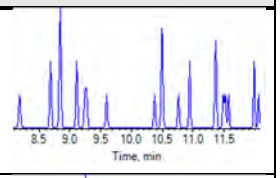
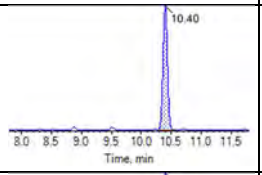
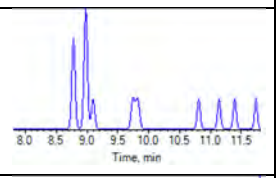
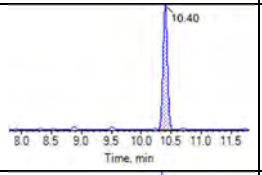
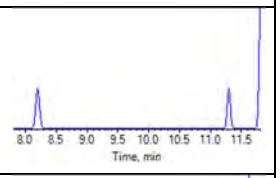
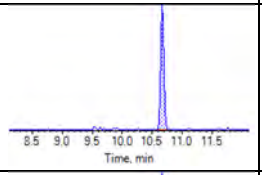
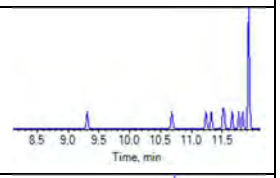
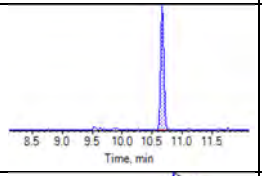
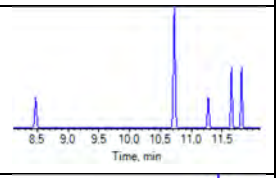
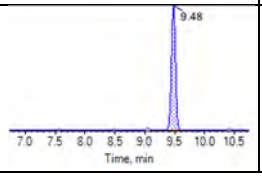
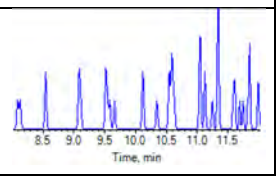
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		

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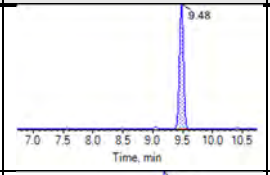
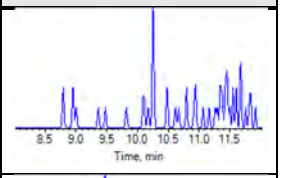
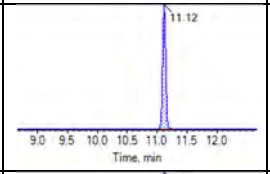
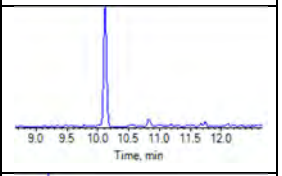
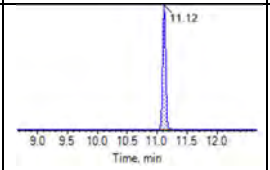
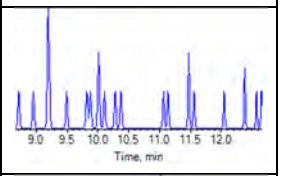
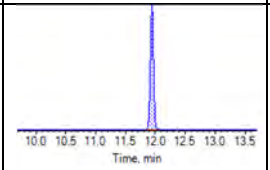
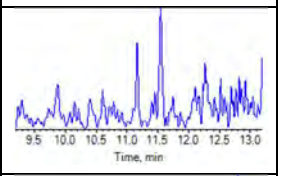
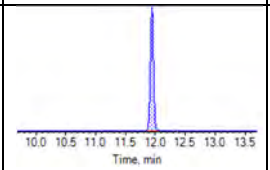
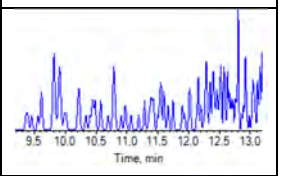
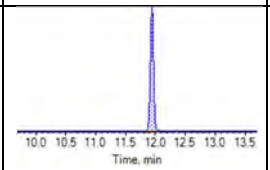
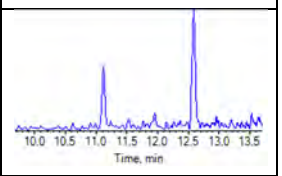
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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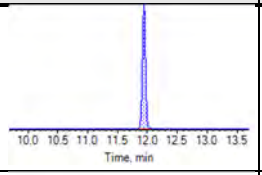
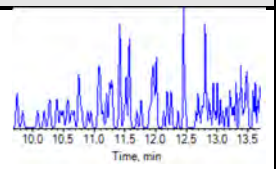
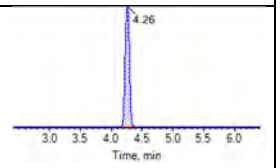
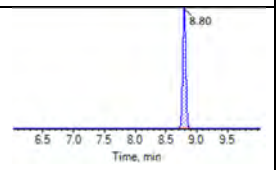
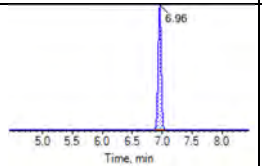
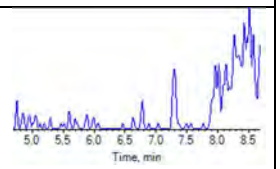
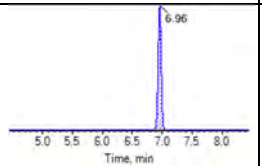
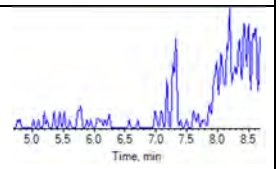
PFC103117002.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1805000	N/A	N/A	N/A	1043.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.80 (8.75)	1241000	N/A	N/A	N/A	1008.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 21:12

Data File: PFC103117015.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

GC
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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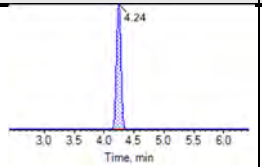
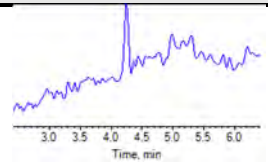
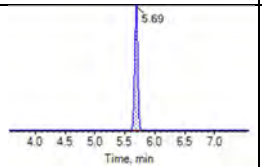
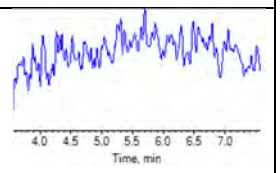
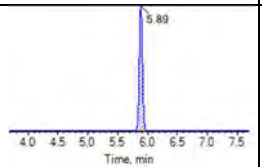
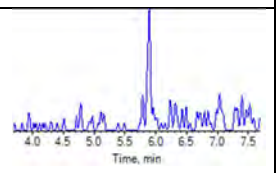
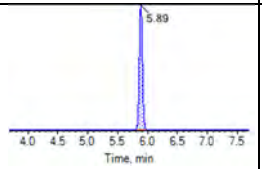
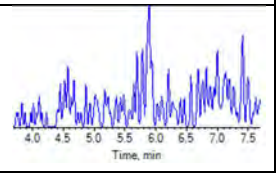
PFC103117015.wiff			
Sample Name	PFCIBLK02	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117015.wiff
Acquisition Date	10/31/2017 21:12:40	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117015.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	173300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	262000	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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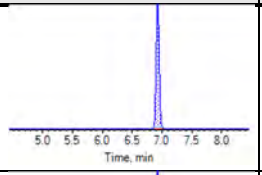
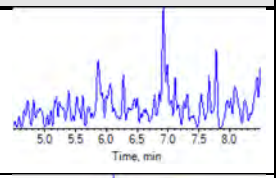
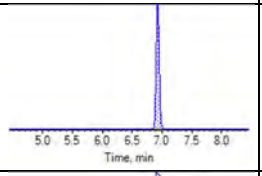
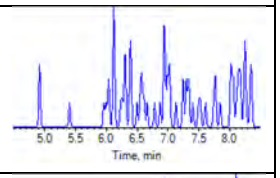
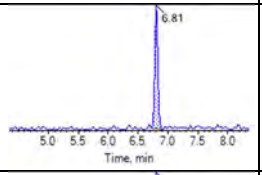
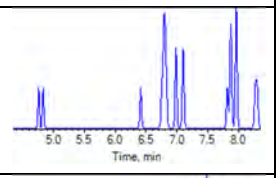
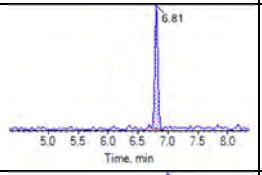
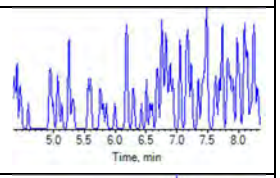
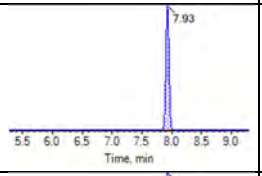
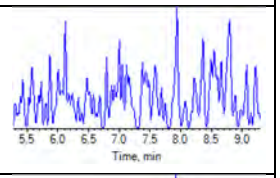
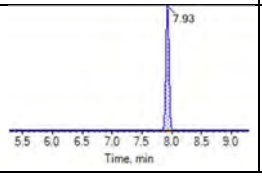
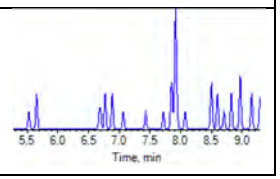
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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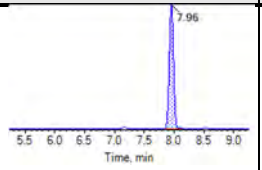
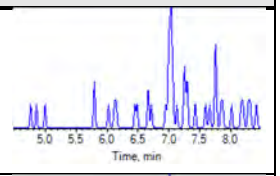
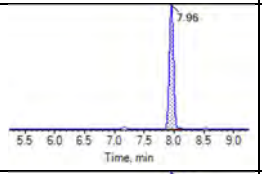
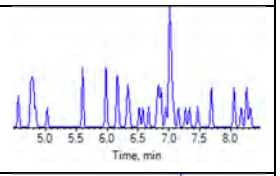
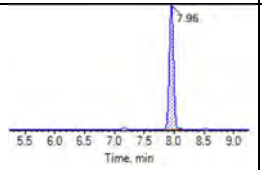
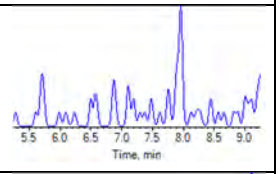
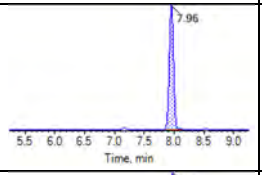
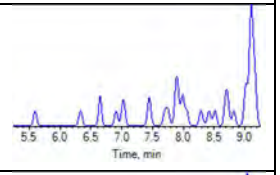
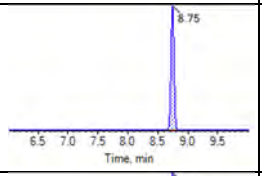
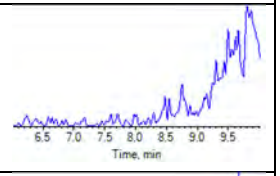
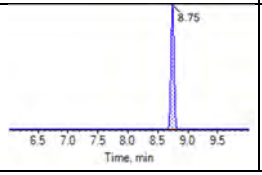
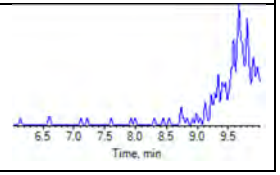
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 0.37		

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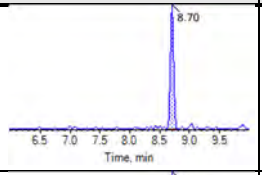
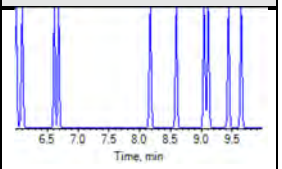
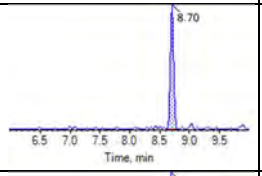
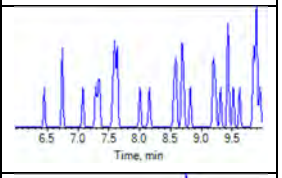
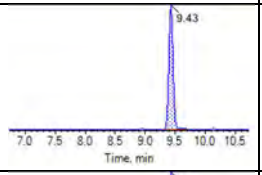
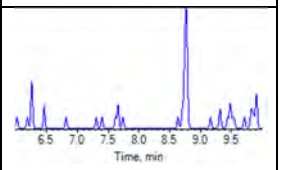
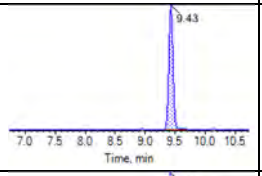
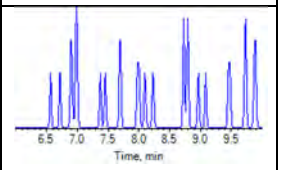
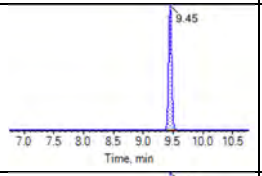
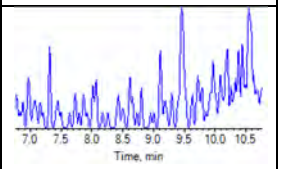
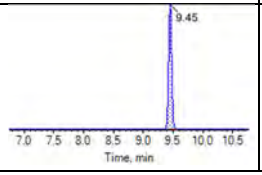
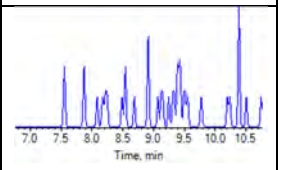
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 0.24		

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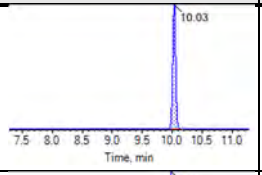
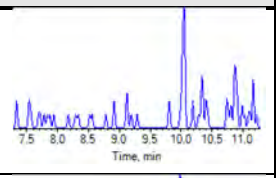
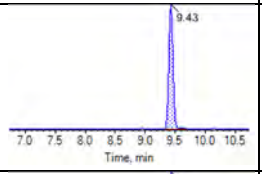
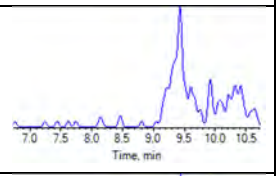
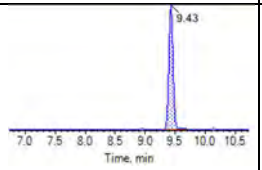
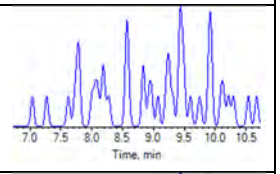
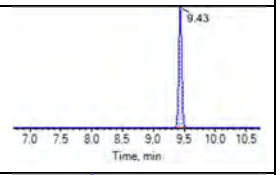
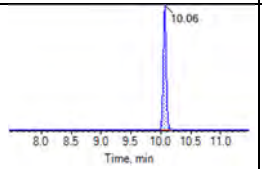
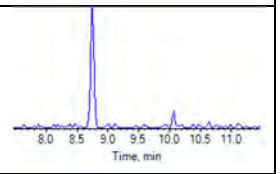
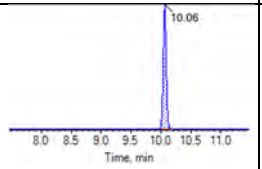
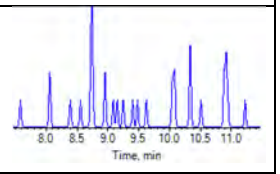
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	654800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1945000	N/A	N/A	N/A	1159.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.07)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 0.13		

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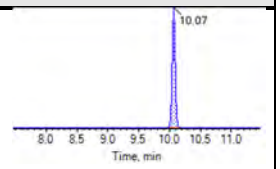
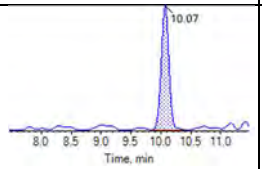
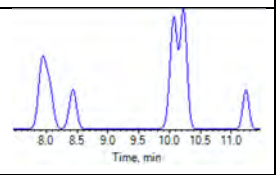
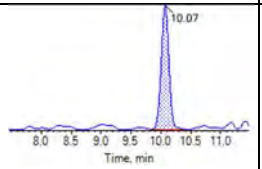
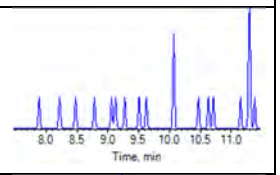
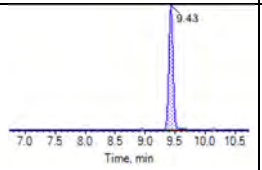
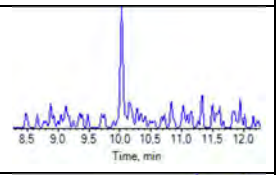
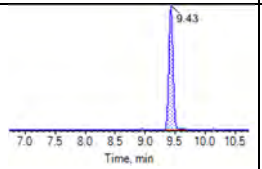
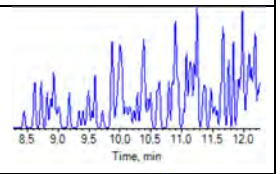
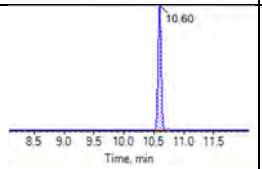
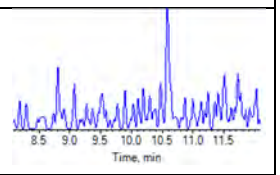
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1255000	N/A	N/A	N/A	1087.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 1.00		

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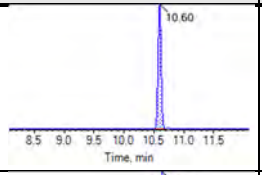
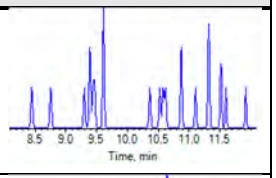
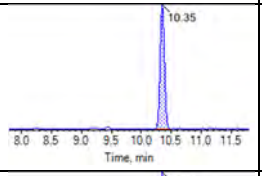
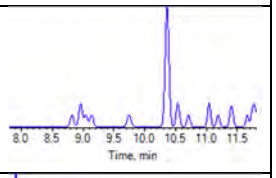
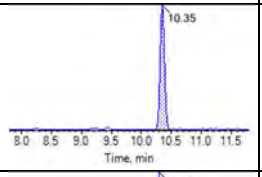
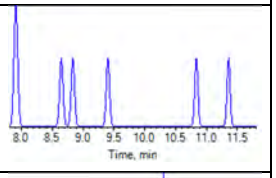
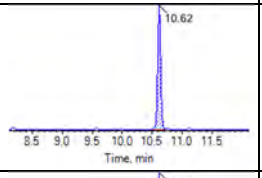
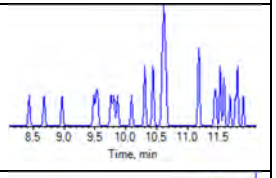
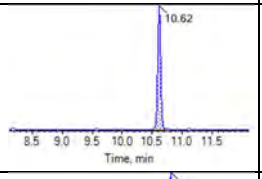
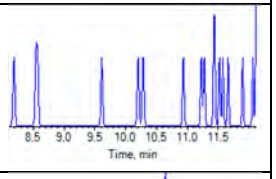
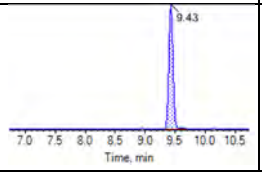
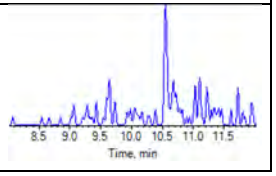
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		

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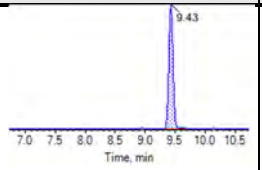
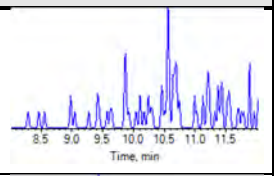
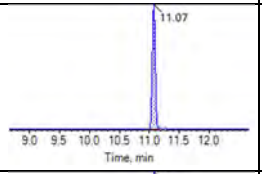
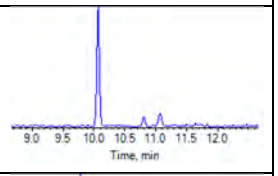
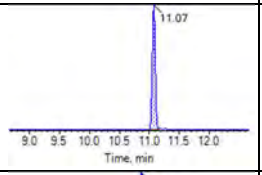
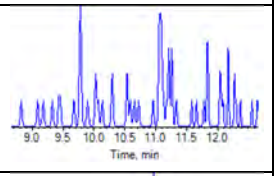
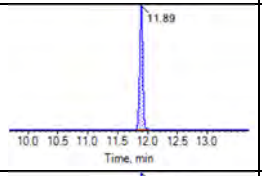
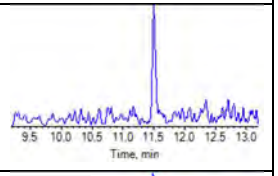
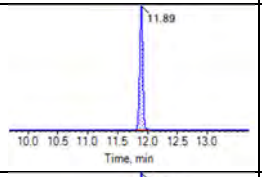
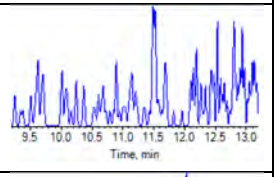
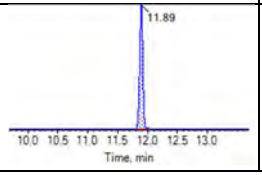
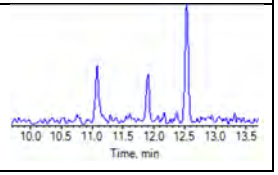
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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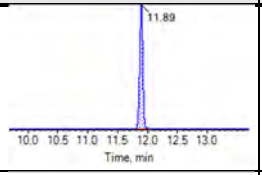
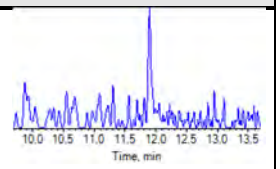
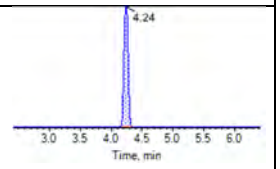
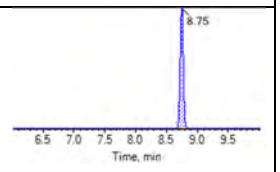
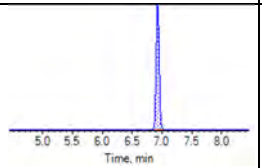
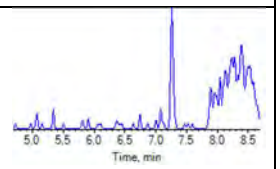
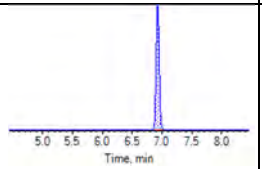
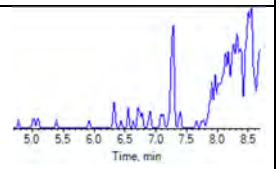
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1915000	N/A	N/A	N/A	1107.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1426000	N/A	N/A	N/A	1159.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.28)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 01-NOV-17 23:32

Data File: PFC103117087.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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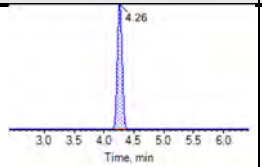
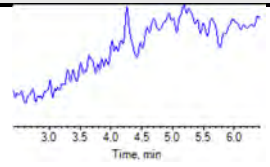
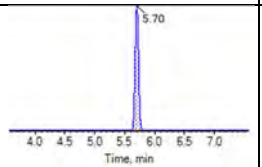
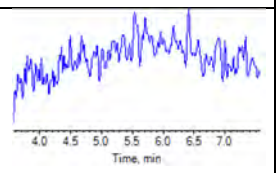
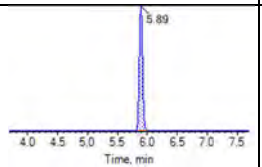
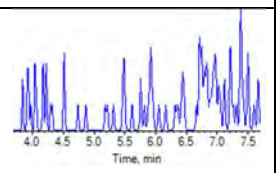
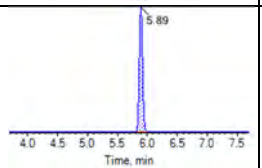
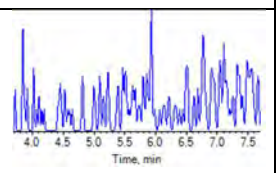
PFC103117087.wiff			
Sample Name	PFCIBLK10	**Injection Vial**	22
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117087.wiff
Acquisition Date	11/1/2017 23:32:45	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117087.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	139100	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	214600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	147900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	147900	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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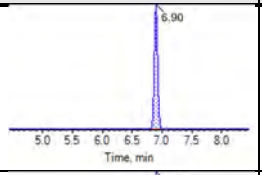
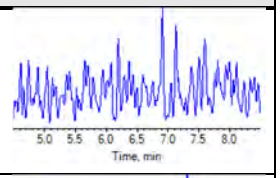
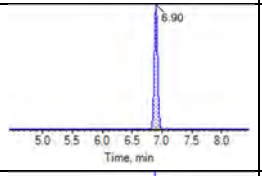
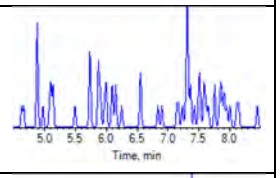
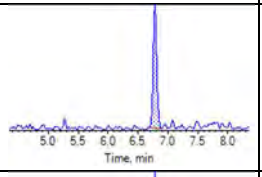
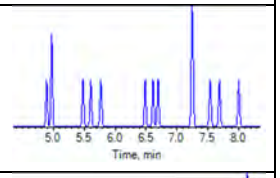
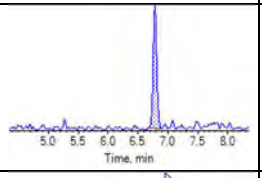
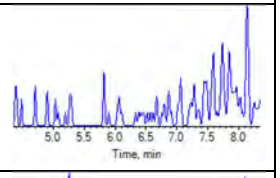
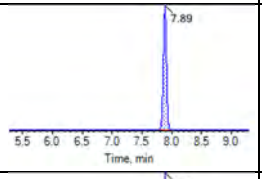
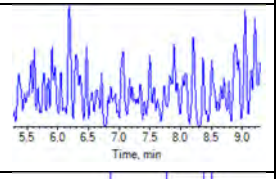
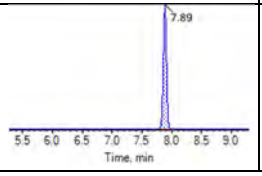
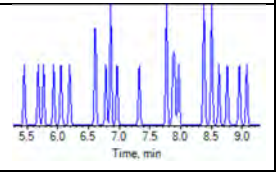
PFC103117087.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	27900	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	27900	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	242600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	242600	N/A	N/A	N/A	N/A/ 0.26		

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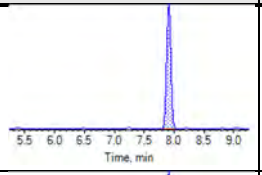
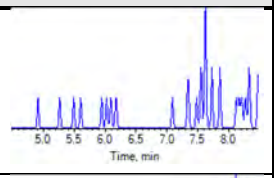
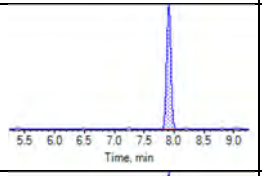
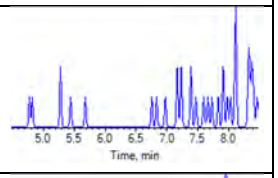
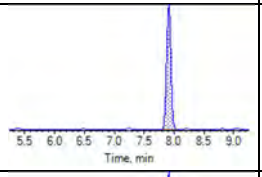
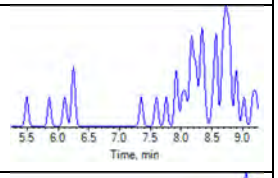
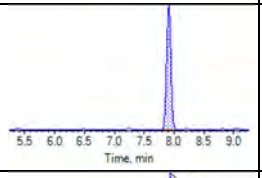
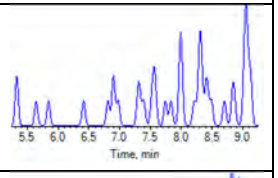
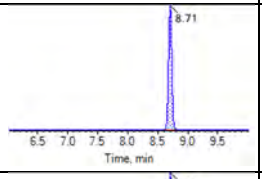
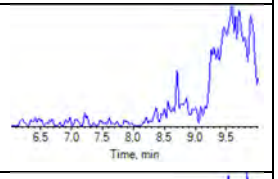
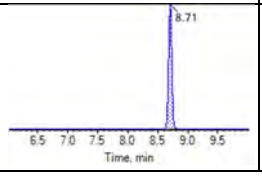
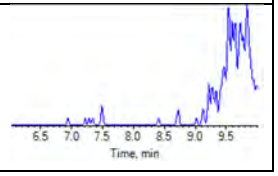
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	240100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	240100	N/A	N/A	N/A	N/A/ 0.37		

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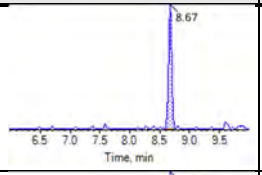
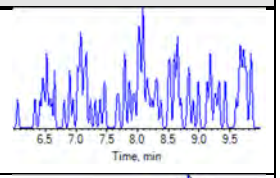
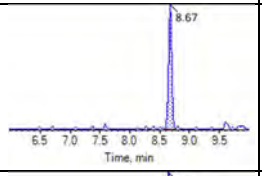
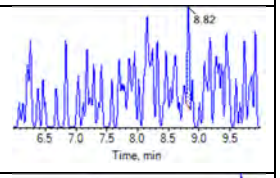
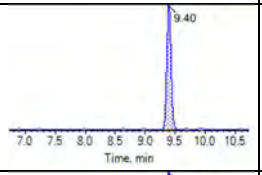
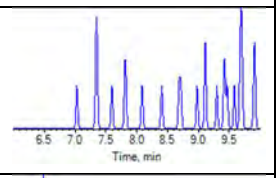
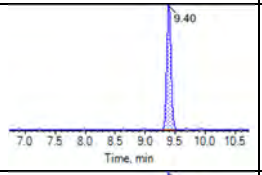
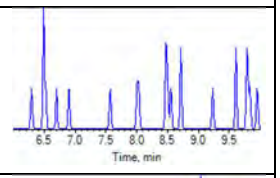
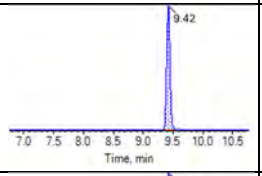
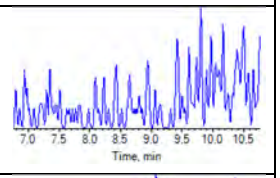
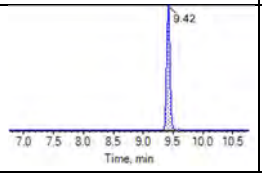
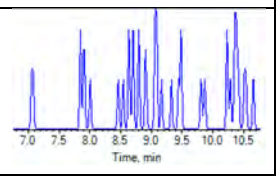
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	36410	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.82 (8.72)	1330	13C2_6:2 FTS	36410	N/A	7.7	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	205900	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	205900	N/A	N/A	N/A	N/A/ 0.24		

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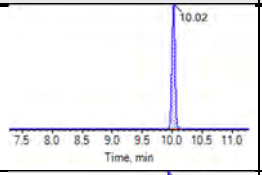
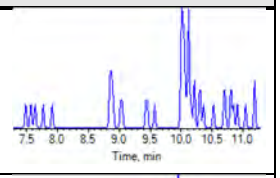
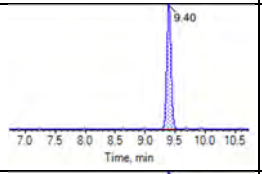
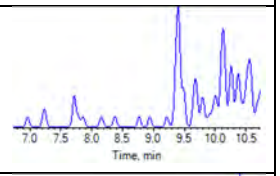
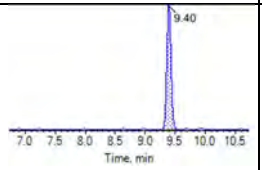
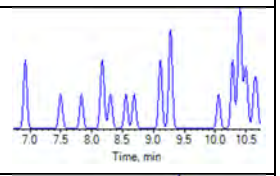
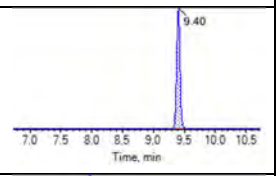
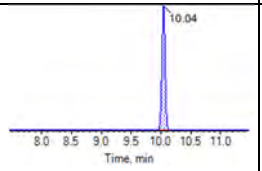
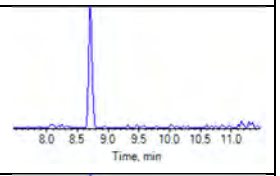
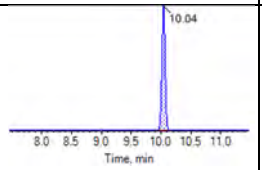
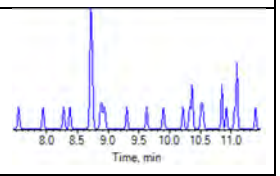
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	521100	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1494000	N/A	N/A	N/A	890.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	154700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	154700	N/A	N/A	N/A	N/A/ 0.13		

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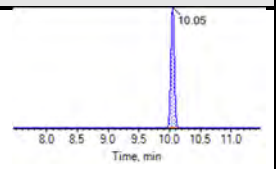
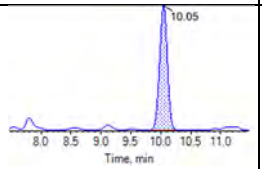
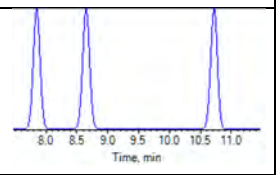
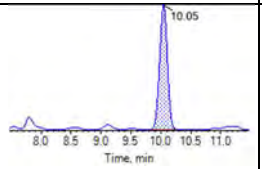
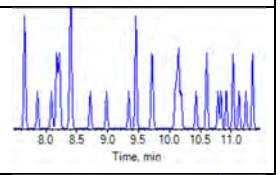
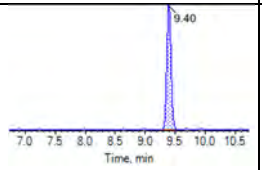
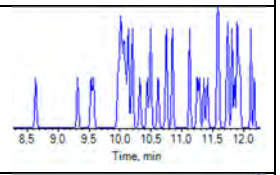
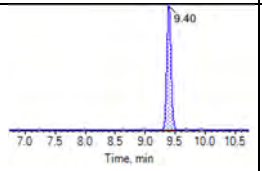
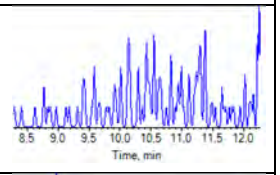
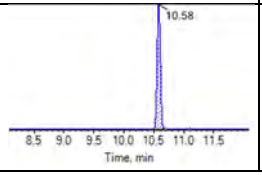
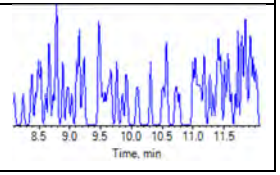
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	1110000	N/A	N/A	N/A	962.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24540	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24540	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	176100	N/A	N/A	N/A	N/A/ 1.00		

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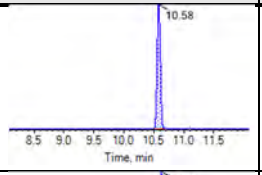
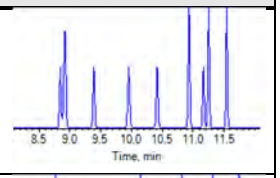
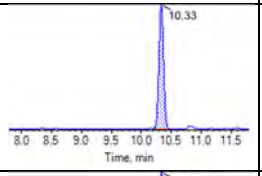
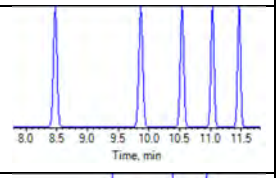
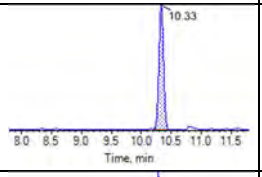
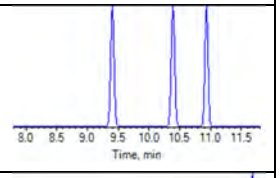
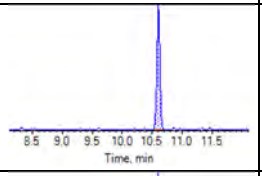
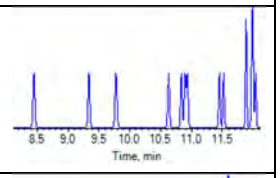
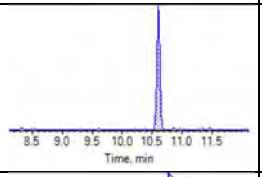
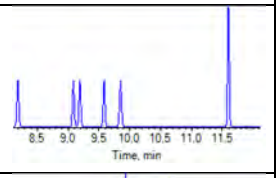
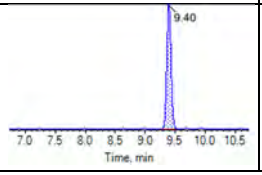
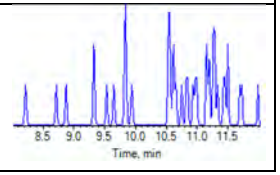
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	176100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50390	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50390	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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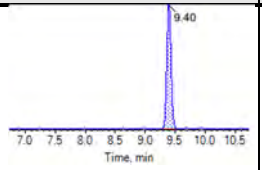
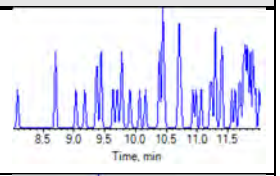
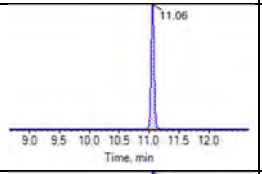
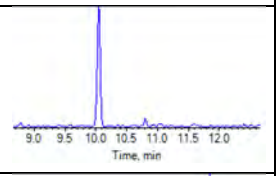
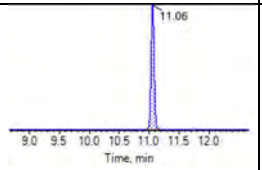
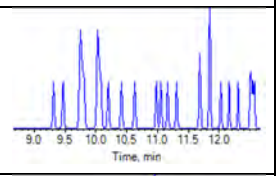
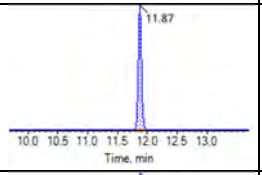
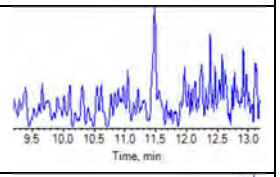
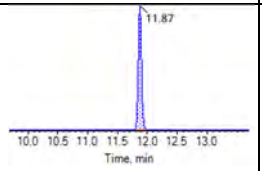
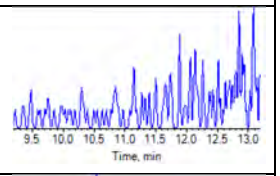
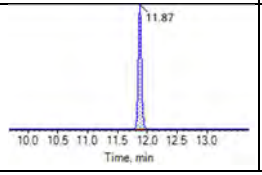
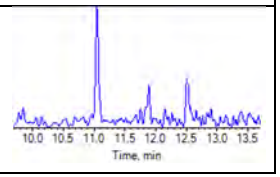
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	168300	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	168300	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 1.00		

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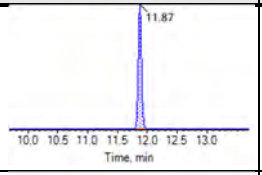
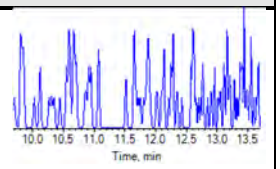
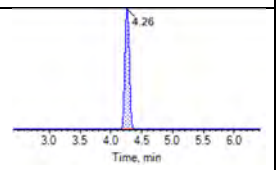
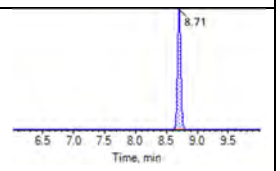
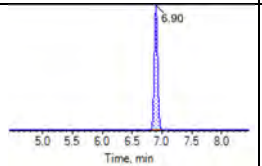
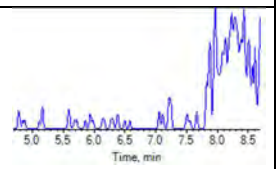
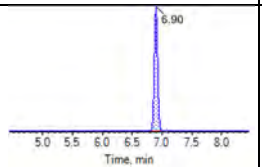
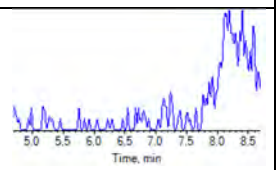
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1556000	N/A	N/A	N/A	899.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1172000	N/A	N/A	N/A	952.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 03:49

Data File: PFC103117099.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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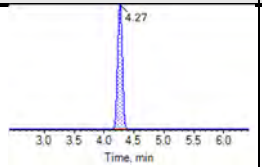
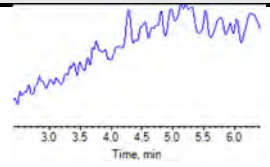
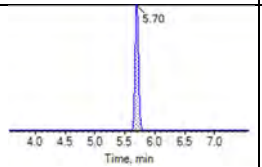
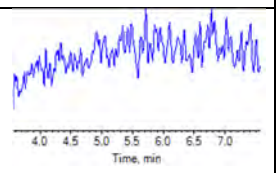
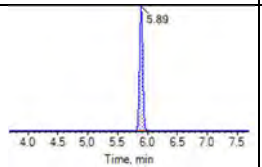
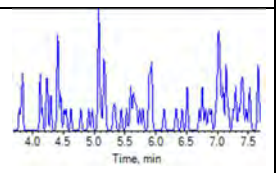
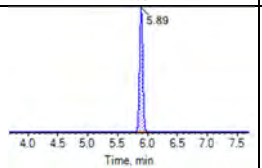
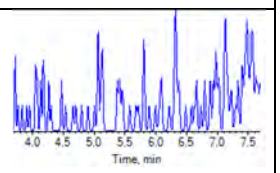
PFC103117099.wiff			
Sample Name	PFCIBLK11	**Injection Vial**	22
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117099.wiff
Acquisition Date	11/2/2017 03:49:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117099.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	149000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	240600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	149400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	149400	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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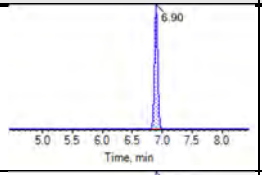
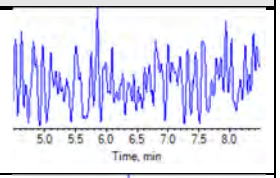
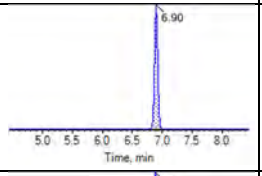
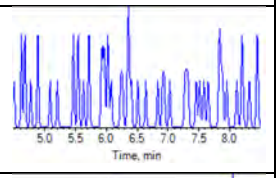
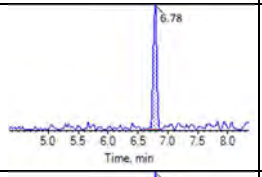
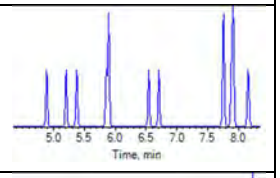
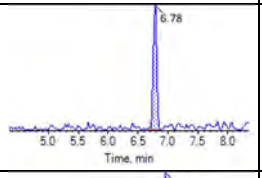
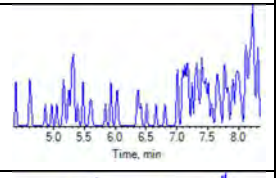
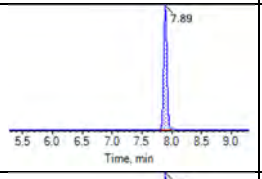
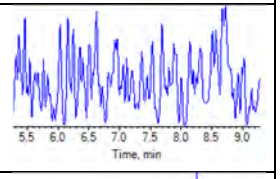
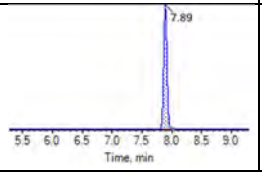
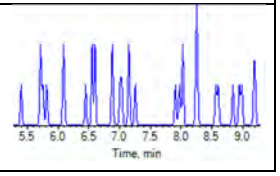
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	27420	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	27420	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	255000	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	255000	N/A	N/A	N/A	N/A/ 0.26		

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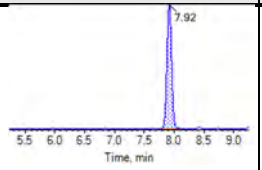
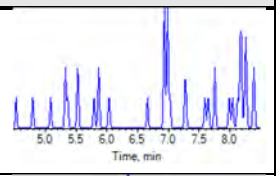
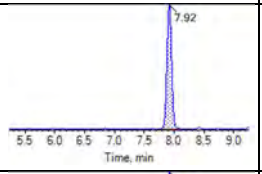
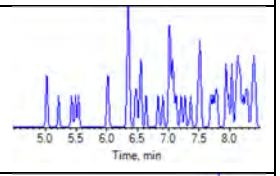
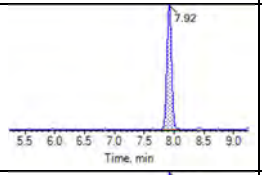
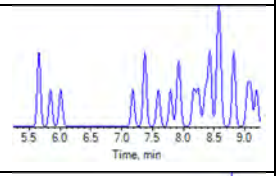
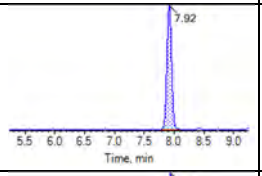
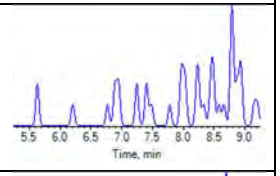
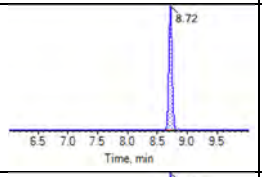
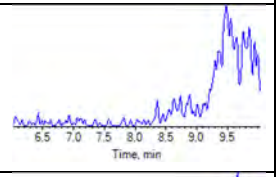
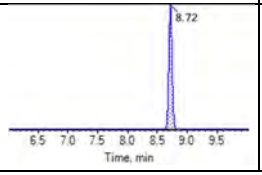
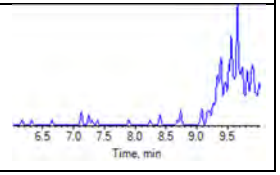
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	225000	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	225000	N/A	N/A	N/A	N/A/ 0.37		

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LCMSMS#6

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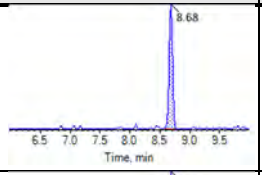
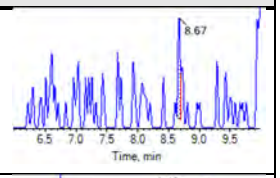
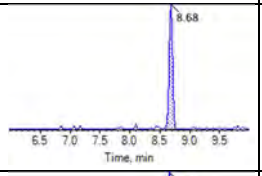
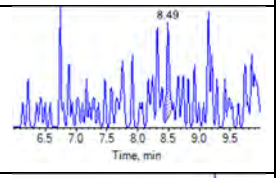
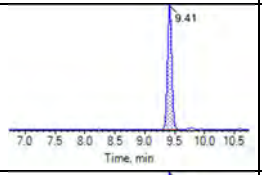
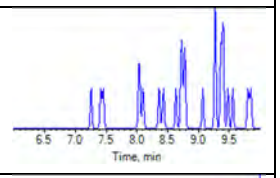
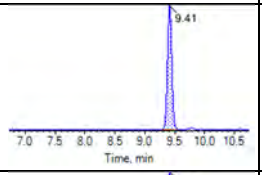
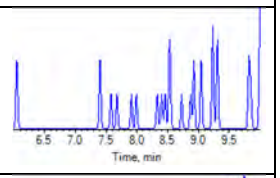
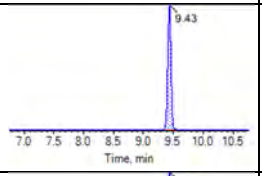
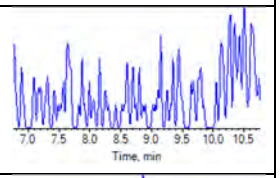
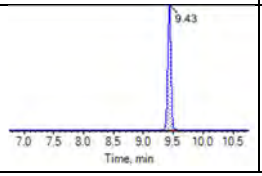
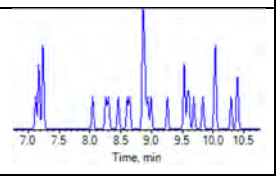
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	1321	13C2_6:2 FTS	40100	N/A	6.2	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.49 (8.72)	1481	13C2_6:2 FTS	40100	N/A	7.8	N/A	1.12/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	241000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	241000	N/A	N/A	N/A	N/A/ 0.24		

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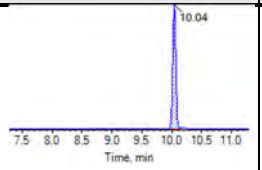
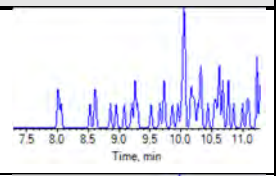
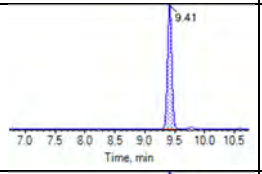
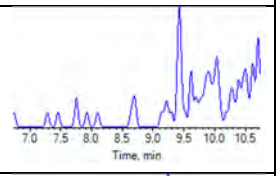
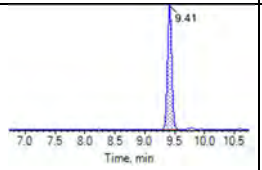
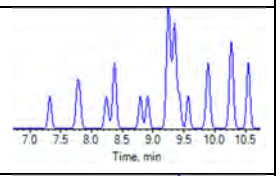
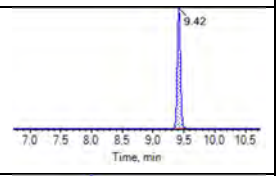
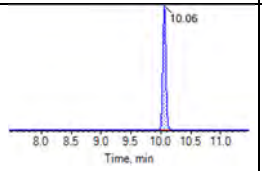
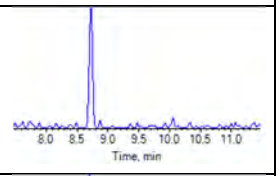
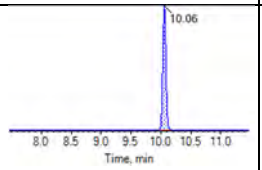
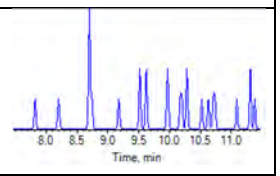
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	527300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1552000	N/A	N/A	N/A	925.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	139200	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	139200	N/A	N/A	N/A	N/A/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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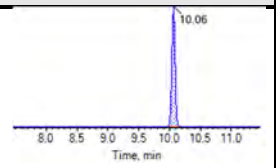
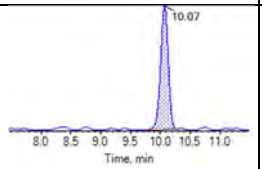
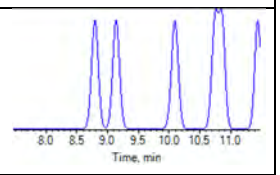
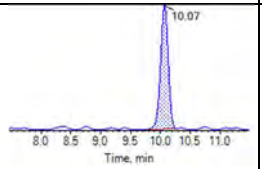
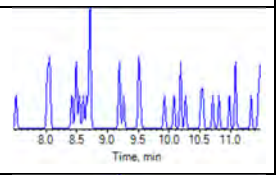
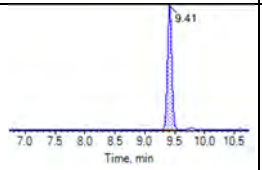
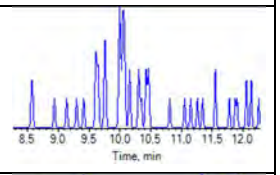
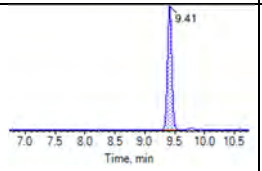
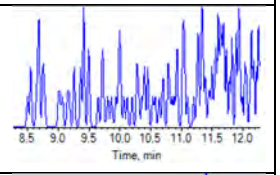
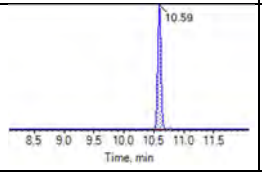
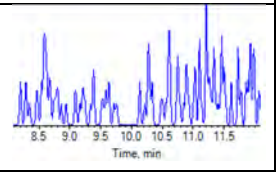
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1065000	N/A	N/A	N/A	923.2	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	22370	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	22370	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	199900	N/A	N/A	N/A	N/A/ 1.00		

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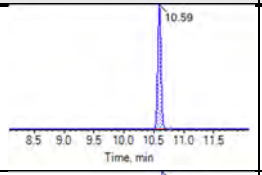
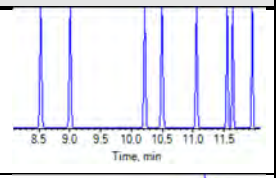
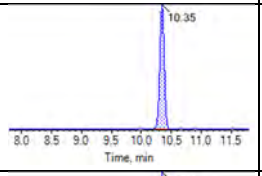
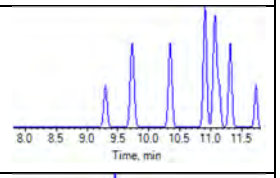
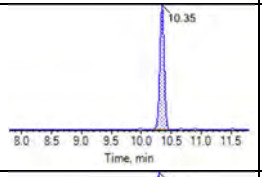
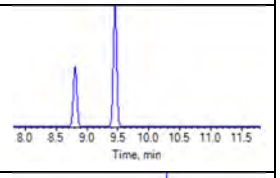
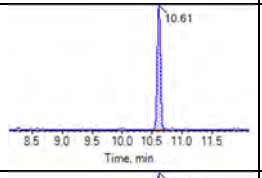
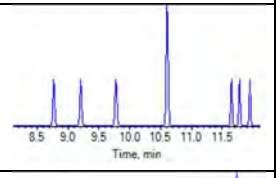
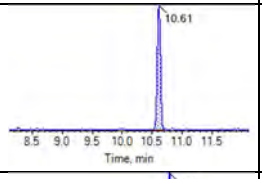
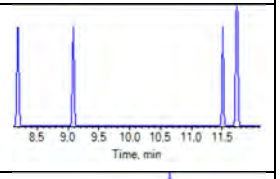
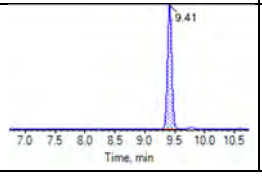
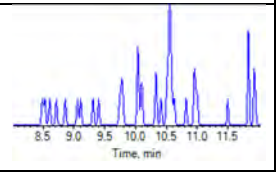
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	199900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50620	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50620	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49450	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49450	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		

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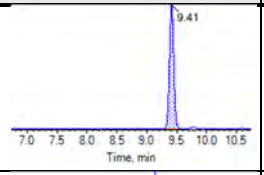
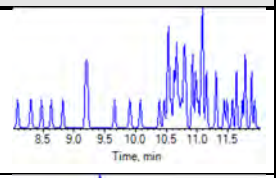
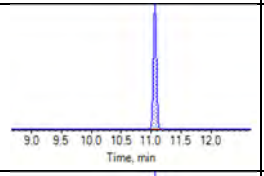
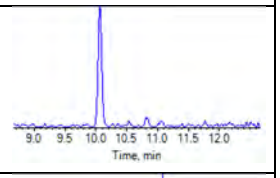
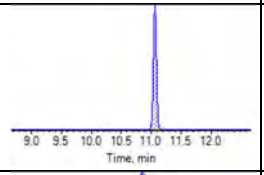
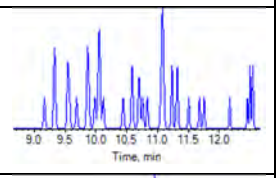
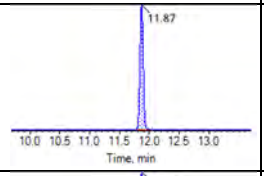
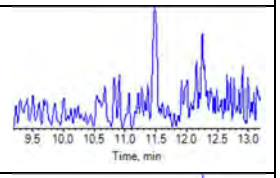
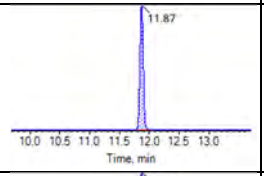
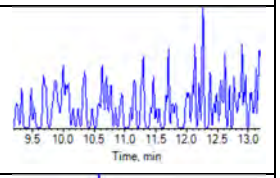
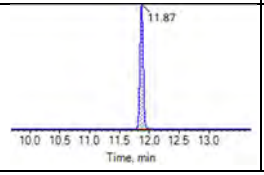
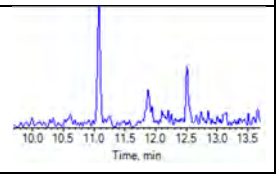
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	176500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	176500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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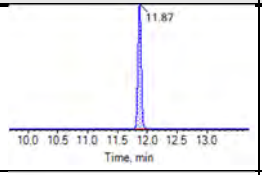
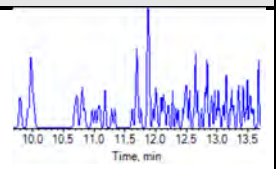
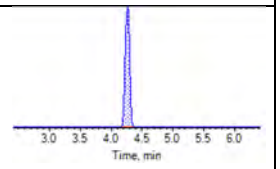
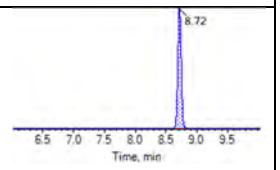
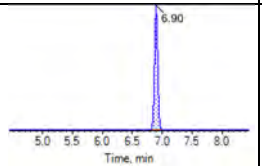
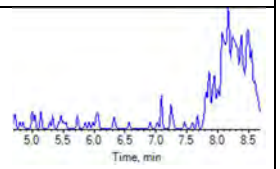
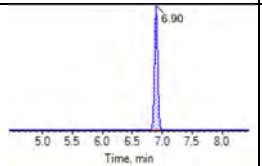
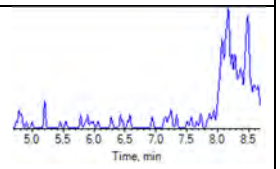
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1647000	N/A	N/A	N/A	951.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.72 (8.75)	1087000	N/A	N/A	N/A	883.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 08:06

Data File: PFC103117111.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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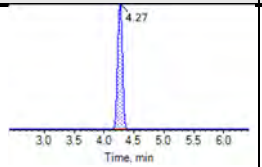
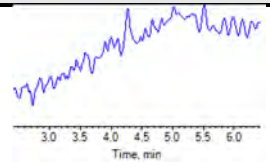
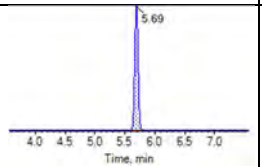
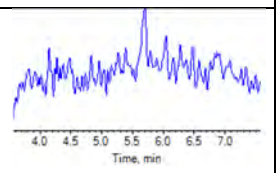
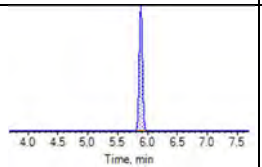
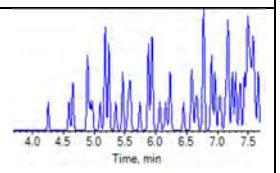
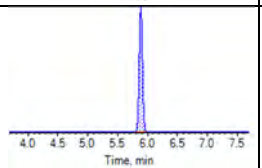
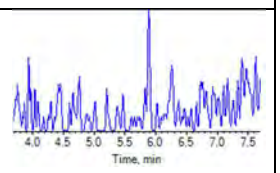
PFC103117111.wiff			
Sample Name	PFCIBLK12	**Injection Vial**	44
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117111.wiff
Acquisition Date	11/2/2017 08:06:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117111.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	144200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	223000	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	148900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	148900	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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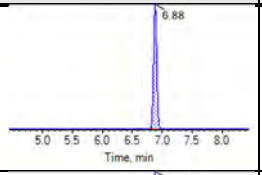
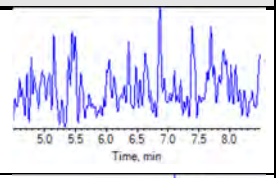
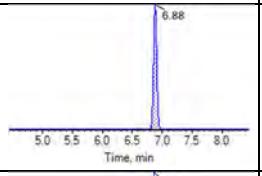
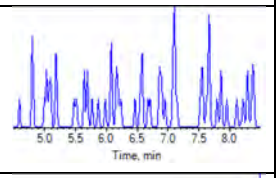
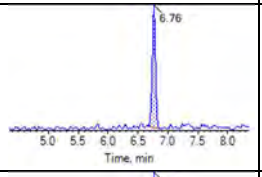
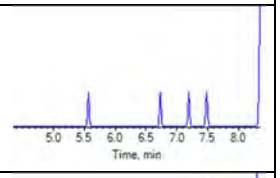
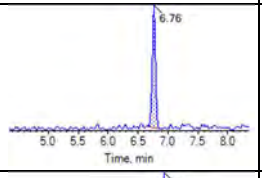
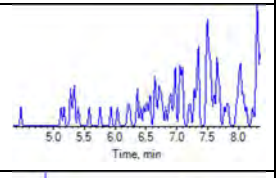
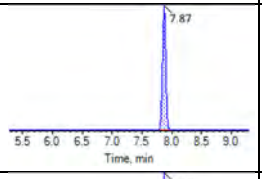
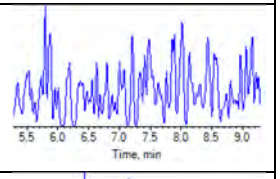
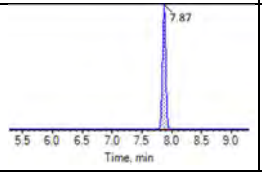
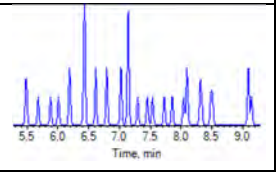
PFC103117111.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	34530	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	34530	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	241500	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	241500	N/A	N/A	N/A	N/A/ 0.26		

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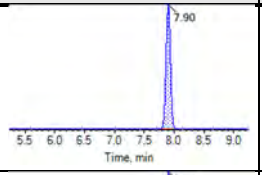
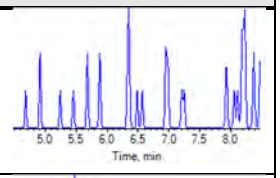
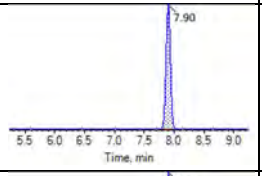
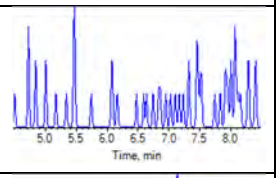
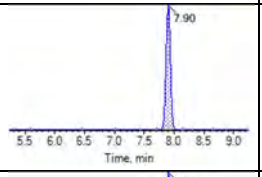
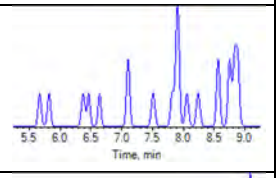
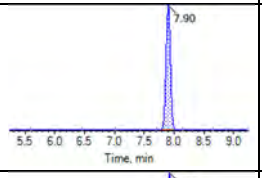
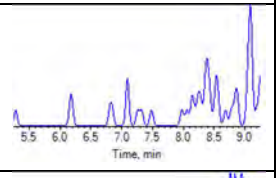
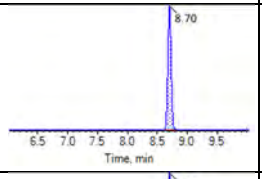
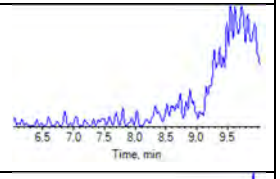
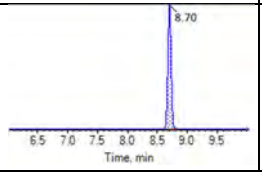
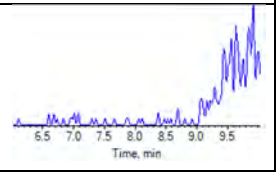
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	228800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	228800	N/A	N/A	N/A	N/A/ 0.37		

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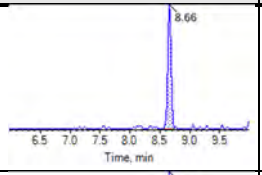
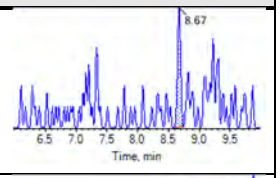
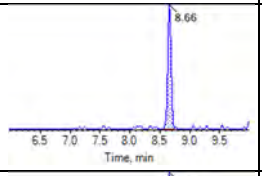
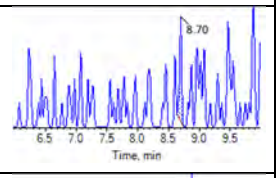
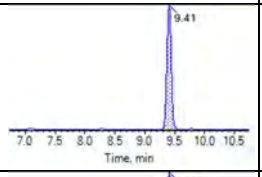
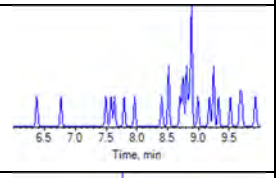
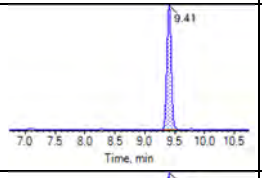
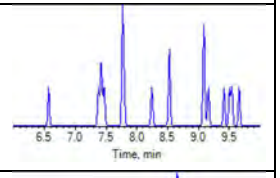
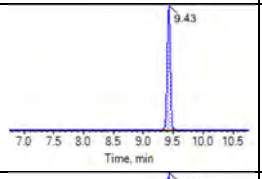
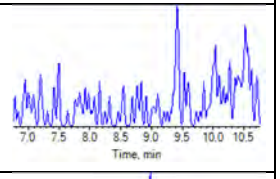
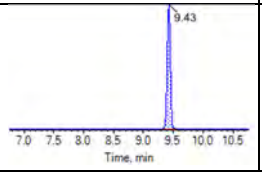
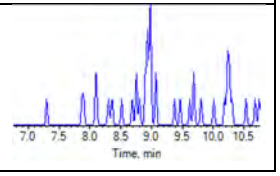
6:2 FTS	427.0 / 407.0	8.67 (8.72)	2686	13C2_6:2 FTS	33370	N/A	15.3	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.70 (8.72)	1387	13C2_6:2 FTS	33370	N/A	8.8	N/A	0.52/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	265600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	265600	N/A	N/A	N/A	N/A/ 0.24		

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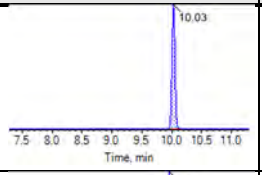
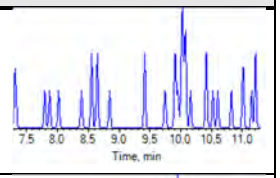
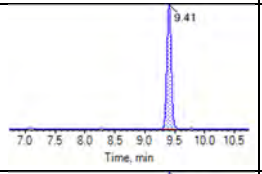
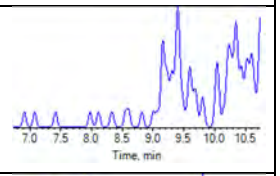
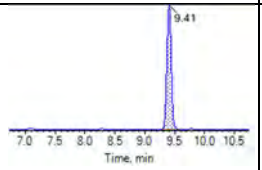
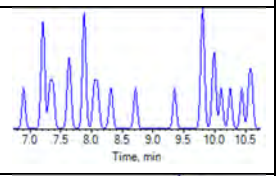
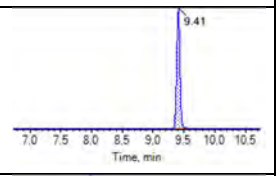
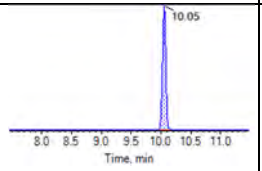
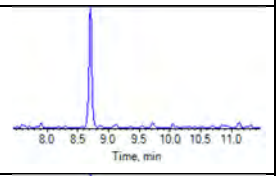
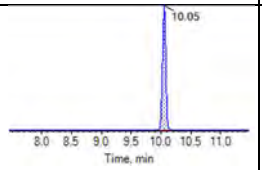
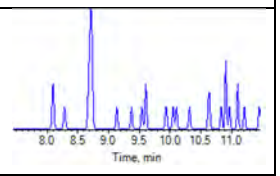
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	507200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1704000	N/A	N/A	N/A	1015.8	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	134200	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	134200	N/A	N/A	N/A	N/A/ 0.13		

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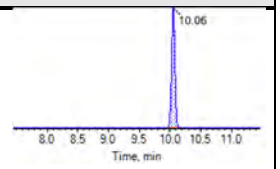
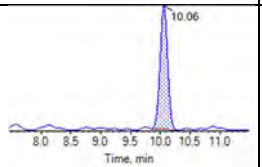
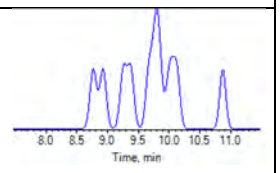
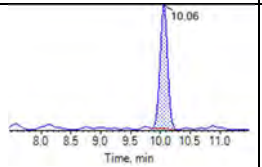
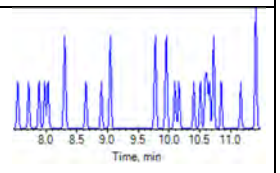
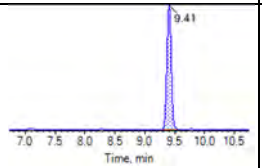
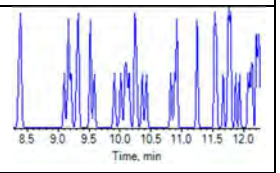
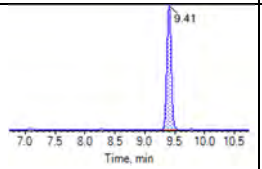
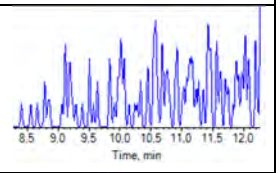
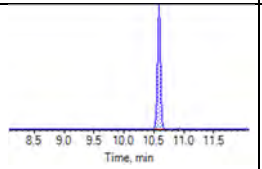
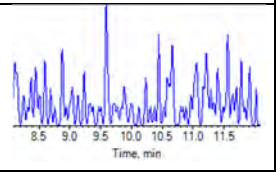
PFC103117111.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1181000	N/A	N/A	N/A	1023.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	22360	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	22360	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	170600	N/A	N/A	N/A	N/A/ 1.00		

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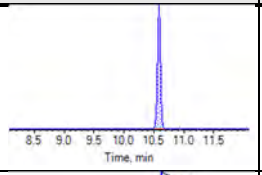
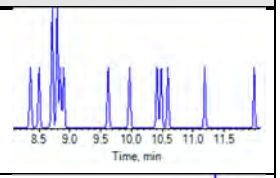
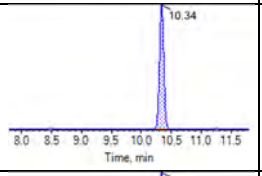
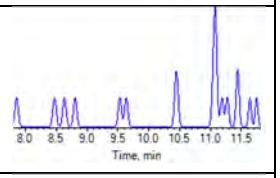
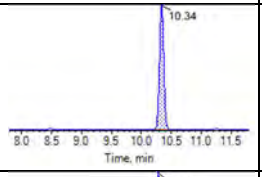
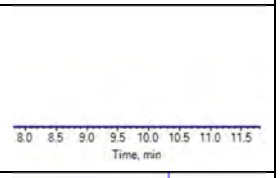
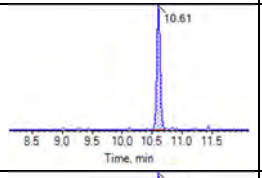
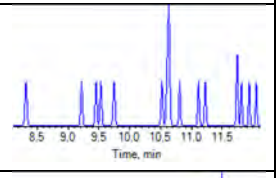
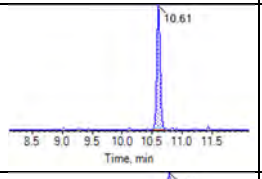
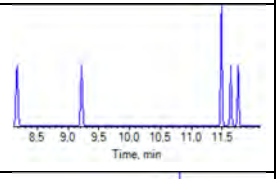
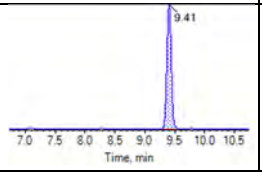
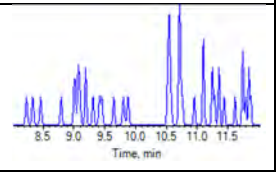
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	170600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	52500	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	52500	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53770	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53770	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		

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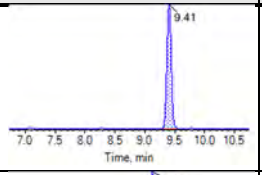
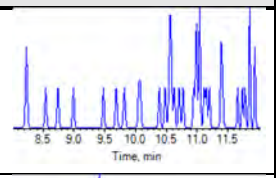
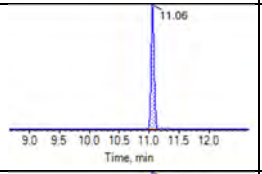
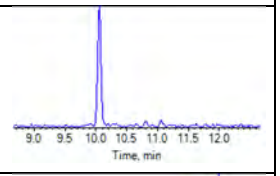
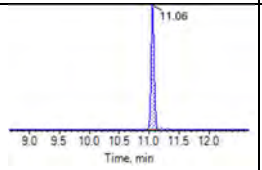
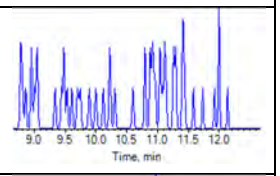
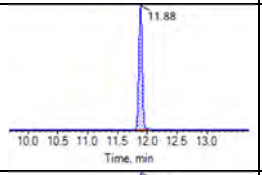
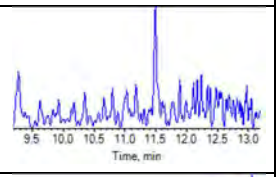
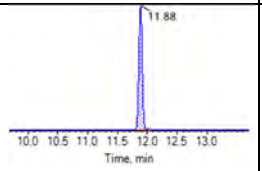
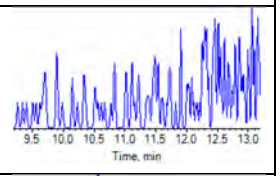
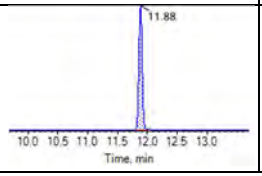
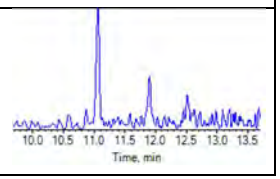
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	168500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	168500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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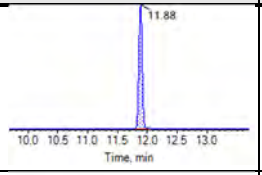
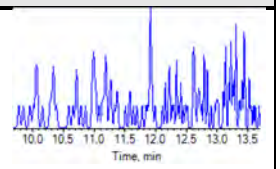
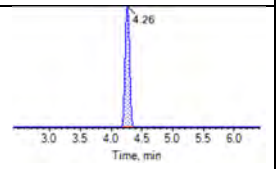
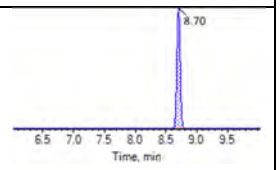
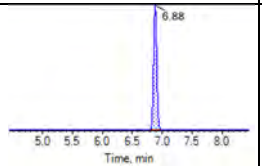
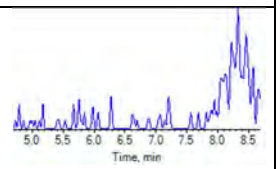
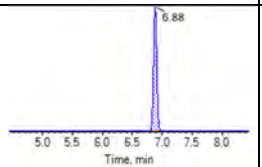
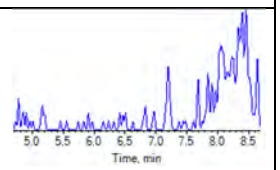
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1660000	N/A	N/A	N/A	959.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1271000	N/A	N/A	N/A	1033.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 12:01

Data File: PFC103117122.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JTSB
11/06/2017

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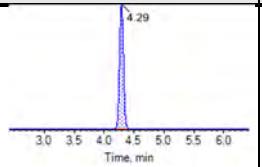
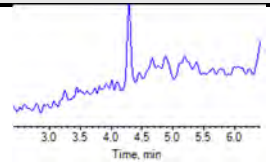
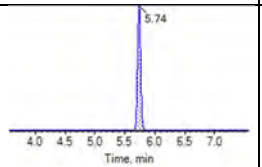
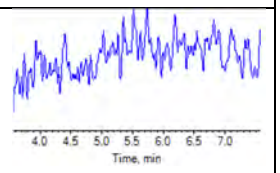
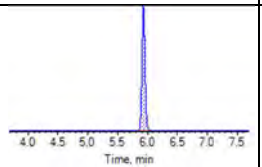
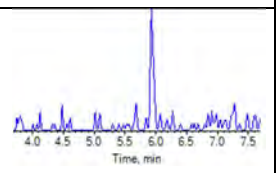
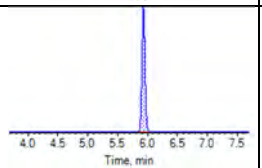
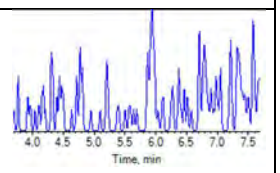
PFC103117122.wiff			
Sample Name	PFCIBLK13	**Injection Vial**	44
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117122.wiff
Acquisition Date	11/2/2017 12:01:22	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117122.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	111300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	169100	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	110200	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	110200	N/A	N/A	N/A	N/A/ 0.45		

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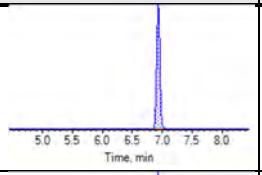
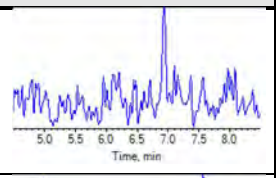
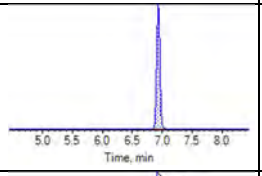
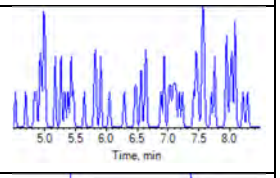
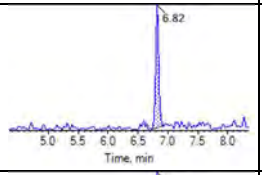
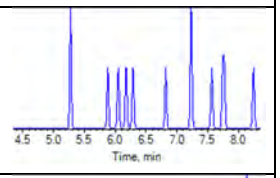
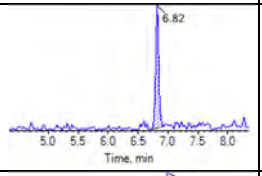
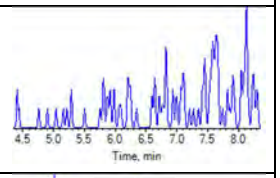
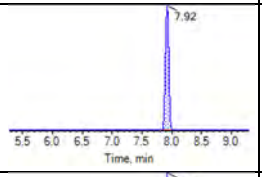
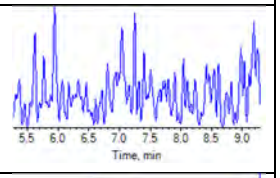
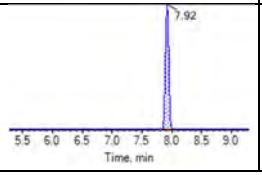
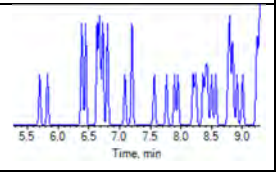
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	21820	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	21820	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	181600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	181600	N/A	N/A	N/A	N/A/ 0.26		

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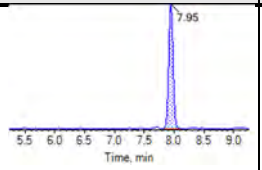
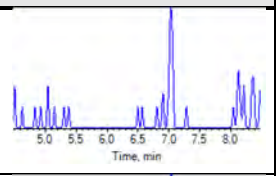
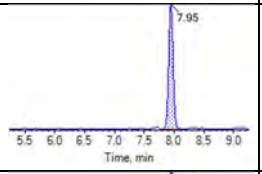
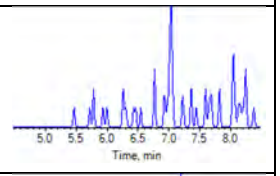
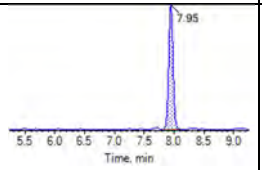
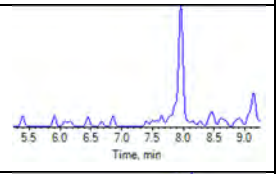
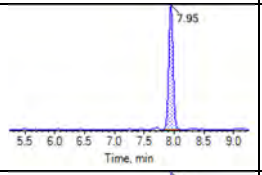
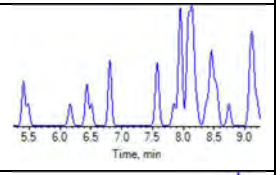
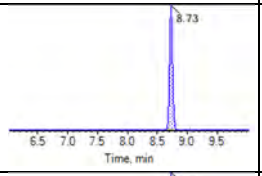
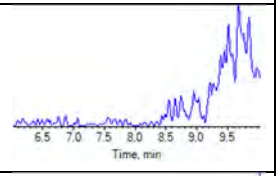
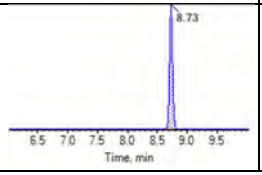
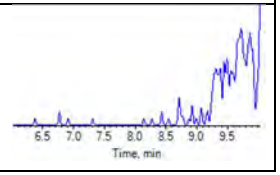
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	171300	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	171300	N/A	N/A	N/A	N/A/ 0.37		

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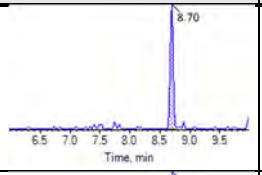
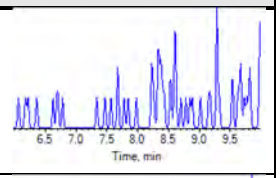
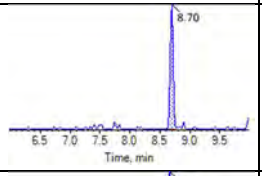
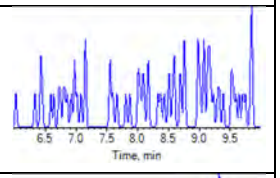
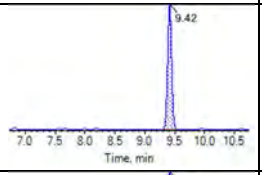
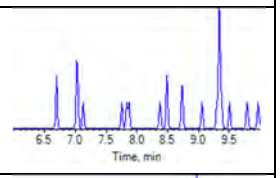
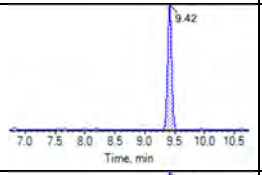
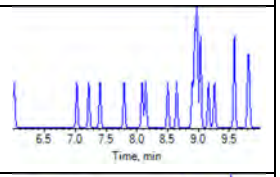
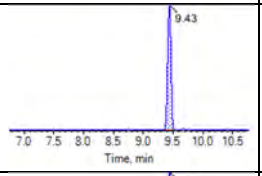
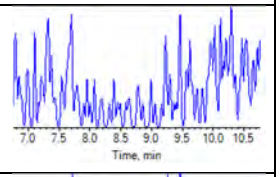
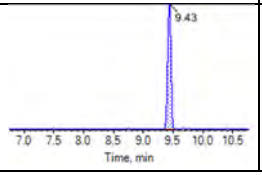
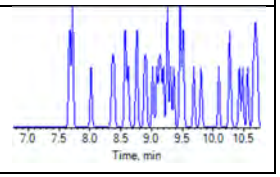
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	24200	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	24200	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	148200	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	148200	N/A	N/A	N/A	N/A/ 0.24		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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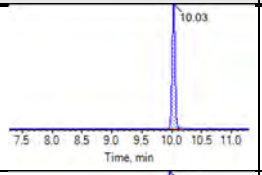
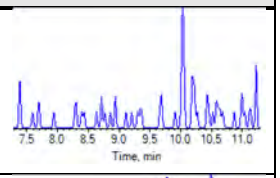
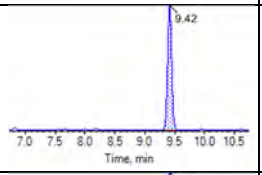
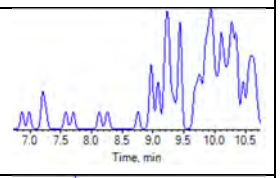
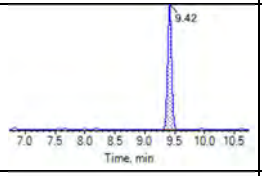
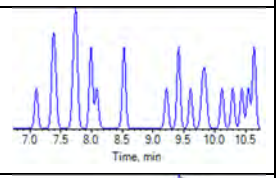
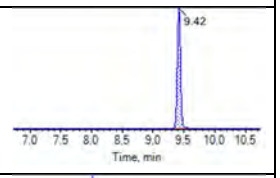
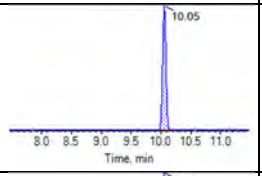
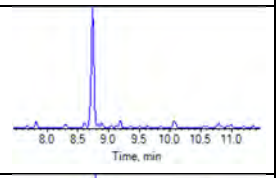
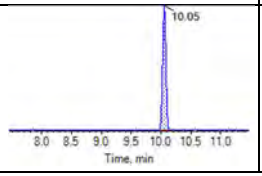
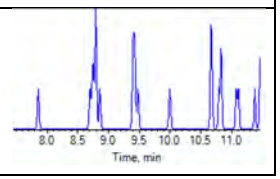
PFC103117122.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	340500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1121000	N/A	N/A	N/A	668.3	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	90500	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	90500	N/A	N/A	N/A	N/A/ 0.13		

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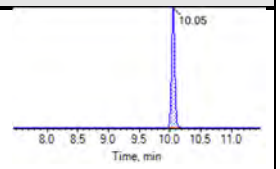
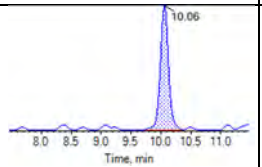
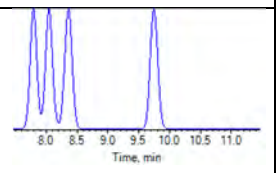
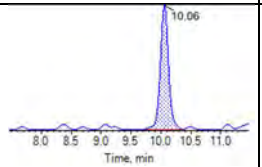
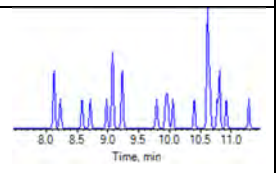
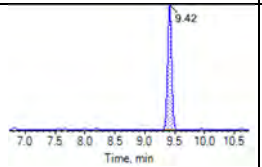
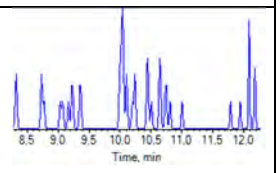
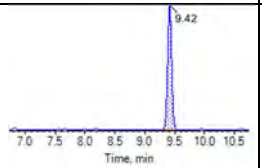
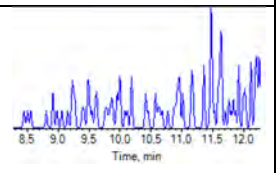
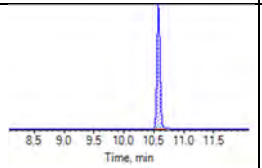
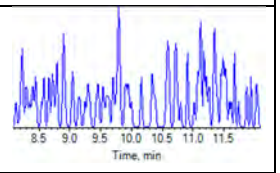
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	764700	N/A	N/A	N/A	662.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	14150	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	14150	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	124100	N/A	N/A	N/A	N/A/ 1.00		

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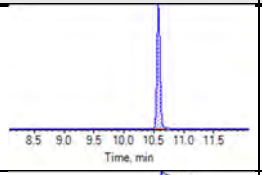
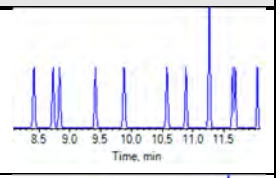
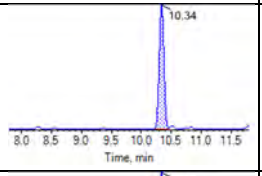
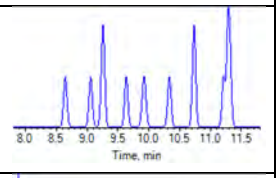
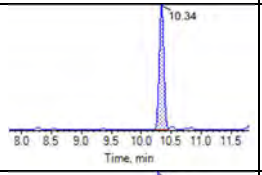
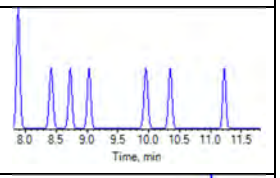
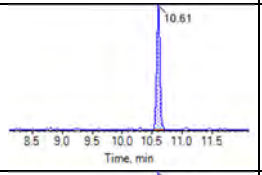
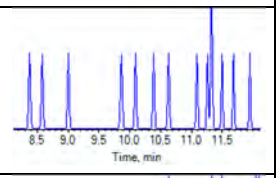
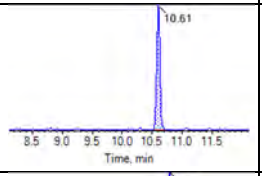
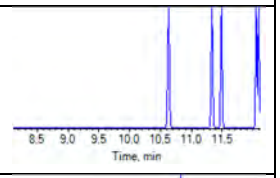
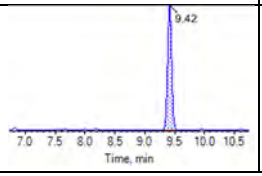
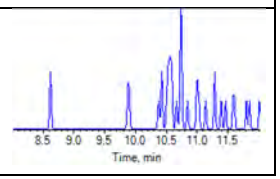
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	124100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37740	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37740	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	39810	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	39810	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		

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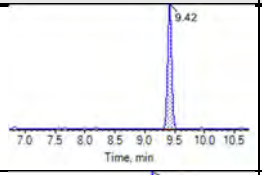
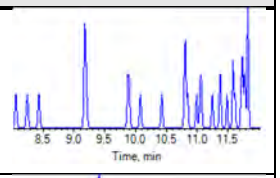
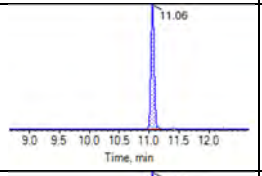
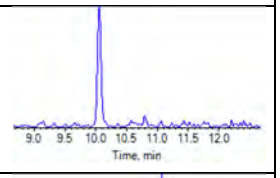
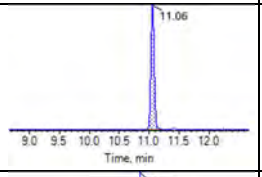
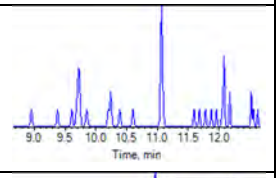
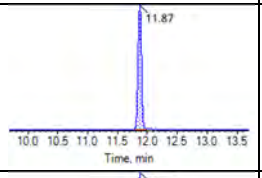
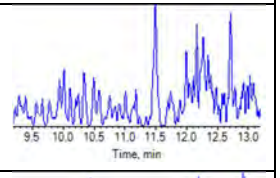
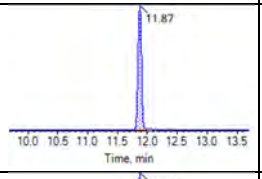
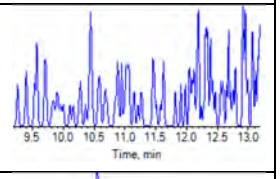
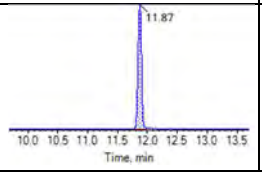
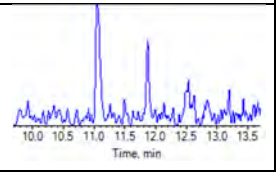
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	121200	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	121200	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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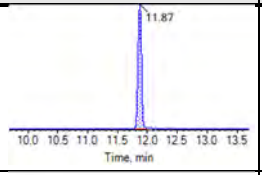
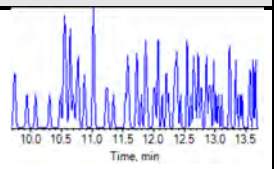
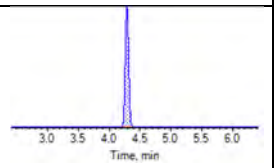
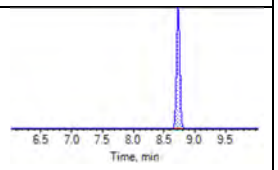
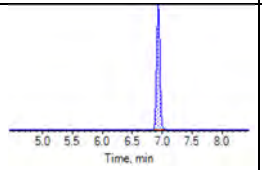
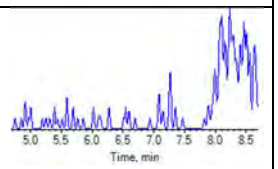
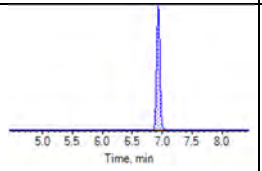
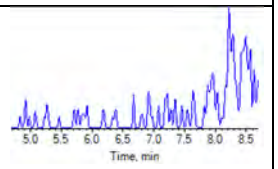
PFC103117122.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1315000	N/A	N/A	N/A	760.2	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	841300	N/A	N/A	N/A	683.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436488

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 16:18

Data File: PFC103117134.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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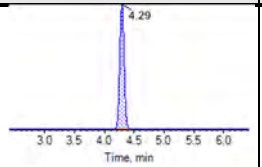
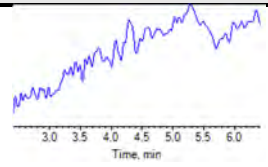
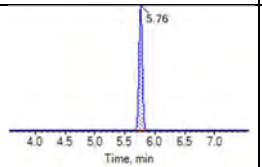
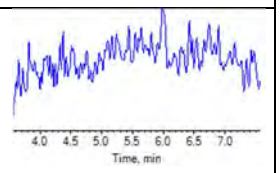
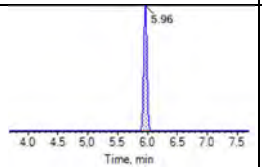
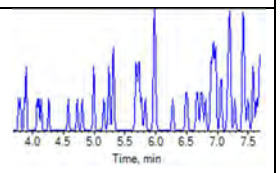
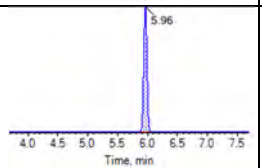
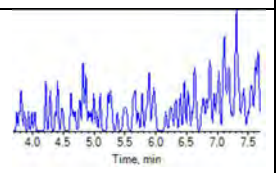
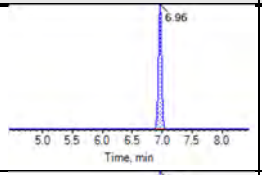
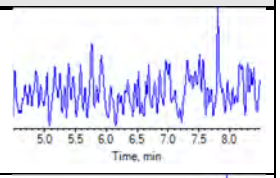
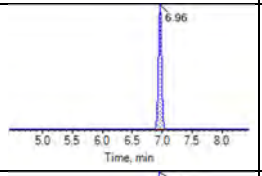
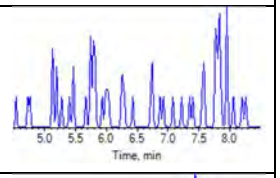
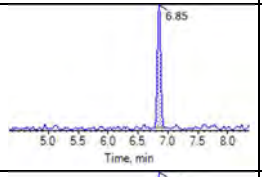
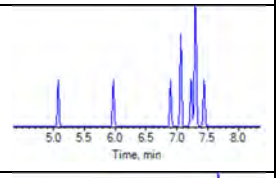
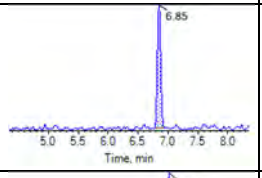
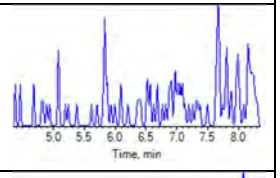
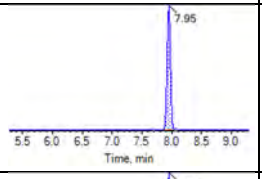
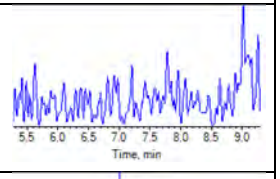
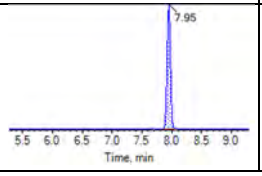
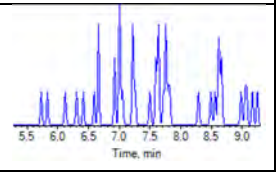
PFC103117134.wiff			
Sample Name	PFCIBLK14	**Injection Vial**	12
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117134.wiff
Acquisition Date	11/2/2017 16:18:07	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117134.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	160300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	253500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	167500	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	167500	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:32:00

PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	34510	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	34510	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	296000	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	296000	N/A	N/A	N/A	N/A/ 0.26		

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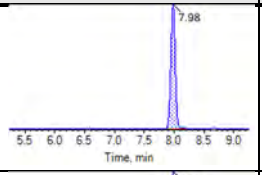
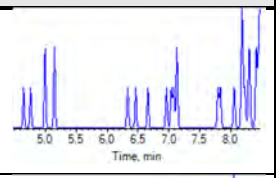
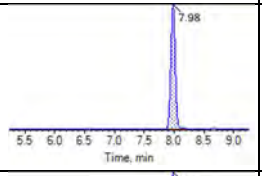
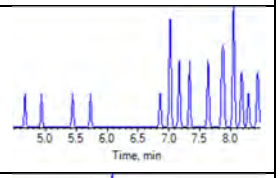
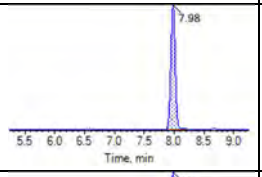
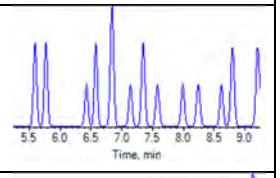
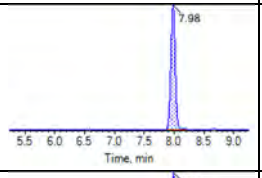
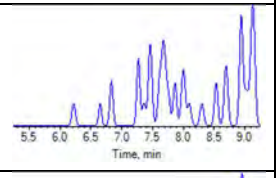
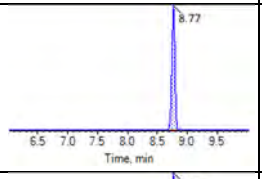
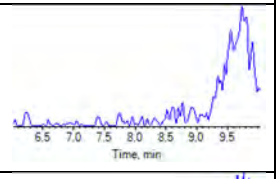
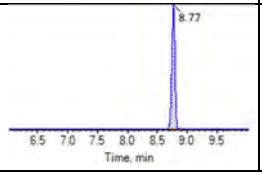
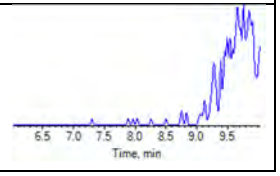
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:32:00

PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	257100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	257100	N/A	N/A	N/A	N/A/ 0.37		

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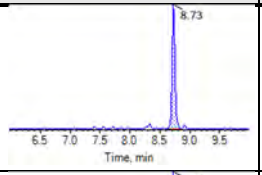
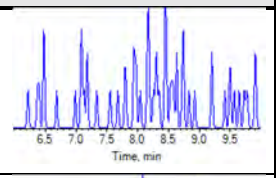
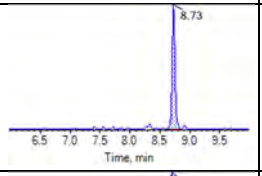
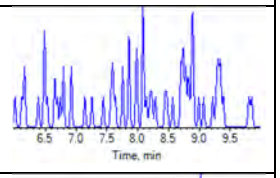
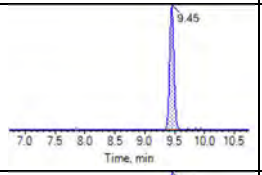
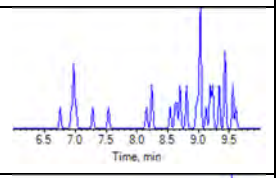
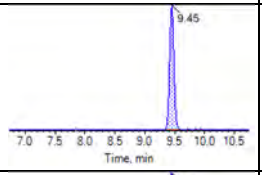
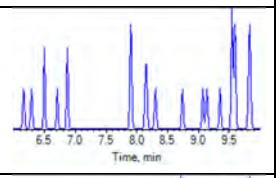
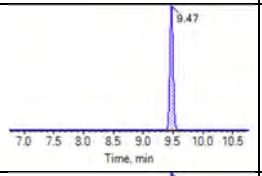
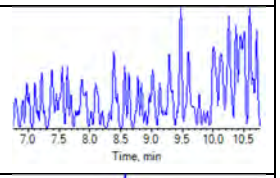
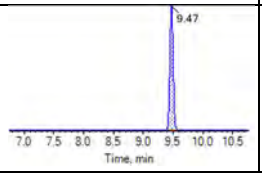
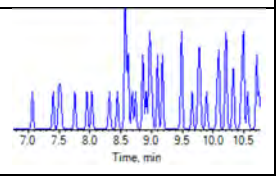
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	41640	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	41640	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	265000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	265000	N/A	N/A	N/A	N/A/ 0.24		

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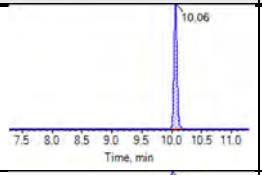
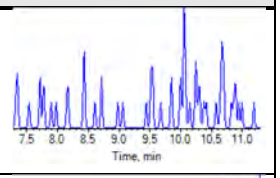
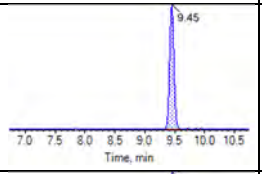
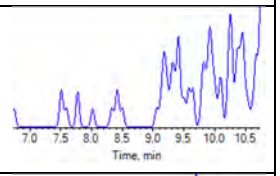
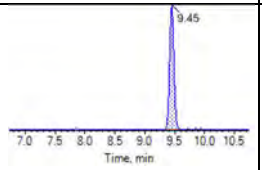
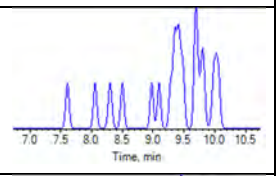
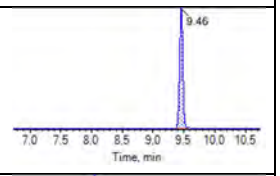
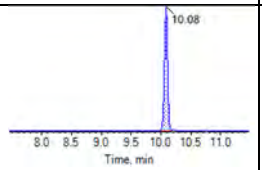
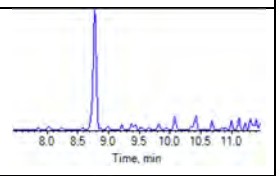
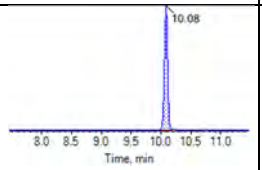
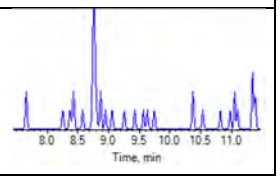
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	569200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1708000	N/A	N/A	N/A	1018.6	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	153600	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	153600	N/A	N/A	N/A	N/A/ 0.13		

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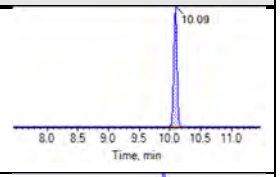
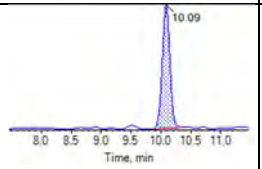
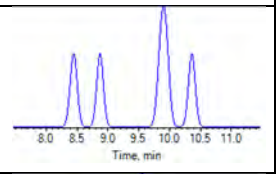
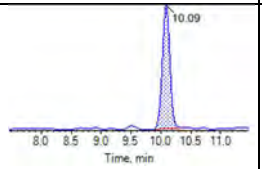
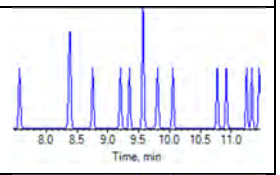
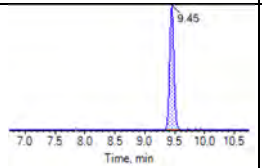
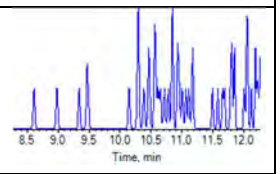
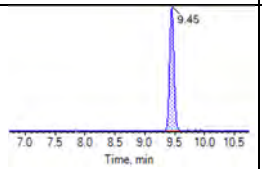
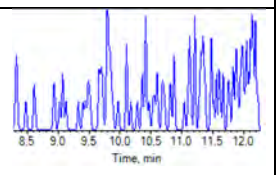
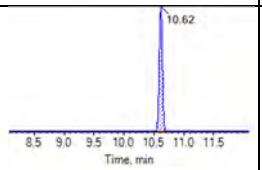
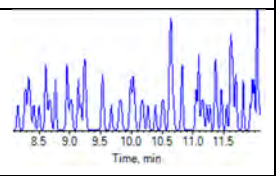
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1176000	N/A	N/A	N/A	1019.1	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	31330	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	31330	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	209500	N/A	N/A	N/A	N/A/ 1.00		

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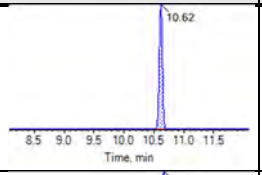
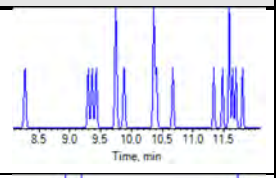
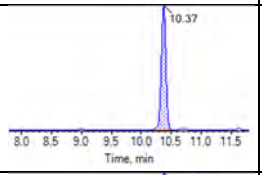
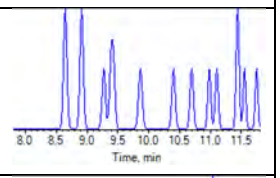
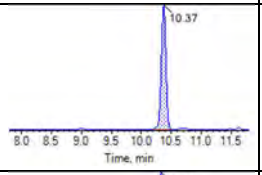
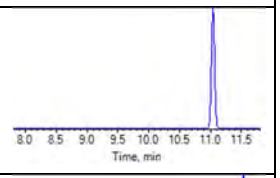
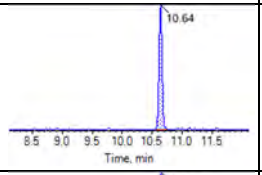
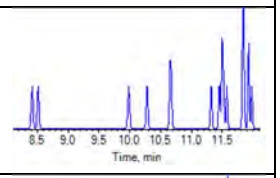
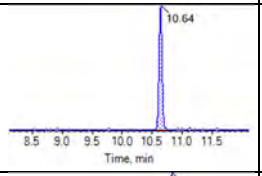
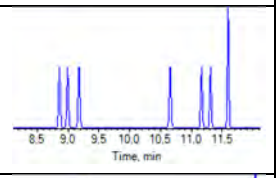
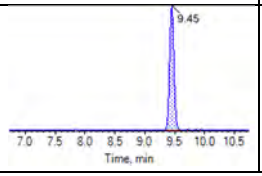
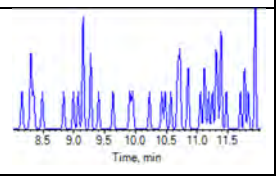
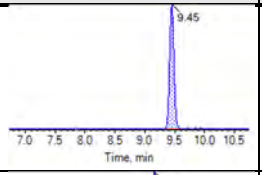
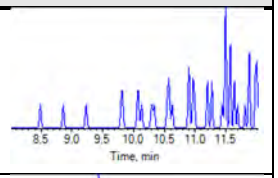
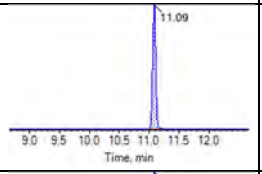
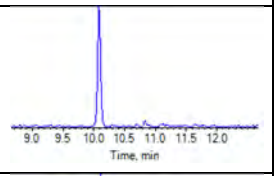
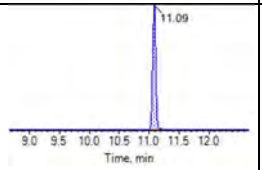
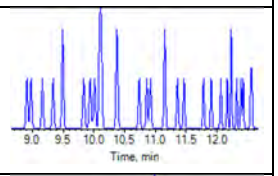
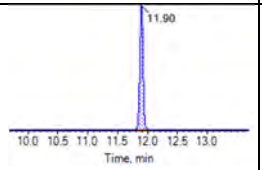
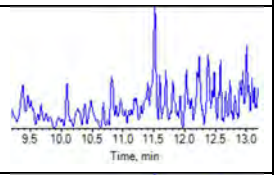
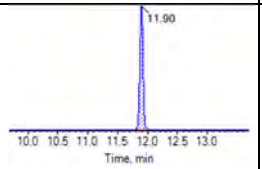
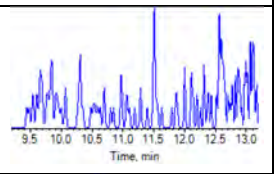
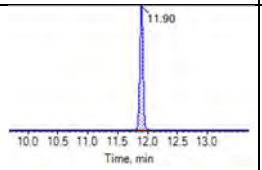
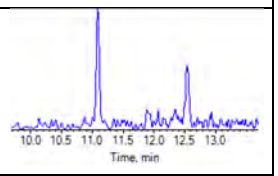
PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	209500	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59990	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59990	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	58240	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	58240	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:32:00

PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	189400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	189400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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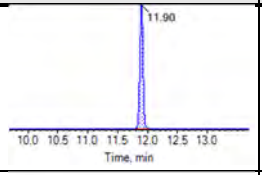
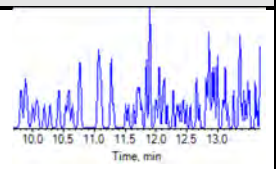
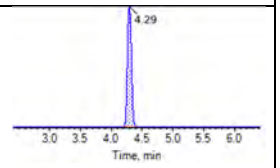
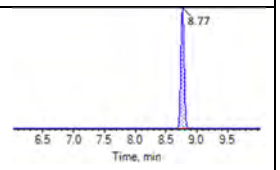
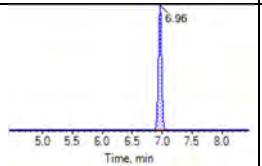
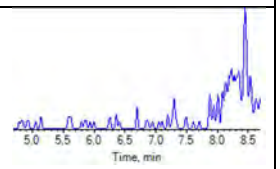
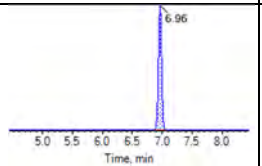
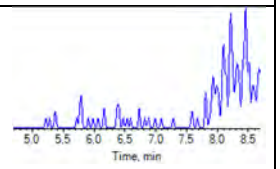
PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1862000	N/A	N/A	N/A	1076.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1366000	N/A	N/A	N/A	1110.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 0.75		

Miscellaneous

Prep Logbook

The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS

Batch ID: 1714400 **Verified by:** _____
Analyst: Grace Cappelmann
Method: EPA 537 Modified

Lab SOP: GL-OA-E-076 REV# 3
Instrument: LCMSMS Manual Instrument

Sample ID	Prep Date	Initial Wt (g)	Final Wt (g)	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1203908641 MB	31-OCT-2017 12:00:00	285.48	33.68	251.8	5	0.01986
1203908642 LCS	31-OCT-2017 12:00:00	284.95	33.58	251.37	5	0.01989
436081001 - 2	31-OCT-2017 12:00:00	83.41	33.39	50.02	5	0.09996
1203908643 - 2 MS (436081001)	31-OCT-2017 12:00:00	84.19	33.48	50.71	5	0.0986
1203908645 - 2 MSD (436081001)	31-OCT-2017 12:00:00	84.07	33.45	50.62	5	0.09878
436081002 - 2	31-OCT-2017 12:00:00	83.28	33.35	49.93	5	0.10014
436081003 - 2	31-OCT-2017 12:00:00	84.2	33.5	50.7	5	0.09862
436488001	31-OCT-2017 12:00:00	298.64	34.22	264.42	5	0.01891
1203908644 MS (436488001)	31-OCT-2017 12:00:00	300.5	34.17	266.33	5	0.01877
1203908646 MSD (436488001)	31-OCT-2017 12:00:00	308.95	34.29	274.66	5	0.0182
436488002	31-OCT-2017 12:00:00	313.23	34.16	279.07	5	0.01792
436488003	31-OCT-2017 12:00:00	315.74	34.18	281.56	5	0.01776
436488004	31-OCT-2017 12:00:00	305.97	34.24	271.73	5	0.0184
436488005	31-OCT-2017 12:00:00	310.65	33.98	276.67	5	0.01807
436488006	31-OCT-2017 12:00:00	301.89	34.29	267.6	5	0.01868
436488007	31-OCT-2017 12:00:00	309.86	34.05	275.81	5	0.01813
436518001	31-OCT-2017 12:00:00	299.98	34.19	265.79	5	0.01881
436518002	31-OCT-2017 12:00:00	221.04	33.52	187.52	5	0.02666
436518003	31-OCT-2017 12:00:00	303.42	34.29	269.13	5	0.01858
436518004	31-OCT-2017 12:00:00	306.81	34.3	272.51	5	0.01835
436518005	31-OCT-2017 12:00:00	301.21	34.06	267.15	5	0.01872
436518006	31-OCT-2017 12:00:00	303.45	34.19	269.26	5	0.01857

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1203908642	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MS	1203908643	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MS	1203908644	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MSD	1203908645	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MSD	1203908646	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
RGNT	All	Water LC/MS Optima	2596326.16	250	mL
SURR	All	MPFAC-24ES 10 ug/L SURR	IPF171027-03	.125	mL
REGNT	All	Methanol HPLC Optima	2585244	4	mL

Comments:

Strata lot #: S322-0018
Envi-Carb lot #: 8632901

Samples 436081001 (and MS/MSD), 436081002 and 436081003 were diluted to 5x. Samples 436488001 (and MS/MSD), 436488004, 436488006, 436518001, 436518003 and 436518004 were filtered due to sediment. The liquid was decanted off sample 436518002 and it was filtered.

Prep Logbook

Batch ID: 1714400 **Verified by:** _____
Analyst: Grace Cappelmann
Method: EPA 537 Modified

Lab SOP: GL-OA-E-076 REV# 3
Instrument: LCMSMS Manual Instrument

Sample ID	Prep Date	Initial Wt (g)	Final Wt (g)	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)	
REGNT All	Water LC/MS Optima			2596326.16	1	mL	
REGNT All	0.1% Ammonia in Methanol			2597946	4	mL	
REGNT All	Acetate Buffer, pH 4			2613490	4	mL	

JISB
11/06/2017

GEL ORGANIC RUN LOG

INSTRUMENT ID: lcmsms6

Date:10/31/17
Extr. Injection Volume: 25uL
Sequence Number: 103117
Initial Calibration Date: 10/31/2017

Method: EPA 537 MOD/TABLE B-15
Int. Std. IPF171027-03 & IPF171027-06
Mobile Phase Lot#: 2612992 MeOH: 2595995

SOP: GL-OA-E-076Rev.2

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag	REFMAT
PFC103117001.wiff	PFCIBLK01	JLS	10/31/2017 16:13			1		USE	B	
PFC103117002.wiff	PFCIBLK01	JLS	10/31/2017 16:34			1		USE	B	
PFC103117003.wiff	WPFICAL-01	JLS	10/31/2017 16:55			1		USE	I	WPF171018-01
PFC103117004.wiff	WPFICAL-02	JLS	10/31/2017 17:17			1		USE	I	WPF171018-02
PFC103117005.wiff	WPFICAL-03	JLS	10/31/2017 17:38			1		USE	I	WPF171018-03
PFC103117006.wiff	WPFICAL-04	JLS	10/31/2017 18:00			1		USE	I	WPF171018-04
PFC103117007.wiff	WPFICAL-05	JLS	10/31/2017 18:21			1		USE	I	WPF171018-05
PFC103117008.wiff	WPFICAL-06	JLS	10/31/2017 18:42			1		USE	I	WPF171018-06
PFC103117009.wiff	WPFICAL-07	JLS	10/31/2017 19:04			1		USE	I	WPF171018-07
PFC103117010.wiff	WPFISC	JLS	10/31/2017 19:25			1		USE	C	WPF171018-08
PFC103117011.wiff	WPFISC	JLS	10/31/2017 19:47			1		USE	C	WPF171018-11
PFC103117012.wiff	WPFICV	JLS	10/31/2017 20:08			1		USE	C	WPF171018-09
PFC103117013.wiff	Technical PFOA	JLS	10/31/2017 20:29			1		USE	L	
PFC103117014.wiff	Carry Over Std	JLS	10/31/2017 20:51			1		USE	L	
PFC103117015.wiff	PFCIBLK02	JLS	10/31/2017 21:12			1		USE	B	
PFC103117016.wiff	1203907522	JLS	10/31/2017 21:34	1714023	436205	1	LQAO	USE	L	
PFC103117017.wiff	1203907523	JLS	10/31/2017 21:55	1714023	436205	1	LQAO	USE	L	
PFC103117018.wiff	436205001	JLS	10/31/2017 22:16	1714023	436205	100	LQAO	DUSE	L	
PFC103117019.wiff	1203907526	JLS	10/31/2017 22:38	1714023	436205	100	LQAO	DUSE	L	
PFC103117020.wiff	1203907529	JLS	10/31/2017 22:59	1714023	436205	100	LQAO	DUSE	L	
PFC103117021.wiff	1203907529	JLS	10/31/2017 23:21	1714023	436205	100	LQAO	DUSE	L	
PFC103117022.wiff	436205002	JLS	10/31/2017 23:42	1714023	436205	100	LQAO	DUSE	L	
PFC103117023.wiff	1203907527	JLS	11/1/2017 00:03	1714023	436205	100	LQAO	DUSE	L	
PFC103117024.wiff	1203907530	JLS	11/1/2017 00:25	1714023	436205	100	LQAO	DUSE	L	
PFC103117025.wiff	1203907530	JLS	11/1/2017 00:46	1714023	436205	100	LQAO	DUSE	L	
PFC103117026.wiff	WPFCCV	JLS	11/1/2017 01:08			1		USE	C	
PFC103117027.wiff	PFCIBLK03	JLS	11/1/2017 01:29			1		USE	B	
PFC103117028.wiff	436205003	JLS	11/1/2017 01:50	1714023	436205	100	LQAO	DUSE	L	
PFC103117029.wiff	1203907525	JLS	11/1/2017 02:12	1714023	436205	100	LQAO	DUSE	L	
PFC103117030.wiff	1203907528	JLS	11/1/2017 02:33	1714023	436205	100	LQAO	DUSE	L	
PFC103117031.wiff	1203907528	JLS	11/1/2017 02:55	1714023	436205	100	LQAO	DUSE	L	
PFC103117032.wiff	BLANK	JLS	11/1/2017 03:16			1		USE	C	
PFC103117033.wiff	BLANK	JLS	11/1/2017 03:37			1		USE	B	

PFC103117034.wiff	436205001	JLS	11/1/2017 03:59	1714023	436205	1000	LQAO	USE	L	
PFC103117035.wiff	1203907526	JLS	11/1/2017 04:20	1714023	436205	1000	LQAO	USE	L	
PFC103117036.wiff	1203907529	JLS	11/1/2017 04:41	1714023	436205	1000	LQAO	USE	L	
PFC103117037.wiff	436205002	JLS	11/1/2017 05:03	1714023	436205	1000	LQAO	USE	L	
PFC103117038.wiff	1203907527	JLS	11/1/2017 05:24	1714023	436205	1000	LQAO	USE	L	
PFC103117039.wiff	1203907530	JLS	11/1/2017 05:46	1714023	436205	1000	LQAO	USE	L	
PFC103117040.wiff	WPFCCV	JLS	11/1/2017 06:07			1		USE	C	WPF171018-09
PFC103117041.wiff	PFCIBLK04	JLS	11/1/2017 06:28			1		USE	B	
PFC103117042.wiff	436205003	JLS	11/1/2017 06:50	1714023	436205	1000	LQAO	USE	L	
PFC103117043.wiff	1203907525	JLS	11/1/2017 07:11	1714023	436205	1000	LQAO	USE	L	
PFC103117044.wiff	1203907528	JLS	11/1/2017 07:33	1714023	436205	1000	LQAO	USE	L	
PFC103117045.wiff	1203906756	JLS	11/1/2017 07:54	1713733	Various	1		USE	S	
PFC103117046.wiff	1203906757	JLS	11/1/2017 08:15	1713733	Various	1		USE	S	
PFC103117047.wiff	435984002	JLS	11/1/2017 08:37	1713733	2017LOD_LCMPFC_S	1		USE	S	
PFC103117048.wiff	435984003	JLS	11/1/2017 08:58	1713733	2017LOD_LCMPFC_S	1		USE	S	
PFC103117049.wiff	435706001	JLS	11/1/2017 09:19	1713733	435706	1	CFPA	USE	S	
PFC103117050.wiff	435706002	JLS	11/1/2017 09:41	1713733	435706	1	CFPA	USE	S	
PFC103117051.wiff	435706003	JLS	11/1/2017 10:02	1713733	435706	1	CFPA	USE	S	
PFC103117052.wiff	WPFCCV	JLS	11/1/2017 10:24			1		USE	C	WPF171018-09
PFC103117053.wiff	PFCIBLK07	JLS	11/1/2017 10:45			1		USE	B	
PFC103117054.wiff	435706004	JLS	11/1/2017 11:06	1713733	435706	1	CFPA	USE	S	
PFC103117055.wiff	1203906758	JLS	11/1/2017 11:28	1713733	435706	1	CFPA	USE	S	
PFC103117056.wiff	1203906759	JLS	11/1/2017 11:49	1713733	435706	1	CFPA	USE	S	
PFC103117057.wiff	436205001	JLS	11/1/2017 12:11	1714023	436205	1000	LQAO	USE	L	
PFC103117058.wiff	436205002	JLS	11/1/2017 12:32	1714023	436205	1000	LQAO	USE	L	
PFC103117059.wiff	436205003	JLS	11/1/2017 12:53	1714023	436205	1000	LQAO	USE	L	
PFC103117060.wiff	1203907529	JLS	11/1/2017 13:15	1714023	436205	1000	LQAO	USE	L	
PFC103117061.wiff	1203907530	JLS	11/1/2017 13:36	1714023	436205	1000	LQAO	USE	L	
PFC103117062.wiff	1203907528	JLS	11/1/2017 13:57	1714023	436205	1000	LQAO	USE	L	
PFC103117063.wiff	WPFCCV	JLS	11/1/2017 14:19			1		USE	C	WPF171018-09
PFC103117064.wiff	PFCIBLK08	JLS	11/1/2017 14:40			1		USE	B	
PFC103117065.wiff	1203907530	JLS	11/1/2017 15:04	1714023	436205	1000	LQAO	USE	L	
PFC103117066.wiff	1203907528	JLS	11/1/2017 15:25	1714023	436205	1000	LQAO	USE	L	
PFC103117067.wiff	436205002	JLS	11/1/2017 15:47	1714023	436205	5000	LQAO	USE	L	
PFC103117068.wiff	1203907527	JLS	11/1/2017 16:08	1714023	436205	5000	LQAO	USE	L	
PFC103117069.wiff	1203907530	JLS	11/1/2017 16:29	1714023	436205	5000	LQAO	USE	L	
PFC103117070.wiff	1203907528	JLS	11/1/2017 16:51	1714023	436205	5000	LQAO	USE	L	
PFC103117071.wiff	1203907525	JLS	11/1/2017 17:12	1714023	436205	5000	LQAO	USE	L	
PFC103117072.wiff	436205003	JLS	11/1/2017 17:34	1714023	436205	5000	LQAO	USE	L	
PFC103117073.wiff	WPFCCV	JLS	11/1/2017 17:55			1		USE	C	WPF171018-09
PFC103117074.wiff	PFCIBLK09	JLS	11/1/2017 18:16			1		USE	B	

PFC103117075.wiff	436205001	JLS	11/1/2017 18:38	1714023	436205	100	LQAO	USE	L	
PFC103117076.wiff	1203907526	JLS	11/1/2017 19:37	1714023	436205	100	LQAO	USE	L	
PFC103117077.wiff	1203907529	JLS	11/1/2017 19:58	1714023	436205	100	LQAO	USE	L	
PFC103117078.wiff	436205002	JLS	11/1/2017 20:20	1714023	436205	100	LQAO	USE	L	
PFC103117079.wiff	1203907527	JLS	11/1/2017 20:41	1714023	436205	100	LQAO	USE	L	
PFC103117080.wiff	1203907530	JLS	11/1/2017 21:02	1714023	436205	100	LQAO	USE	L	
PFC103117081.wiff	436205003	JLS	11/1/2017 21:24	1714023	436205	100	LQAO	USE	L	
PFC103117082.wiff	1203907525	JLS	11/1/2017 21:45	1714023	436205	100	LQAO	USE	L	
PFC103117083.wiff	1203907528	JLS	11/1/2017 22:07	1714023	436205	100	LQAO	USE	L	
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PFC103117085.wiff	Blank	JLS	11/1/2017 22:49			1		USE	B	
PFC103117086.wiff	WPFCCV	JLS	11/1/2017 23:11			1		USE	C	WPF171018-09
PFC103117087.wiff	PFCIBLK10	JLS	11/1/2017 23:32			1		USE	B	
PFC103117088.wiff	1203908641	JLS	11/1/2017 23:54	1714407	Various	1	Various	USE	L	
PFC103117089.wiff	1203908642	JLS	11/2/2017 00:15	1714407	Various	1	Various	USE	L	
PFC103117090.wiff	436081001	JLS	11/2/2017 00:36	1714407	436081	100	TNAQ	USE	L	
PFC103117091.wiff	1203908643	JLS	11/2/2017 00:58	1714407	436081	100	TNAQ	USE	L	
PFC103117092.wiff	1203908645	JLS	11/2/2017 01:19	1714407	436081	100	TNAQ	USE	L	
PFC103117093.wiff	436081002	JLS	11/2/2017 01:41	1714407	436081	100	TNAQ	USE	L	
PFC103117094.wiff	436081003	JLS	11/2/2017 02:02	1714407	436081	100	TNAQ	USE	L	
PFC103117095.wiff	436488001	JLS	11/2/2017 02:23	1714407	DRM102617	1	ESAF	USE	L	
PFC103117096.wiff	1203908644	JLS	11/2/2017 02:45	1714407	DRM102617	1	ESAF	USE	L	
PFC103117097.wiff	1203908646	JLS	11/2/2017 03:06	1714407	DRM102617	1	ESAF	USE	L	
PFC103117098.wiff	WPFCCV	JLS	11/2/2017 03:28			1		USE	C	WPF171018-09
PFC103117099.wiff	PFCIBLK11	JLS	11/2/2017 03:49			1		USE	B	
PFC103117100.wiff	436488002	JLS	11/2/2017 04:10	1714407	DRM102617	1	ESAF	USE	L	
PFC103117101.wiff	436488003	JLS	11/2/2017 04:32	1714407	DRM102617	1	ESAF	USE	L	
PFC103117102.wiff	436488004	JLS	11/2/2017 04:53	1714407	DRM102617	1	ESAF	USE	L	
PFC103117103.wiff	436488005	JLS	11/2/2017 05:15	1714407	DRM102617	1	ESAF	USE	L	
PFC103117104.wiff	436488006	JLS	11/2/2017 05:36	1714407	DRM102617	1	ESAF	USE	L	
PFC103117105.wiff	436488007	JLS	11/2/2017 05:57	1714407	DRM102617	1	ESAF	USE	L	
PFC103117106.wiff	436518001	JLS	11/2/2017 06:19	1714407	DRM102617	1	ESAF	USE	L	
PFC103117107.wiff	436518002	JLS	11/2/2017 06:40	1714407	DRM102617	1	ESAF	USE	L	
PFC103117108.wiff	436518003	JLS	11/2/2017 07:01	1714407	DRM102617	1	ESAF	USE	L	
PFC103117109.wiff	436518004	JLS	11/2/2017 07:23	1714407	DRM102617	1	ESAF	USE	L	
PFC103117110.wiff	WPFCCV	JLS	11/2/2017 07:44			1		USE	C	WPF171018-09
PFC103117111.wiff	PFCIBLK12	JLS	11/2/2017 08:06			1		USE	B	
PFC103117112.wiff	436518005	JLS	11/2/2017 08:27	1714407	DRM102617	1	ESAF	USE	L	
PFC103117113.wiff	436518006	JLS	11/2/2017 08:48	1714407	DRM102617	1	ESAF	USE	L	
PFC103117114.wiff	436081001	JLS	11/2/2017 09:10	1714407	436081	1	TNAQ	USE	L	
PFC103117115.wiff	1203908643	JLS	11/2/2017 09:31	1714407	436081	1	TNAQ	USE	L	

PFC103117116.wiff	1203908645	JLS	11/2/2017 09:53	1714407	436081	1	TNAQ	USE	L	
PFC103117117.wiff	436081002	JLS	11/2/2017 10:14	1714407	436081	1	TNAQ	USE	L	
PFC103117118.wiff	436081003	JLS	11/2/2017 10:35	1714407	436081	1	TNAQ	USE	L	
PFC103117119.wiff	Blank	JLS	11/2/2017 10:57			1		USE	B	
PFC103117120.wiff	Blank	JLS	11/2/2017 11:18			1		USE	B	
PFC103117121.wiff	WPFCCV	JLS	11/2/2017 11:39			1		USE	C	WPF171018-09
PFC103117122.wiff	PFCIBLK13	JLS	11/2/2017 12:01			1		USE	B	
PFC103117123.wiff	436081001	JLS	11/2/2017 12:22	1714407	436081	20	TNAQ	USE	L	
PFC103117124.wiff	1203908643	JLS	11/2/2017 12:44	1714407	436081	20	TNAQ	USE	L	
PFC103117125.wiff	1203908645	JLS	11/2/2017 13:05	1714407	436081	20	TNAQ	USE	L	
PFC103117126.wiff	436081002	JLS	11/2/2017 13:26	1714407	436081	20	TNAQ	USE	L	
PFC103117127.wiff	436081003	JLS	11/2/2017 13:48	1714407	436081	20	TNAQ	USE	L	
PFC103117128.wiff	436488002	JLS	11/2/2017 14:09	1714407	DRM102617	10	ESAF	USE	L	
PFC103117129.wiff	436488003	JLS	11/2/2017 14:31	1714407	DRM102617	10	ESAF	USE	L	
PFC103117130.wiff	436488004	JLS	11/2/2017 14:52	1714407	DRM102617	5	ESAF	USE	L	
PFC103117131.wiff	436518001	JLS	11/2/2017 15:13	1714407	DRM102617	10	ESAF	USE	L	
PFC103117132.wiff	436518002	JLS	11/2/2017 15:35	1714407	DRM102617	100	ESAF	USE	L	
PFC103117133.wiff	WPFCCV	JLS	11/2/2017 15:56			1		USE	C	WPF171018-09
PFC103117134.wiff	PFCIBLK14	JLS	11/2/2017 16:18			1		USE	B	
PFC103117135.wiff	436518003	JLS	11/2/2017 16:39	1714407	DRM102617	5	ESAF	USE	L	
PFC103117136.wiff	436518003	JLS	11/2/2017 17:00	1714407	DRM102617	1	ESAF	USE	L	
PFC103117137.wiff	Blank	JLS	11/2/2017 17:22			1		USE	B	
PFC103117138.wiff	436205001	JLS	11/2/2017 17:43	1714023	436205	5000	LQAO	USE	L	
PFC103117139.wiff	1203907526	JLS	11/2/2017 18:05	1714023	436205	5000	LQAO	USE	L	
PFC103117140.wiff	1203907529	JLS	11/2/2017 18:26	1714023	436205	5000	LQAO	USE	L	
PFC103117141.wiff	436205001	JLS	11/2/2017 18:47	1714023	436205	100	LQAO	USE	L	
PFC103117142.wiff	1203907526	JLS	11/2/2017 19:09	1714023	436205	100	LQAO	USE	L	
PFC103117143.wiff	1203907529	JLS	11/2/2017 19:30	1714023	436205	100	LQAO	USE	L	
PFC103117144.wiff	WPFCCV	JLS	11/2/2017 19:52			1		USE	C	WPF171018-09
PFC103117145.wiff	PFCIBLK15	JLS	11/2/2017 20:13			1		USE	B	
PFC103117146.wiff	1203910649	JLS	11/2/2017 20:34	1715232	436646	1	ARMY	USE	L	
PFC103117147.wiff	1203910650	JLS	11/2/2017 20:56	1715232	436646	1	ARMY	USE	L	
PFC103117148.wiff	436646001	JLS	11/2/2017 21:17	1715232	436646	1	ARMY	USE	L	
PFC103117149.wiff	1203910651	JLS	11/2/2017 21:39	1715232	436646	1	ARMY	USE	L	
PFC103117150.wiff	1203910652	JLS	11/2/2017 22:00	1715232	436646	1	ARMY	USE	L	
PFC103117151.wiff	1203911346	JLS	11/2/2017 22:21	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117152.wiff	Filter Paper MB	JLS	11/2/2017 22:43		VARIOUS	1	VARIOUS	DUSE	S	
PFC103117153.wiff	1203911347	JLS	11/2/2017 23:04	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117154.wiff	1203911348	JLS	11/2/2017 23:25	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117155.wiff	435984001	JLS	11/2/2017 23:47	1715548	2017LOD_LCMPFC_S	1	QCQA	DUSE	S	
PFC103117156.wiff	436427004	JLS	11/3/2017 00:08	1715548	436427	1	H2GO	DUSE	S	

PFC103117157.wiff	WPFCCV	JLS	11/3/2017 00:30			1		USE	C	WPF171018-09
PFC103117158.wiff	PFCIBLK16	JLS	11/3/2017 00:51			1		USE	B	
PFC103117159.wiff	Rinse	JLS	11/3/2017 09:03			1		DUSE	B	
PFC103117160.wiff	PFCIBLK17	JLS	11/3/2017 09:25			1		USE	B	
PFC103117161.wiff	WPFDISC	JLS	11/3/2017 09:46			1		USE	C	WPF171018-08
PFC103117162.wiff	PFCIBLK18	JLS	11/3/2017 10:08			1		USE	B	
PFC103117163.wiff	1203911346	JLS	11/3/2017 10:29	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117164.wiff	Filter Paper MB	JLS	11/3/2017 10:50		VARIOUS	1	VARIOUS	USE	S	
PFC103117165.wiff	1203911347	JLS	11/3/2017 11:12	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117166.wiff	1203911348	JLS	11/3/2017 11:33	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117167.wiff	435984001	JLS	11/3/2017 11:55	1715548	2017LOD_LCMPFC_S	1	QCQA	USE	S	
PFC103117168.wiff	436427004	JLS	11/3/2017 12:16	1715548	436427	1	H2GO	USE	S	
PFC103117169.wiff	WPFCCV	JLS	11/3/2017 12:37			1		USE	C	WPF171018-09
PFC103117170.wiff	PFCIBLK19	JLS	11/3/2017 12:59			1		USE	B	
PFC103117171.wiff	1203905293	JLS	11/3/2017 13:20	1713140		1	VARIOUS	USE	L	
PFC103117172.wiff	1203905294	JLS	11/3/2017 13:42	1713140		1	VARIOUS	USE	L	
PFC103117173.wiff	1203905295	JLS	11/3/2017 14:03	1713140		1	VARIOUS	USE	L	
PFC103117174.wiff	435706005	JLS	11/3/2017 14:24	1713140	435706	1	CFPA	USE	L	
PFC103117175.wiff	435983002	JLS	11/3/2017 14:46	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117176.wiff	435983003	JLS	11/3/2017 15:07	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117177.wiff	436081001	JLS	11/3/2017 15:29	1713140	436081	500	TNAQ	DUSE	L	
PFC103117178.wiff	436081002	JLS	11/3/2017 15:50	1713140	436081	500	TNAQ	DUSE	L	
PFC103117179.wiff	436081003	JLS	11/3/2017 16:11	1713140	436081	500	TNAQ	DUSE	L	
PFC103117180.wiff	436081005	JLS	11/3/2017 16:33	1713140	436081	1	TNAQ	USE	L	
PFC103117181.wiff	WPFCCV	JLS	11/3/2017 16:54			1		USE	C	WPF171018-09
PFC103117182.wiff	PFCIBLK20	JLS	11/3/2017 17:16			1		USE	B	
PFC103117183.wiff	436081006	JLS	11/3/2017 17:37	1713140	436081	1	TNAQ	USE	L	
PFC103117184.wiff	436081001	JLS	11/3/2017 17:58	1713140	436081	100	TNAQ	DUSE	L	
PFC103117185.wiff	436081002	JLS	11/3/2017 18:20	1713140	436081	100	TNAQ	DUSE	L	
PFC103117186.wiff	436081003	JLS	11/3/2017 18:41	1713140	436081	100	TNAQ	DUSE	L	
PFC103117187.wiff	436081001	JLS	11/3/2017 19:03	1713140	436081	1	TNAQ	DUSE	L	
PFC103117188.wiff	436081002	JLS	11/3/2017 19:24	1713140	436081	1	TNAQ	DUSE	L	
PFC103117189.wiff	436081003	JLS	11/3/2017 19:45	1713140	436081	1	TNAQ	DUSE	L	
PFC103117190.wiff	BLANK	JLS	11/3/2017 20:07			1		USE	B	
PFC103117191.wiff	BLANK	JLS	11/3/2017 20:28			1		USE	B	
PFC103117192.wiff	436518002	JLS	11/3/2017 20:50	1714407	DRM102617	10	ESAF	USE	L	
PFC103117193.wiff	BLANK	JLS	11/3/2017 21:11			1		USE	B	
PFC103117194.wiff	WPFCCV	JLS	11/3/2017 21:32			1		USE	C	WPF171018-09
PFC103117195.wiff	PFCIBLK21	JLS	11/3/2017 21:54			1		USE	B	
PFC103117196.wiff	436205001	JLS	11/3/2017 22:15	1714023	436205	10000	LQAO	USE	L	
PFC103117197.wiff	1203907526	JLS	11/3/2017 22:36	1714023	436205	10000	LQAO	USE	L	

PFC103117198.wiff	1203907529	JLS	11/3/2017 22:58	1714023	436205	10000	LQAO	USE	L	
PFC103117199.wiff	436205002	JLS	11/3/2017 23:19	1714023	436205	10000	LQAO	USE	L	
PFC103117200.wiff	1203907527	JLS	11/3/2017 23:41	1714023	436205	10000	LQAO	USE	L	
PFC103117201.wiff	1203907530	JLS	11/4/2017 00:02	1714023	436205	10000	LQAO	USE	L	
PFC103117202.wiff	436205003	JLS	11/4/2017 00:23	1714023	436205	10000	LQAO	USE	L	
PFC103117203.wiff	1203907525	JLS	11/4/2017 00:45	1714023	436205	10000	LQAO	USE	L	
PFC103117204.wiff	1203907528	JLS	11/4/2017 01:06	1714023	436205	10000	LQAO	USE	L	
PFC103117205.wiff	WPFCCV	JLS	11/4/2017 01:28			1		USE	C	WPF171018-09
PFC103117206.wiff	PFCIBLK22	JLS	11/4/2017 01:49			1		USE	B	

LC-MS/MS Analysis

Case Narrative

LCMSMS-Misc
Technical Case Narrative
EnSafe Inc. (ESAF)
SDG #: 436518

Product: **The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS**
Analytical Method: EPA 537 Modified
Analytical Procedure: GL-OA-E-076 REV# 4
Analytical Batches: 1714407 and 1714400

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
436518001	29MW01_1017
436518002	29MW02_1017
436518003	16MW09_1017
436518004	16MW25_1017
436518005	GW-102717FB
436518006	EBGW102717
1203908641	Method Blank (MB)
1203908642	Laboratory Control Sample (LCS)
1203908644	436488001(16MW06_1017) Matrix Spike (MS)
1203908646	436488001(16MW06_1017) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
The following samples were diluted to bring the over range concentrations within the calibration range. 436518001 (29MW01_1017), 436518002 (29MW02_1017) and 436518003 (16MW09_1017).

Analyte	436518		
	001	002	003
Perfluoroheptanoic acid (PFHpA)	1X	100X	1X
Perfluorohexanoic acid (PFHxA)	1X	100X	1X
Perfluorononanoic acid (PFNA)	1X	10X	1X
Perfluorooctanesulfonate (PFOS)	10X	10X	5X
Perfluorooctanoic acid (PFOA)	1X	10X	1X

Miscellaneous Information

Additional Comments

The following samples were filtered prior to extraction to remove sediment. Additionally, the liquid portion of sample 436518002 was extracted only because approximately 1/4 of the sample appeared to be mud. This sample was decanted and then filtered to remove additional solids. 1203908644 (16MW06_1017MS), 1203908646 (16MW06_1017MSD), 436518001 (29MW01_1017), 436518002 (29MW02_1017), 436518003 (16MW09_1017) and 436518004 (16MW25_1017).

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ESAF001 EnSafe Inc.

Client SDG: 436518 GEL Work Order: 436518

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the MS or MSD is outside of specified acceptance criteria.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Jannie Shaw - Busby **Name: Jannie Shaw-Busby**

Date: 10 NOV 2017 **Title: Senior Chemist**

Sample Data Summary

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518001**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-01**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW01_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 06:19**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**265.79 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117106.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.0025	ug/L	0.00124	0.0025	0.00376
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.0025	ug/L	0.00124	0.0025	0.00376
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00637	ug/L	0.000621	0.00126	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00126	ug/L	0.000734	0.00126	0.00188
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00126	ug/L	0.000621	0.00126	0.00188
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00633	ug/L	0.000621	0.00126	0.00188
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.031	ug/L	0.000621	0.00115	0.00171
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00938	ug/L	0.000621	0.00126	0.00188
375-95-1	Perfluorononanoic acid (PFNA)		0.00238	ug/L	0.000621	0.00124	0.00188
335-67-1	Perfluorooctanoic acid (PFOA)		0.0223	ug/L	0.000658	0.00124	0.00188
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00124	ug/L	0.000621	0.00124	0.00188
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00124	ug/L	0.000621	0.00124	0.00188
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00124	ug/L	0.000621	0.00124	0.00188

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518001**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-01**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW01_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 15:13**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**265.79 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117131.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.112	ug/L	0.00621	0.0124	0.0188

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 06:40**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117107.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00355	ug/L	0.00176	0.00355	0.00533
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00355	ug/L	0.00176	0.00355	0.00533
375-73-5	Perfluorobutanesulfonate (PFBS)		0.005	ug/L	0.00088	0.00179	0.00237
335-76-2	Perfluorodecanoic acid (PFDA)		0.00585	ug/L	0.00104	0.00179	0.00267
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00179	ug/L	0.00088	0.00179	0.00267
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0409	ug/L	0.00088	0.00163	0.00243
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00176	ug/L	0.00088	0.00176	0.00267
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00176	ug/L	0.00088	0.00176	0.00267
2058-94-8	Perfluoroundecanoic acid (PFUdA)	J	0.00206	ug/L	0.00088	0.00176	0.00267

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**100**
Run Date:	**11/02/2017 15:35**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117132.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.575	ug/L	0.088	0.179	0.267
307-24-4	Perfluorohexanoic acid (PFHxA)		1.87	ug/L	0.088	0.179	0.267

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017DL2**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/03/2017 20:50**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117192.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
375-95-1	Perfluorononanoic acid (PFNA)		0.069	ug/L	0.0088	0.0176	0.0267
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0825	ug/L	0.0088	0.0176	0.0267
335-67-1	Perfluorooctanoic acid (PFOA)		0.421	ug/L	0.00933	0.0176	0.0267

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 08:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518003**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-09**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW09_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**5**
Run Date:	**11/02/2017 16:39**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.13 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117135.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0591	ug/L	0.00307	0.00613	0.00929

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 08:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518003**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-09**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW09_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 17:00**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.13 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117136.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00247	ug/L	0.00123	0.00247	0.00372
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00247	ug/L	0.00123	0.00247	0.00372
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00301	ug/L	0.000613	0.00124	0.00165
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00124	ug/L	0.000725	0.00124	0.00186
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00603	ug/L	0.000613	0.00124	0.00186
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0254	ug/L	0.000613	0.00113	0.00169
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0094	ug/L	0.000613	0.00124	0.00186
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00153	ug/L	0.000613	0.00123	0.00186
335-67-1	Perfluorooctanoic acid (PFOA)		0.0165	ug/L	0.00065	0.00123	0.00186
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000613	0.00123	0.00186

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 09:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518004**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-25**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW25_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 07:23**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**272.51 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117109.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00244	ug/L	0.00121	0.00244	0.00367
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00244	ug/L	0.00121	0.00244	0.00367
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00123	ug/L	0.000605	0.00123	0.00163
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00123	ug/L	0.000716	0.00123	0.00183
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00112	ug/L	0.000605	0.00112	0.00167
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00121	ug/L	0.000605	0.00121	0.00183
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00121	ug/L	0.000642	0.00121	0.00183
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00121	ug/L	0.000605	0.00121	0.00183

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 12:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518005**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**GW102717FB**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**GW-102717FB**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 08:27**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**267.15 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117112.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00249	ug/L	0.00124	0.00249	0.00374
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00249	ug/L	0.00124	0.00249	0.00374
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00125	ug/L	0.000618	0.00125	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00125	ug/L	0.00073	0.00125	0.00187
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00114	ug/L	0.000618	0.00114	0.0017
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00124	ug/L	0.000618	0.00124	0.00187
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00124	ug/L	0.000655	0.00124	0.00187
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00124	ug/L	0.000618	0.00124	0.00187

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:30**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518006**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**EBGW102717**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**EBGW102717**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 08:48**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.26 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117113.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00247	ug/L	0.00123	0.00247	0.00371
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00247	ug/L	0.00123	0.00247	0.00371
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00124	ug/L	0.000613	0.00124	0.00165
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00124	ug/L	0.000724	0.00124	0.00186
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00113	ug/L	0.000613	0.00113	0.00169
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
1763-23-1	Perfluorooctanesulfonate (PFOS)	J	0.000966	ug/L	0.000613	0.00123	0.00186
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00123	ug/L	0.00065	0.00123	0.00186
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000613	0.00123	0.00186

Quality Control Summary

Quality Control Summary
Spike Recovery Report

SDG Number: 436518
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1714400
Matrix: WATER
Lab Sample ID: 1203908642
Instrument: LCMSMS6
Analysis Date: 11/02/2017 00:15
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
1763-23-1	LCS Perfluorooctanesulfonate (PFOS)	0.0199	0.0	0.0175	88	70-130
2058-94-8	LCS Perfluoroundecanoic acid (PFUdA)	0.0199	0.0	0.0173	87	70-130
2355-31-9	LCS N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0185	93	70-130
2991-50-6	LCS N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0165	83	70-130
307-24-4	LCS Perfluorohexanoic acid (PFHxA)	0.0199	0.0	0.0192	96	70-130
307-55-1	LCS Perfluorododecanoic acid (PFDoA)	0.0199	0.0	0.0207	104	70-130
335-67-1	LCS Perfluorooctanoic acid (PFOA)	0.0199	0.0	0.0173	87	70-130
335-76-2	LCS Perfluorodecanoic acid (PFDA)	0.0199	0.0	0.0172	87	70-130
355-46-4	LCS Perfluorohexanesulfonate (PFHxS)	0.0181	0.0	0.015	82	70-130
375-73-5	LCS Perfluorobutanesulfonate (PFBS)	0.0176	0.0	0.0171	97	70-130
375-85-9	LCS Perfluoroheptanoic acid (PFHpA)	0.0199	0.0	0.0169	85	70-130
375-95-1	LCS Perfluorononanoic acid (PFNA)	0.0199	0.0	0.0195	98	70-130
376-06-7	LCS Perfluorotetradecanoic acid (PFTeDA)	0.0199	0.0	0.0178	89	70-130
72629-94-8	LCS Perfluorotridecanoic acid (PFTrDA)	0.0199	0.0	0.0173	87	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: 436518
Sample Type: Matrix Spike
Client ID: 16MW06_1017MS
Matrix: GROUND WATER
Lab Sample ID: 1203908644
Instrument: LCMSMS6
Analysis Date: 11/02/2017 02:45
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
1763-23-1	MS	Perfluorooctanesulfonate (PFOS)	0.0188	0.0266		0.0466	107	70-130
2058-94-8	MS	Perfluoroundecanoic acid (PFUdA)	0.0188	0.00	U	0.0173	92	70-130
2355-31-9	MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0188	0.000537	U	0.0153	78	70-130
2991-50-6	MS	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0188	0.000479	U	0.0196	102	70-130
307-24-4	MS	Perfluorohexanoic acid (PFHxA)	0.0188	0.00266		0.0217	101	70-130
307-55-1	MS	Perfluorododecanoic acid (PFDoA)	0.0188	0.00	U	0.0185	99	70-130
335-67-1	MS	Perfluorooctanoic acid (PFOA)	0.0188	0.0106		0.0287	97	70-130
335-76-2	MS	Perfluorodecanoic acid (PFDA)	0.0188	0.000295	U	0.0178	93	70-130
355-46-4	MS	Perfluorohexanesulfonate (PFHxS)	0.0171	0.00307		0.0213	107	70-130
375-73-5	MS	Perfluorobutanesulfonate (PFBS)	0.0166	0.000801	J	0.0166	95	70-130
375-85-9	MS	Perfluoroheptanoic acid (PFHpA)	0.0188	0.0025		0.0205	96	70-130
375-95-1	MS	Perfluorononanoic acid (PFNA)	0.0188	0.00112	J	0.0191	96	70-130
376-06-7	MS	Perfluorotetradecanoic acid (PFTeDA)	0.0188	0.00	U	0.0169	90	70-130
72629-94-8	MS	Perfluorotridecanoic acid (PFTrDA)	0.0188	0.00	U	0.0168	89	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: 436518
Sample Type: Matrix Spike Duplicate
Client ID: 16MW06_1017MSD
Matrix: GROUND WATER
Lab Sample ID: 1203908646
Instrument: LCMSMS6
Analysis Date: 11/02/2017 03:06
Dilution: 1
Analyst: JLS
Prep Batch ID: 1714400
Batch ID: 1714407

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1763-23-1	MSDPerfluorooctanesulfonate (PFOS)	0.0182	0.0266		0.0458	106	70-130	2	0-30
2058-94-8	MSDPerfluoroundecanoic acid (PFUdA)	0.0182	0.00	U	0.0195	107	70-130	12	0-30
2355-31-9	MSDN-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0182	0.000537	U	0.0151	80	70-130	1	0-30
2991-50-6	MSDN-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0182	0.000479	U	0.0156	83	70-130	23	0-30
307-24-4	MSDPerfluorohexanoic acid (PFHxA)	0.0182	0.00266		0.0194	92	70-130	11	0-30
307-55-1	MSDPerfluorododecanoic acid (PFDoA)	0.0182	0.00	U	0.0202	111	70-130	9	0-30
335-67-1	MSDPerfluorooctanoic acid (PFOA)	0.0182	0.0106		0.0251	80	70-130	14	0-30
335-76-2	MSDPerfluorodecanoic acid (PFDA)	0.0182	0.000295	U	0.0171	93	70-130	4	0-30
355-46-4	MSDPerfluorohexanesulfonate (PFHxS)	0.0166	0.00307		0.0172	85	70-130	21	0-30
375-73-5	MSDPerfluorobutanesulfonate (PFBS)	0.0161	0.000801	J	0.0151	89	70-130	9	0-30
375-85-9	MSDPerfluoroheptanoic acid (PFHpA)	0.0182	0.0025		0.018	85	70-130	13	0-30
375-95-1	MSDPerfluorononanoic acid (PFNA)	0.0182	0.00112	J	0.0184	95	70-130	4	0-30
376-06-7	MSDPerfluorotetradecanoic acid (PFTeDA)	0.0182	0.00	U	0.0169	93	70-130	0	0-30
72629-94-8	MSDPerfluorotridecanoic acid (PFTrDA)	0.0182	0.00	U	0.0171	94	70-130	2	0-30

Method Blank Summary

SDG Number:	**436518**	**Client:**	**ESAF001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1714400**	**Instrument ID:**	**LCMSMS6**	**Data File:**	**PFC103117088.wiff**
Lab Sample ID:	**1203908641**	**Prep Date:**	**10/31/2017 12:00**	**Analyzed:**	**11/01/17 23:54**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1714400	1203908642	PFC103117089.wiff	11/02/17	0015
04	29MW01_1017	436518001	PFC103117106.wiff	11/02/17	0619
05	29MW02_1017	436518002	PFC103117107.wiff	11/02/17	0640
06	16MW25_1017	436518004	PFC103117109.wiff	11/02/17	0723
07	GW-102717FB	436518005	PFC103117112.wiff	11/02/17	0827
08	EBGW102717	436518006	PFC103117113.wiff	11/02/17	0848
09	29MW01_1017DL	436518001	PFC103117131.wiff	11/02/17	1513
10	29MW02_1017DL	436518002	PFC103117132.wiff	11/02/17	1535
11	16MW09_1017DL	436518003	PFC103117135.wiff	11/02/17	1639
12	16MW09_1017	436518003	PFC103117136.wiff	11/02/17	1700
13	29MW02_1017DL2	436518002	PFC103117192.wiff	11/03/17	2050

Sample Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518001**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-01**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW01_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 06:19**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**265.79 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117106.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.0025	ug/L	0.00124	0.0025	0.00376
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.0025	ug/L	0.00124	0.0025	0.00376
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00637	ug/L	0.000621	0.00126	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00126	ug/L	0.000734	0.00126	0.00188
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00126	ug/L	0.000621	0.00126	0.00188
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00633	ug/L	0.000621	0.00126	0.00188
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.031	ug/L	0.000621	0.00115	0.00171
307-24-4	Perfluorohexanoic acid (PFHxA)		0.00938	ug/L	0.000621	0.00126	0.00188
375-95-1	Perfluorononanoic acid (PFNA)		0.00238	ug/L	0.000621	0.00124	0.00188
335-67-1	Perfluorooctanoic acid (PFOA)		0.0223	ug/L	0.000658	0.00124	0.00188
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00124	ug/L	0.000621	0.00124	0.00188
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00124	ug/L	0.000621	0.00124	0.00188
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00124	ug/L	0.000621	0.00124	0.00188

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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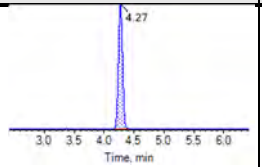
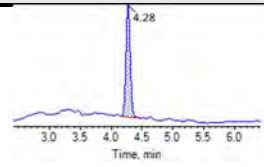
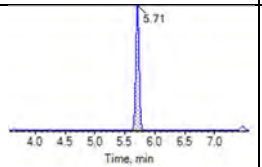
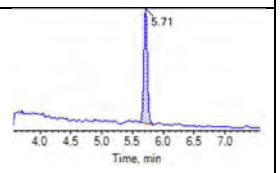
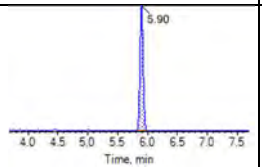
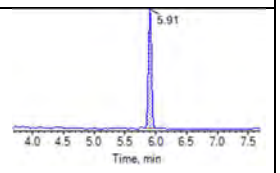
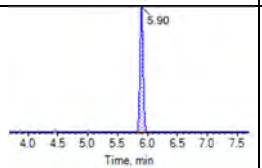
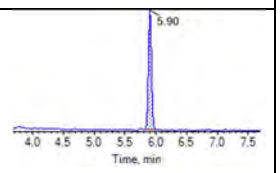
PFC103117106.wiff			
Sample Name	436518001	**Injection Vial**	39
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117106.wiff
Acquisition Date	11/2/2017 06:19:13	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117106.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	305300	13C4_PFBA	138400	N/A	313.1	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	442900	13C5_PFPeA	250900	N/A	410.3	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	567200	13C3_PFBS	169800	N/A	338.9	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	251200	13C3_PFBS	169800	N/A	334.3	N/A	0.44/ 0.45		

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LCMSMS#6

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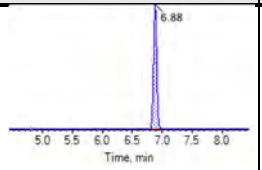
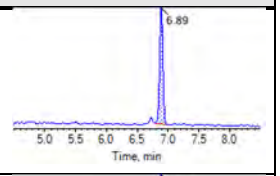
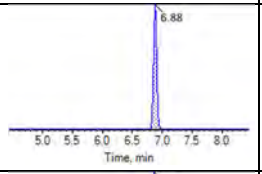
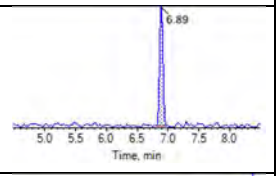
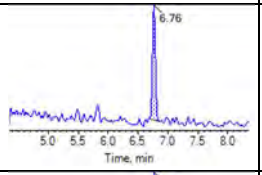
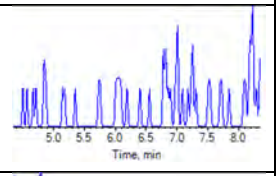
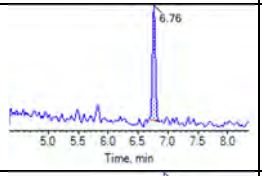
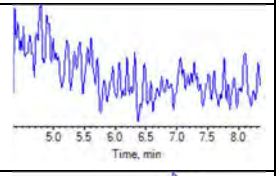
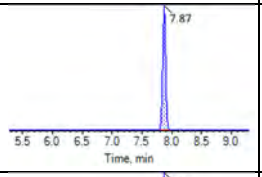
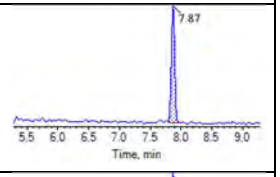
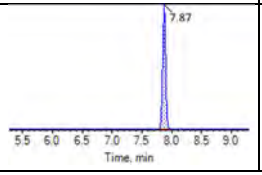
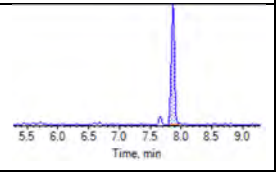
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	560400	13C5_PFHxA	296000	N/A	498.7	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	42270	13C5_PFHxA	296000	N/A	532.1	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	50320	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	50320	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	379500	13C4_PFHpA	269500	N/A	336.7	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	89160	13C4_PFHpA	269500	N/A	302.5	N/A	0.23/ 0.26		

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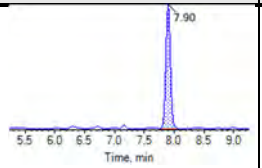
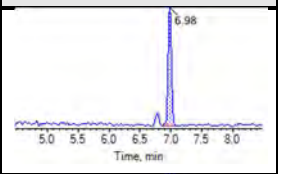
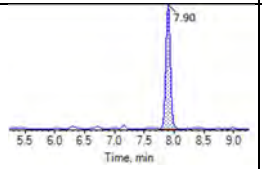
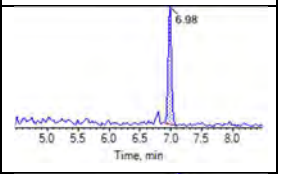
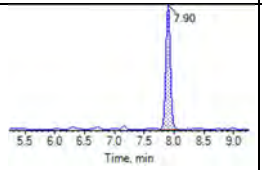
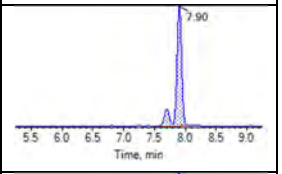
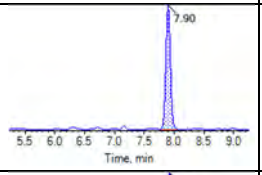
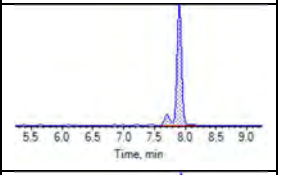
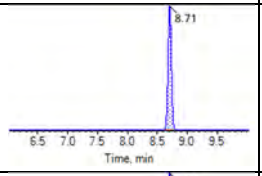
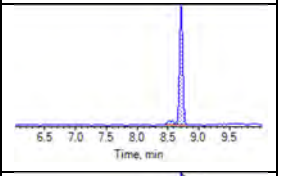
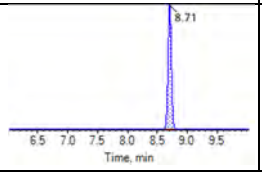
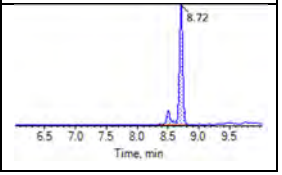
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	185100	13C3_PFHxS	70480	N/A	125.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	75880	13C3_PFHxS	70480	N/A	147.2	N/A	0.41/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	2241000	13C3_PFHxS	70480	N/A	1648.8	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	539600	13C3_PFHxS	70480	N/A	1571.7	N/A	0.24/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	1204000	13C8_PFOA	240900	N/A	1185.0	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	468700	13C8_PFOA	240900	N/A	1236.1	N/A	0.39/ 0.37		

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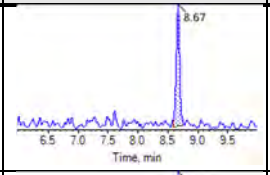
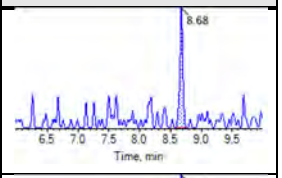
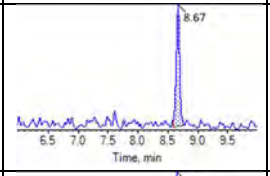
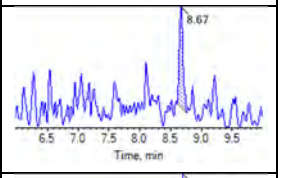
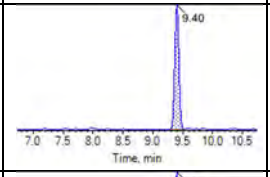
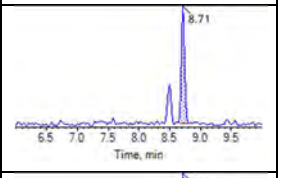
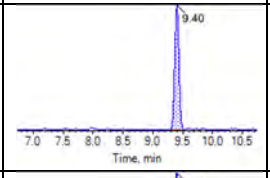
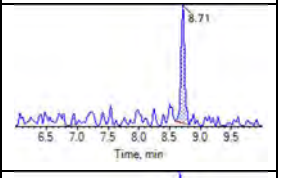
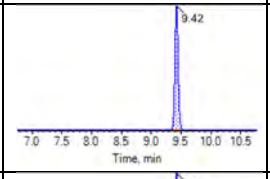
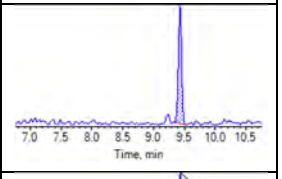
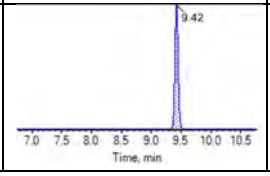
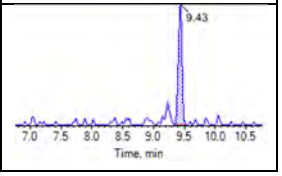
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.68 (8.72)	6498	13C2_6:2 FTS	38560	N/A	32.0	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	8838	13C2_6:2 FTS	38560	N/A	48.4	N/A	1.36/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	92860	13C8_PFOS	57190	N/A	83.3	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	21380	13C8_PFOS	57190	N/A	95.2	N/A	0.23/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	93630	13C9_PFNA	219800	N/A	126.8	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	19640	13C9_PFNA	219800	N/A	110.3	N/A	0.21/ 0.24		

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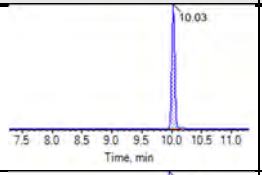
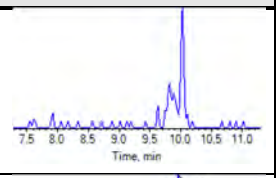
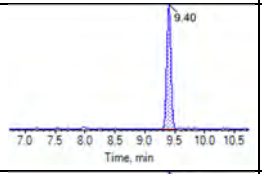
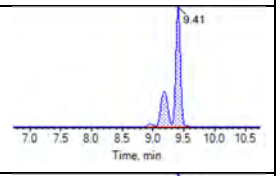
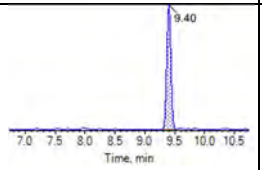
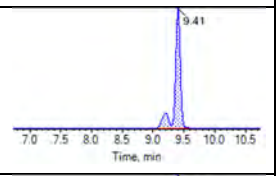
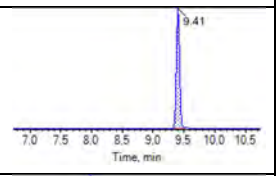
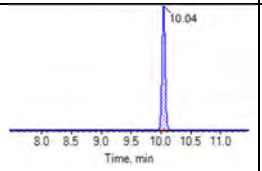
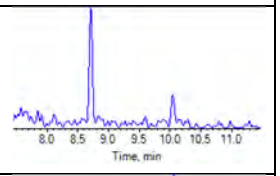
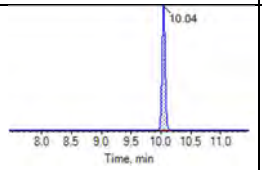
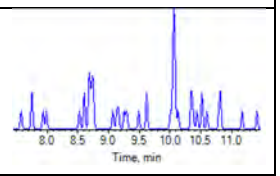
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	452500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	6907000	13C8_PFOS	57190	N/A	7433.0	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	980600	13C8_PFOS	57190	N/A	7145.0	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1550000	N/A	N/A	N/A	924.4	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.04)	N/A	13C6_PFDA	141700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	141700	N/A	N/A	N/A	N/A/ 0.13		

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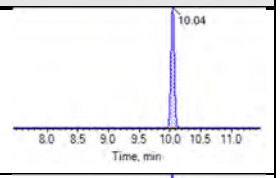
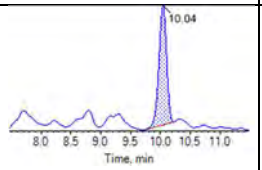
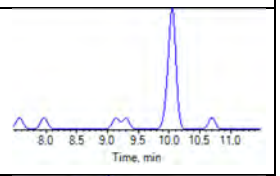
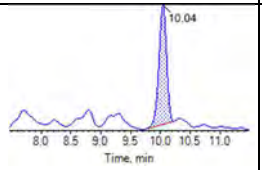
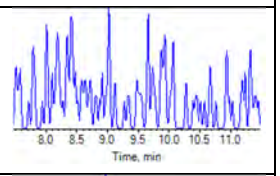
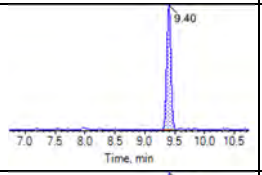
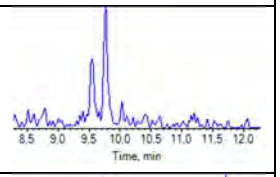
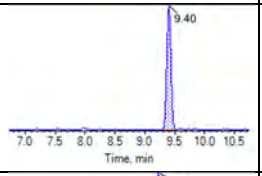
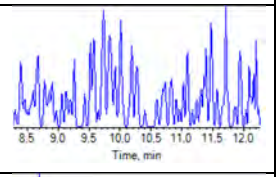
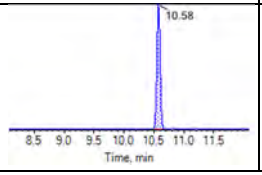
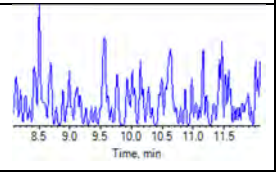
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	989400	N/A	N/A	N/A	857.6	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	18160	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	18160	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	57190	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	57190	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	177600	N/A	N/A	N/A	N/A/ 1.00		

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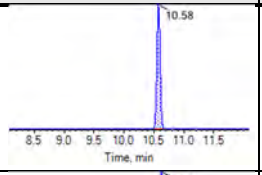
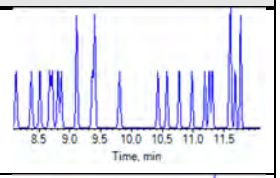
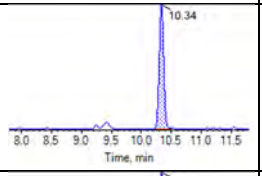
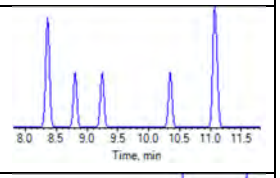
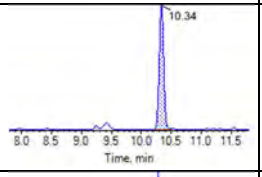
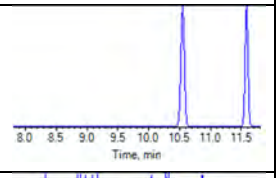
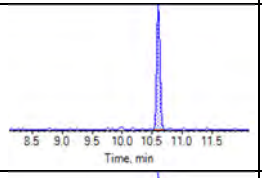
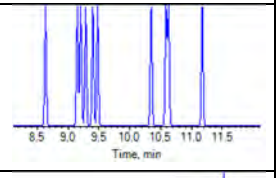
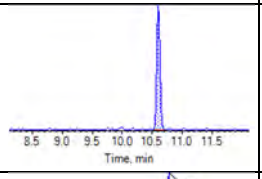
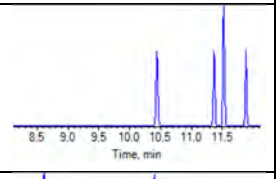
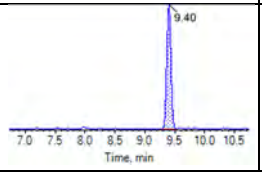
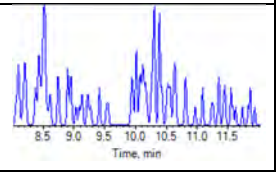
PFC103117106.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	177600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42870	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42870	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	51550	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	51550	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	57190	N/A	N/A	N/A	N/A/ 1.00		

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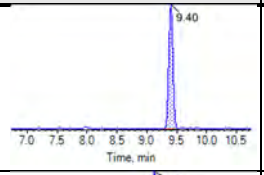
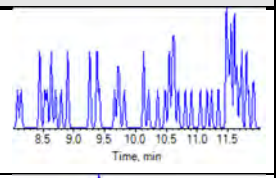
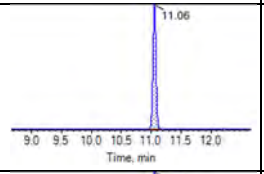
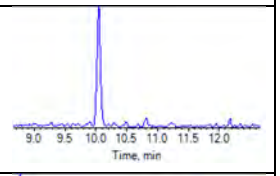
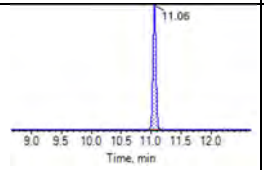
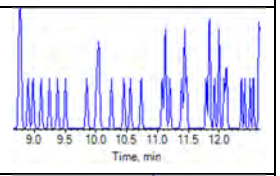
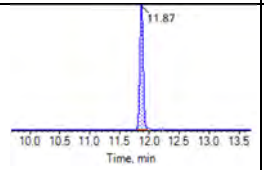
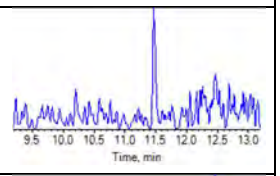
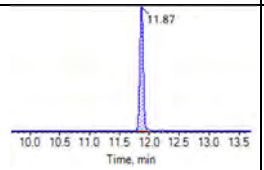
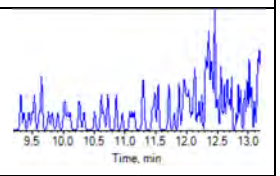
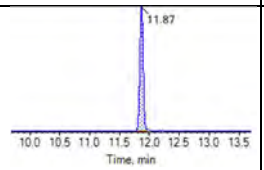
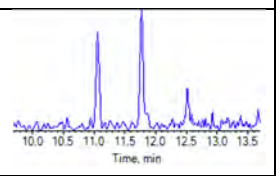
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	57190	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	171400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	171400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	111700	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	111700	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	111700	N/A	N/A	N/A	N/A/ 1.00		

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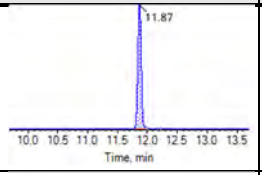
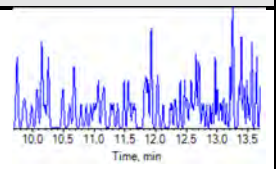
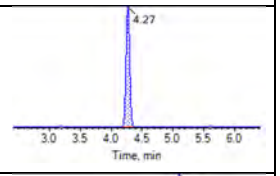
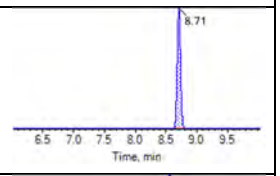
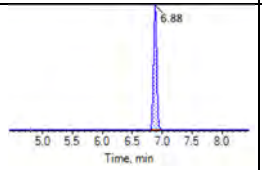
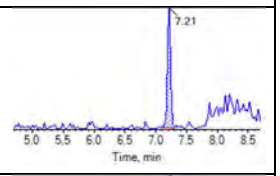
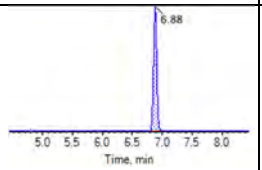
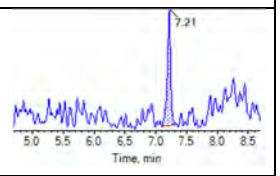
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	111700	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1503000	N/A	N/A	N/A	869.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1208000	N/A	N/A	N/A	981.5	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	23020	13C5_PFHxA	296000	N/A	31.3	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	12870	13C5_PFHxA	296000	N/A	23.2	N/A	0.56/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 06:40**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117107.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00355	ug/L	0.00176	0.00355	0.00533
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00355	ug/L	0.00176	0.00355	0.00533
375-73-5	Perfluorobutanesulfonate (PFBS)		0.005	ug/L	0.00088	0.00179	0.00237
335-76-2	Perfluorodecanoic acid (PFDA)		0.00585	ug/L	0.00104	0.00179	0.00267
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00179	ug/L	0.00088	0.00179	0.00267
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0409	ug/L	0.00088	0.00163	0.00243
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00176	ug/L	0.00088	0.00176	0.00267
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00176	ug/L	0.00088	0.00176	0.00267
2058-94-8	Perfluoroundecanoic acid (PFUdA)	J	0.00206	ug/L	0.00088	0.00176	0.00267

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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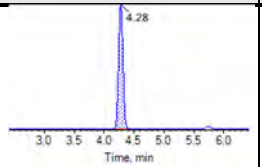
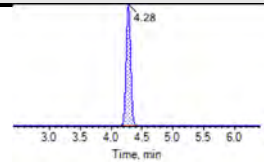
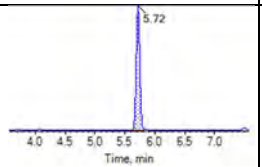
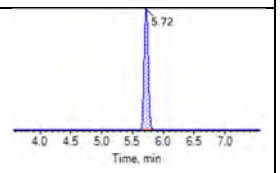
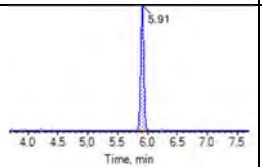
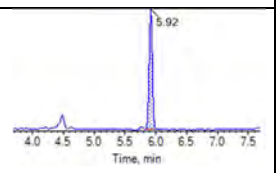
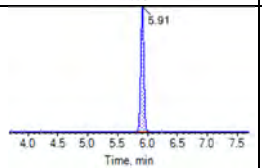
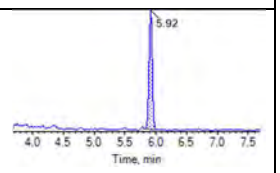
PFC103117107.wiff			
Sample Name	436518002	**Injection Vial**	40
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117107.wiff
Acquisition Date	11/2/2017 06:40:36	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117107.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	26440000	13C4_PFBA	145200	N/A	25844.9	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	67510000	13C5_PFPeA	188600	N/A	83232.4	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.92 (5.89)	334500	13C3_PFBS	181000	N/A	187.5	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.92 (5.89)	146200	13C3_PFBS	181000	N/A	182.5	N/A	0.44/ 0.45		

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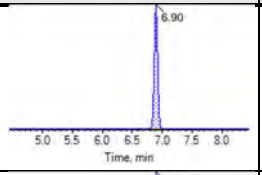
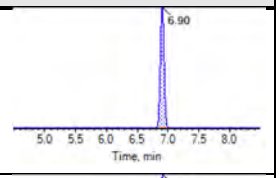
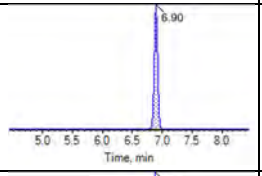
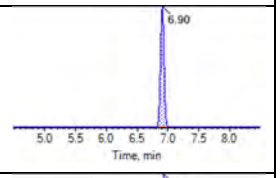
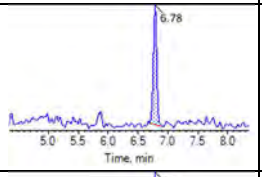
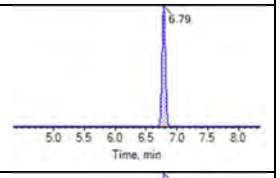
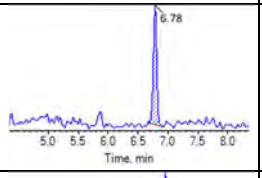
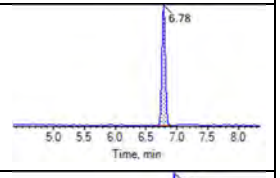
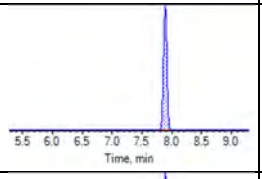
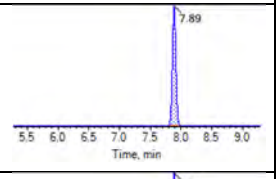
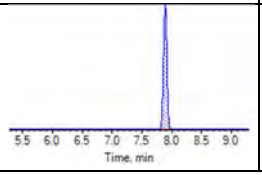
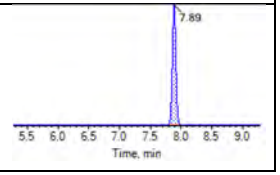
PFHxA	313.0 / 269.0	6.90 (6.92)	56560000	13C5_PFHxA	240000	N/A	62072.8	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	5076000	13C5_PFHxA	240000	N/A	78807.4	N/A	0.09/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	602000	13C2_4:2 FTS	42750	N/A	2352.5	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	444700	13C2_4:2 FTS	42750	N/A	2419.0	N/A	0.74/ 0.72		
PFHpA	363.0 / 319.0	7.89 (7.93)	21320000	13C4_PFHpA	217000	N/A	23491.6	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.89 (7.93)	5417000	13C4_PFHpA	217000	N/A	22834.7	N/A	0.25/ 0.26		

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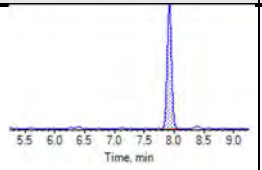
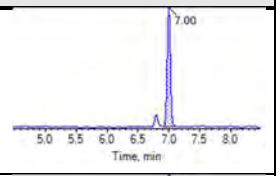
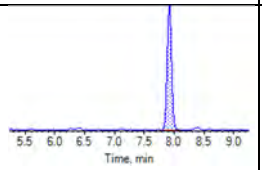
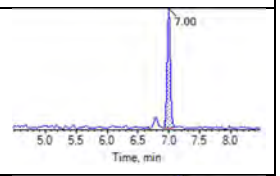
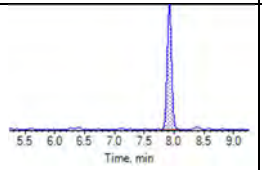
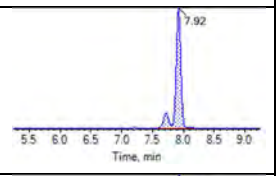
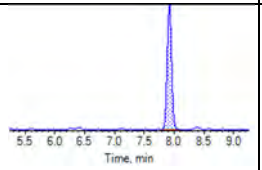
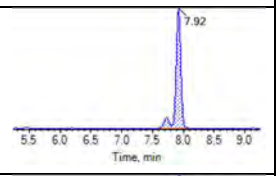
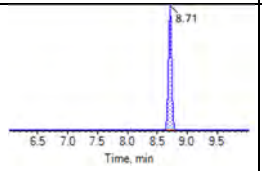
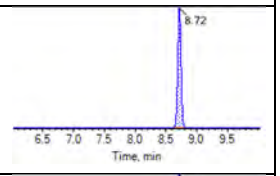
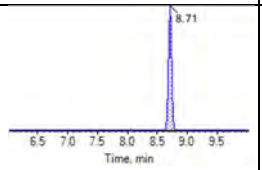
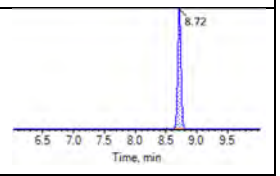
PFPeS	349.0 / 80.0	7.00 (7.02)	260100	13C3_PFHxS	69940	N/A	177.6	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.00 (7.02)	101500	13C3_PFHxS	69940	N/A	198.5	N/A	0.39/ 0.35		
PFHxS	399.0 / 80.0	7.92 (7.96)	2068000	13C3_PFHxS	69940	N/A	1533.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.92 (7.96)	545700	13C3_PFHxS	69940	N/A	1601.8	N/A	0.26/ 0.25		
PFOA	413.0 / 369.0	8.72 (8.75)	14770000	13C8_PFOA	204600	N/A	17113.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	5623000	13C8_PFOA	204600	N/A	17459.5	N/A	0.38/ 0.37		

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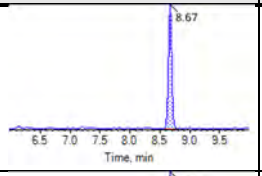
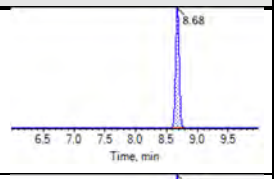
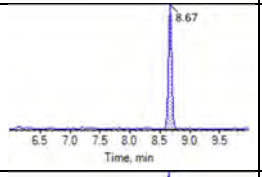
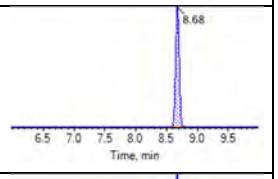
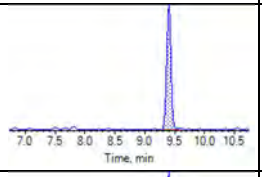
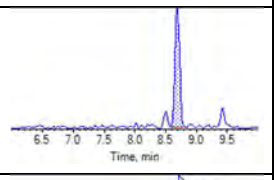
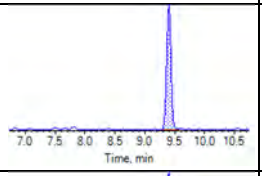
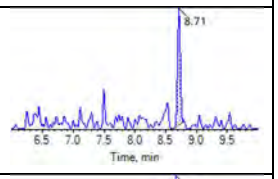
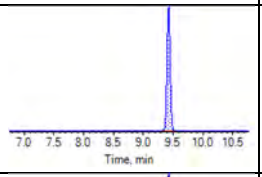
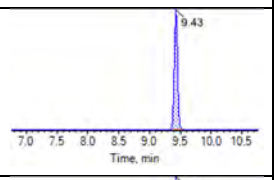
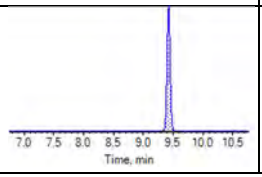
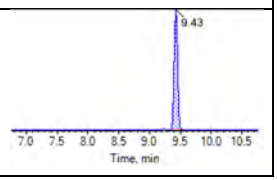
6:2 FTS	427.0 / 407.0	8.68 (8.72)	55480000	13C2_6:2 FTS	233100	N/A	45123.4	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.68 (8.72)	48280000	13C2_6:2 FTS	233100	N/A	43721.2	N/A	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.69 (8.76)	126700	13C8_PFOS	65330	N/A	99.5	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	11110	13C8_PFOS	65330	N/A	43.3	N/A	0.09/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	2197000	13C9_PFNA	215800	N/A	3028.2	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	551700	13C9_PFNA	215800	N/A	3153.8	N/A	0.25/ 0.24		

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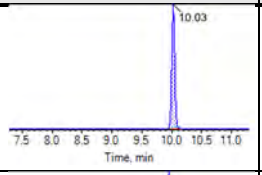
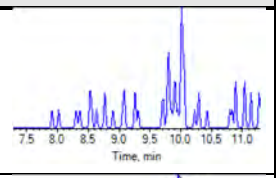
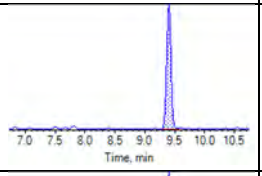
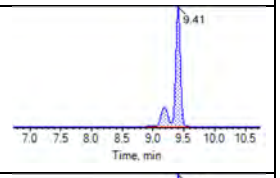
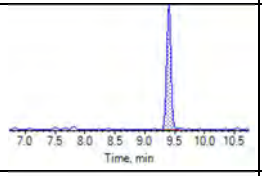
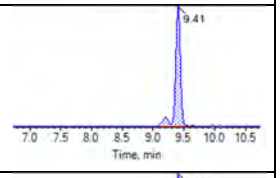
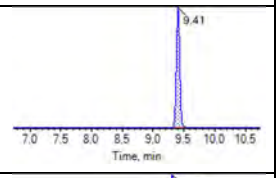
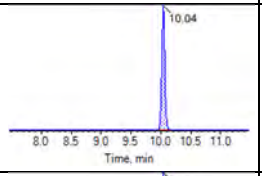
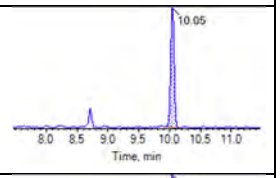
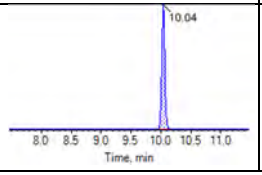
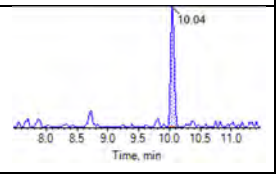
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	477300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	3249000	13C8_PFOS	65330	N/A	3061.4	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	487000	13C8_PFOS	65330	N/A	3106.4	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1502000	N/A	N/A	N/A	895.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.05 (10.08)	148300	13C6_PFDA	131100	N/A	219.5	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	22210	13C6_PFDA	131100	N/A	262.4	N/A	0.15/ 0.13		

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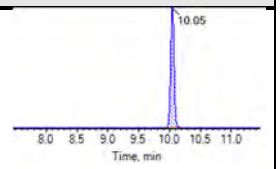
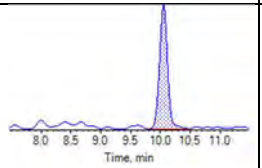
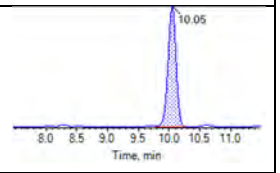
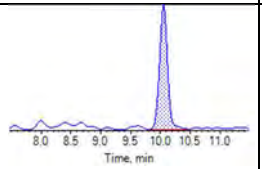
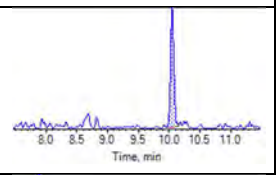
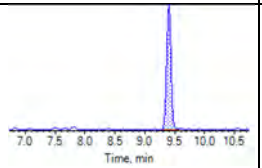
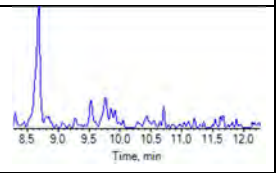
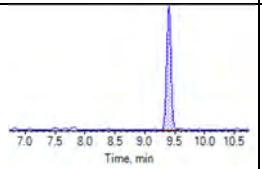
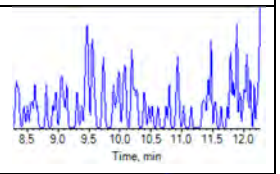
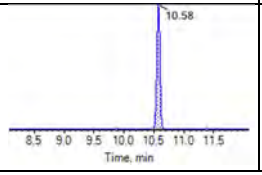
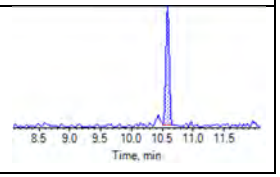
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	1016000	N/A	N/A	N/A	880.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	29200	13C2_8:2 FTS	34500	N/A	164.2	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.05 (10.09)	32690	13C2_8:2 FTS	34500	N/A	189.7	N/A	1.12/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	65330	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	65330	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	46380	13C7_PFUdA	168900	N/A	77.1	N/A	1.00/ 1.00		

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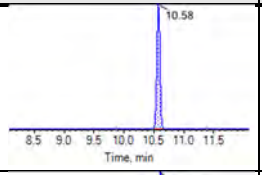
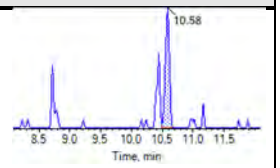
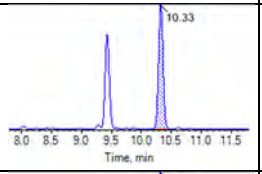
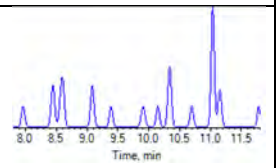
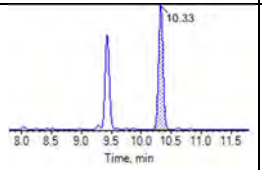
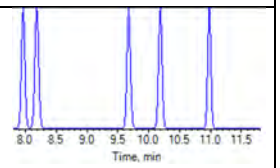
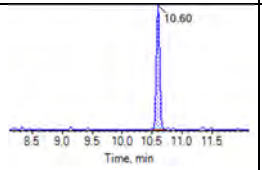
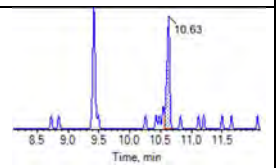
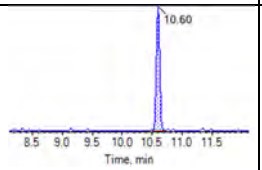
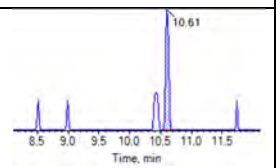
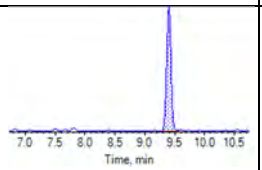
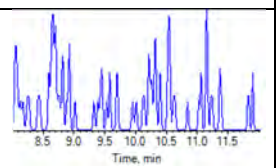
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.58 (10.62)	7451	13C7_PFUdA	168900	N/A	104.0	N/A	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46870	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46870	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	2784	d5-N-EtFOSAA	45930	N/A	14.9	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.61 (10.64)	1482	d5-N-EtFOSAA	45930	N/A	16.7	N/A	0.53/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	65330	N/A	N/A	N/A	N/A/ 1.00		

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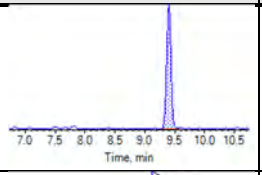
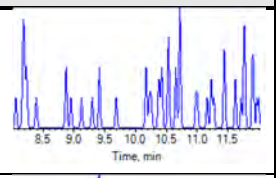
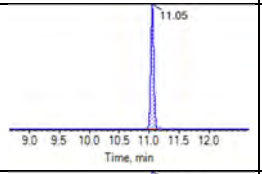
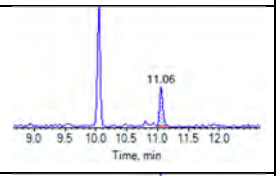
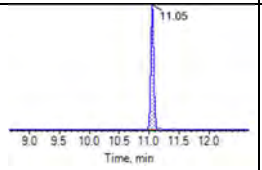
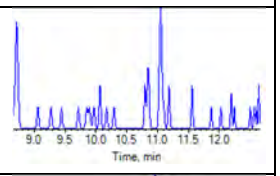
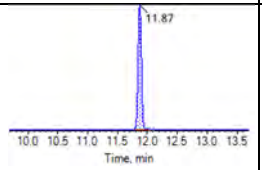
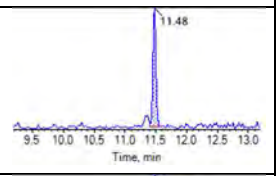
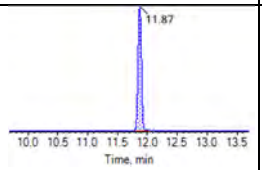
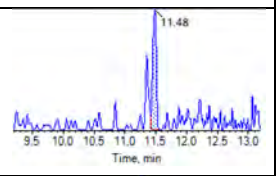
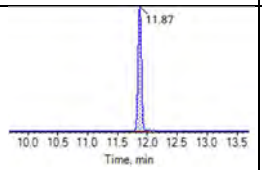
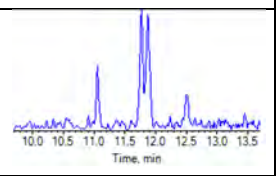
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	65330	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	11.06 (11.09)	9717	13C2_PFDoA	157800	N/A	16.4	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	157800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	11600	13C2_PFTeDA	71780	N/A	32.9	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	2498	13C2_PFTeDA	71780	N/A	32.0	N/A	0.22/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	71780	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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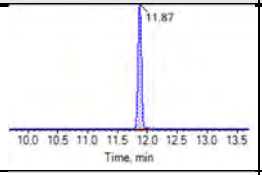
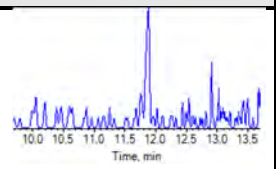
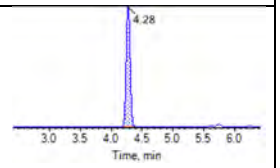
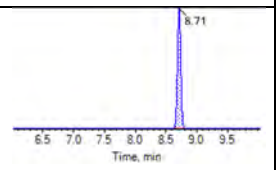
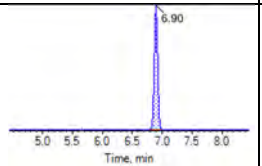
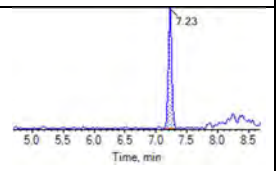
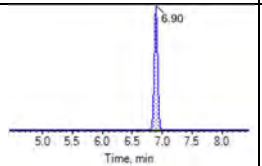
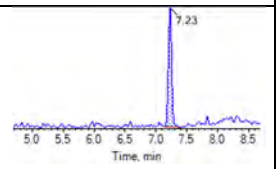
PFC103117107.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	71780	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1609000	N/A	N/A	N/A	929.9	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1119000	N/A	N/A	N/A	909.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.23 (7.26)	71310	13C5_PFHxA	240000	N/A	119.5	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.23 (7.26)	58780	13C5_PFHxA	240000	N/A	130.9	N/A	0.82/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 09:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518004**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-25**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW25_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 07:23**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**272.51 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117109.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00244	ug/L	0.00121	0.00244	0.00367
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00244	ug/L	0.00121	0.00244	0.00367
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00123	ug/L	0.000605	0.00123	0.00163
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00123	ug/L	0.000716	0.00123	0.00183
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00112	ug/L	0.000605	0.00112	0.00167
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00123	ug/L	0.000605	0.00123	0.00183
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00121	ug/L	0.000605	0.00121	0.00183
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00121	ug/L	0.000642	0.00121	0.00183
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00121	ug/L	0.000605	0.00121	0.00183
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00121	ug/L	0.000605	0.00121	0.00183

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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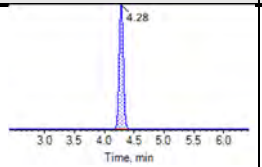
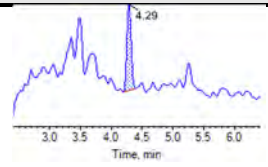
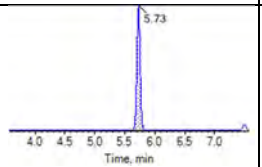
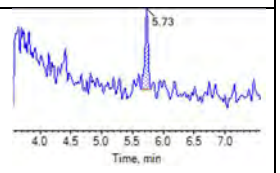
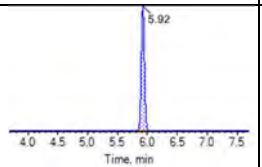
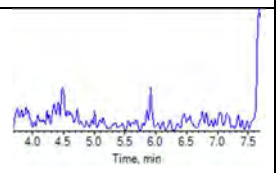
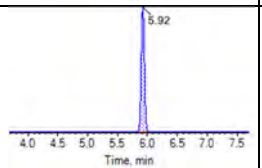
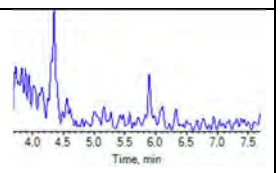
PFC103117109.wiff			
Sample Name	436518004	**Injection Vial**	42
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117109.wiff
Acquisition Date	11/2/2017 07:23:21	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117109.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	13120	13C4_PFBA	156200	N/A	11.9	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.73 (5.69)	12250	13C5_PFPeA	250700	N/A	11.4	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	170300	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	170300	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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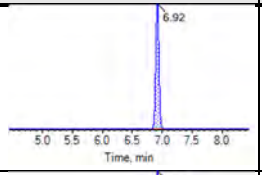
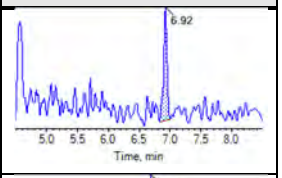
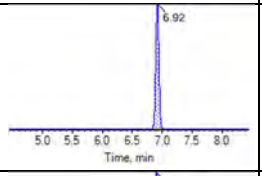
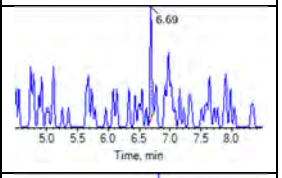
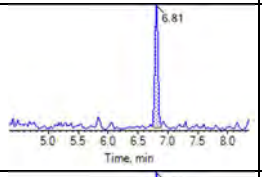
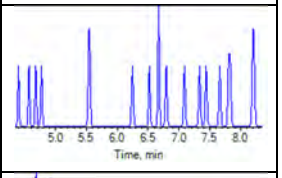
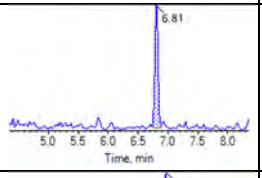
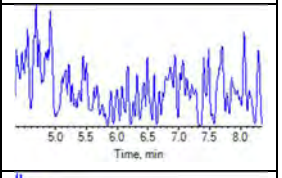
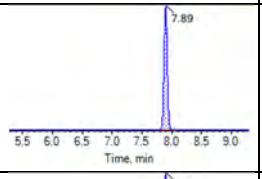
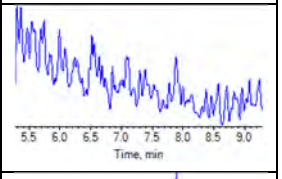
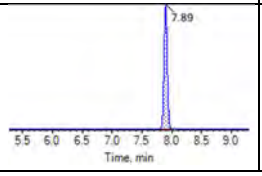
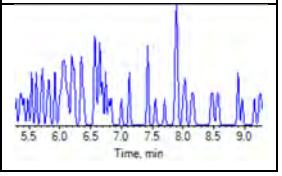
PFC103117109.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	15280	13C5_PFHxA	298500	N/A	13.5	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.69 (6.92)	1017	13C5_PFHxA	298500	N/A	12.7	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	36780	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	36780	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	236500	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	236500	N/A	N/A	N/A	N/A/ 0.26		

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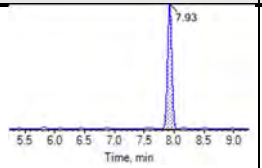
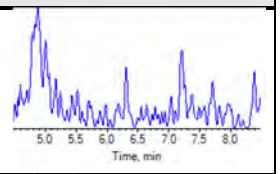
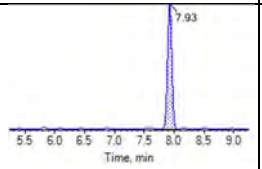
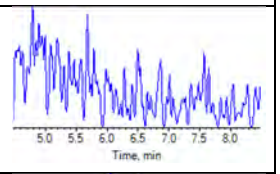
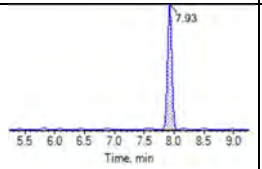
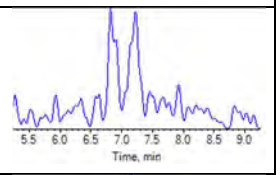
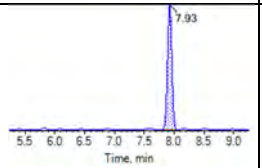
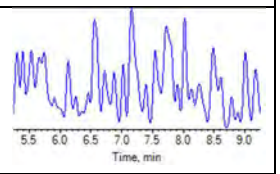
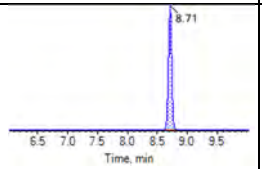
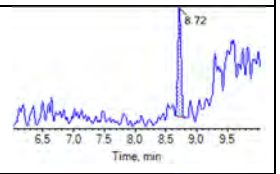
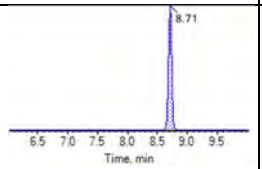
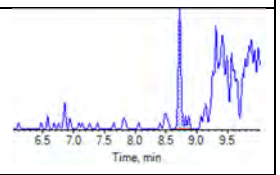
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	89410	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	89410	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	89410	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	89410	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	8.72 (8.75)	22230	13C8_PFOA	260800	N/A	20.2	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.72 (8.75)	8508	13C8_PFOA	260800	N/A	20.7	N/A	0.38/ 0.37		

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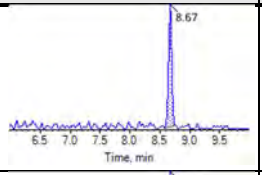
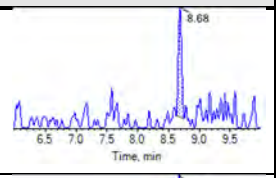
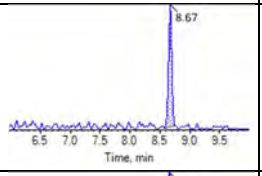
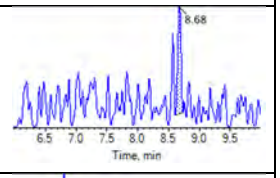
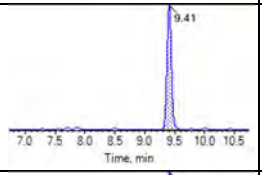
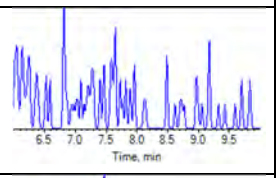
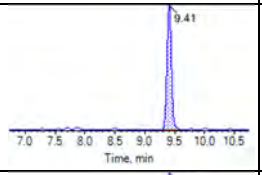
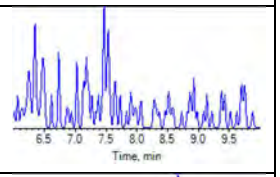
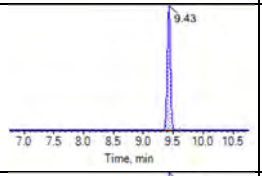
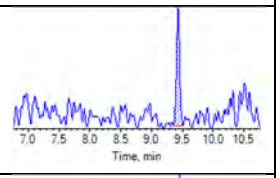
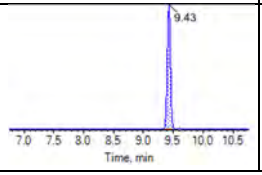
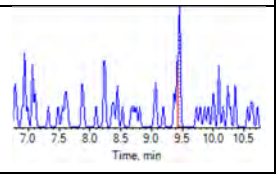
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.68 (8.72)	6286	13C2_6:2 FTS	37560	N/A	31.7	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.68 (8.72)	5464	13C2_6:2 FTS	37560	N/A	30.7	N/A	0.87/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	10330	13C9_PFNA	241300	N/A	12.7	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	1869	13C9_PFNA	241300	N/A	9.6	N/A	0.18/ 0.24		

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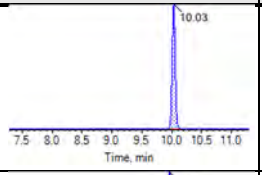
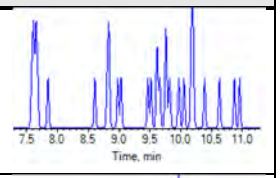
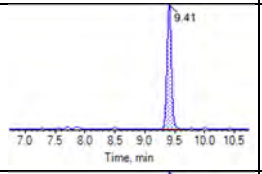
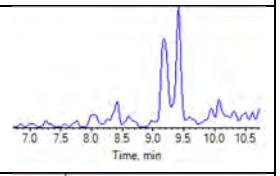
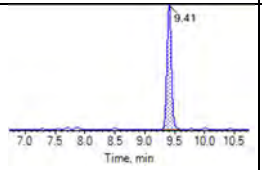
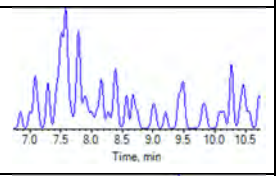
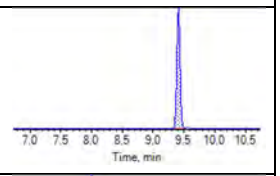
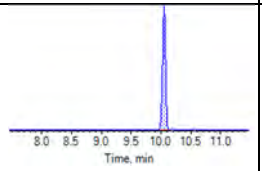
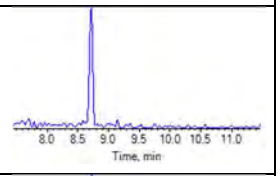
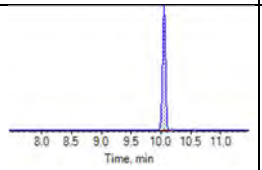
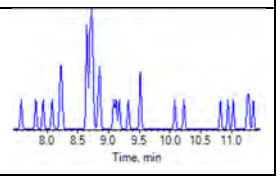
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	479700	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.48)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1549000	N/A	N/A	N/A	923.8	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	130400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	130400	N/A	N/A	N/A	N/A/ 0.13		

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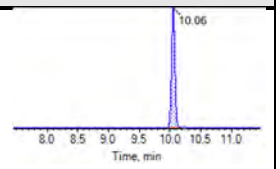
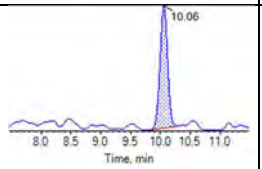
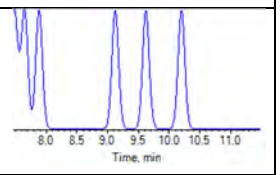
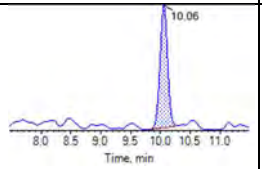
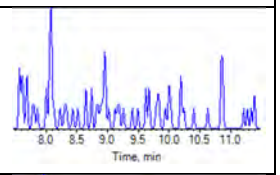
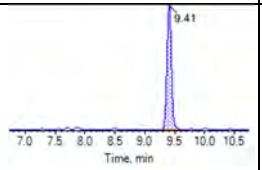
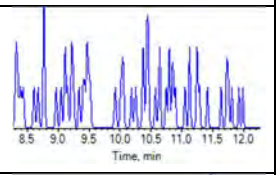
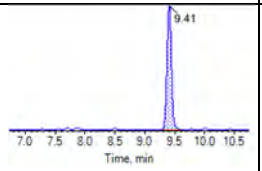
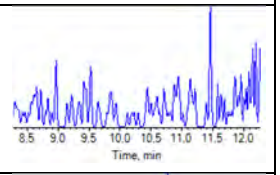
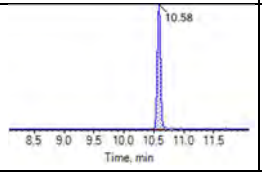
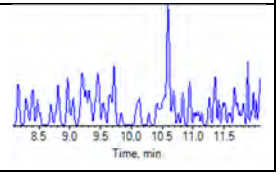
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1055000	N/A	N/A	N/A	914.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	23420	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	23420	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	157700	N/A	N/A	N/A	N/A/ 1.00		

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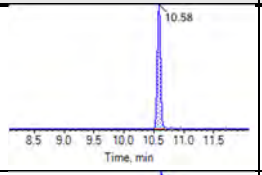
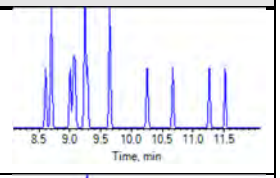
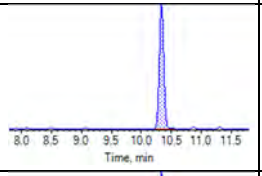
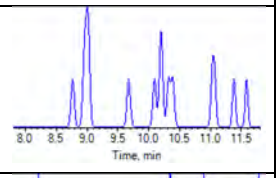
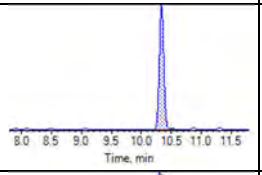
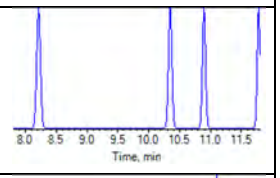
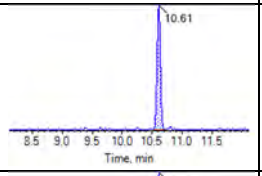
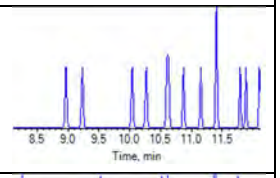
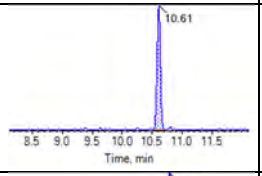
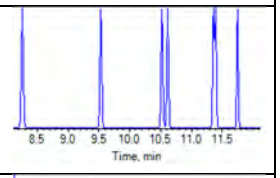
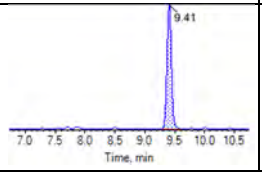
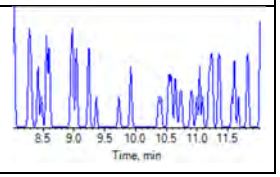
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:14:00

PFC103117109.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	157700	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	40440	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	40440	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	43280	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	43280	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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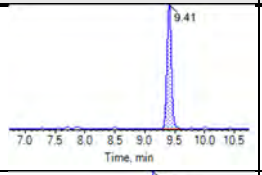
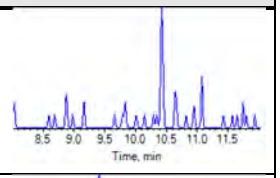
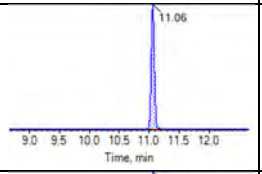
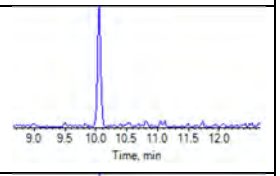
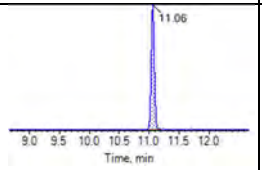
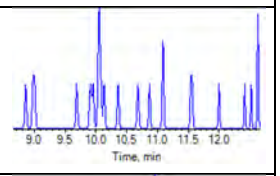
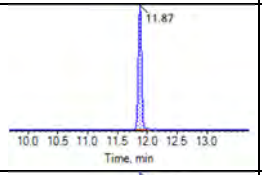
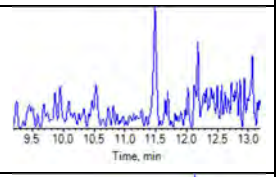
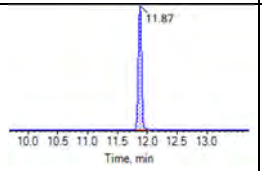
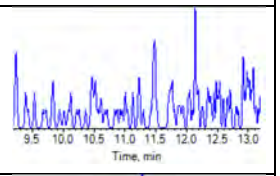
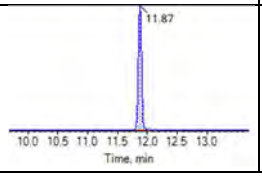
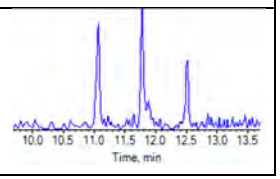
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	53790	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	166200	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	166200	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	123700	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	123700	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	123700	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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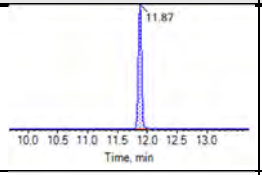
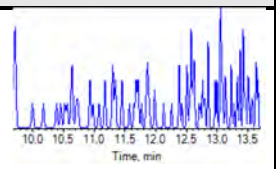
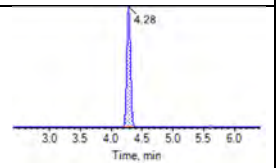
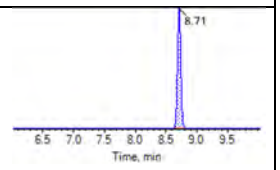
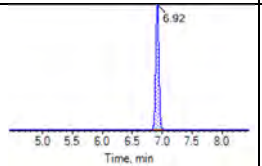
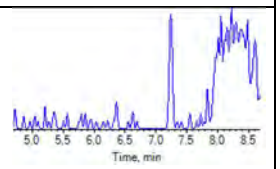
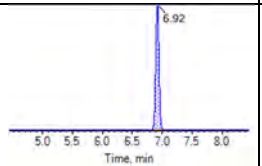
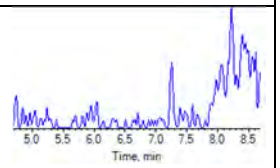
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	123700	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1674000	N/A	N/A	N/A	967.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1214000	N/A	N/A	N/A	987.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	298500	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	298500	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 12:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518005**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**GW102717FB**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**GW-102717FB**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 08:27**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**267.15 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117112.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00249	ug/L	0.00124	0.00249	0.00374
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00249	ug/L	0.00124	0.00249	0.00374
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00125	ug/L	0.000618	0.00125	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00125	ug/L	0.00073	0.00125	0.00187
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00114	ug/L	0.000618	0.00114	0.0017
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00125	ug/L	0.000618	0.00125	0.00187
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00124	ug/L	0.000618	0.00124	0.00187
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00124	ug/L	0.000655	0.00124	0.00187
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00124	ug/L	0.000618	0.00124	0.00187
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00124	ug/L	0.000618	0.00124	0.00187

JISB GC
11/06/2017 11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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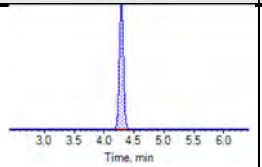
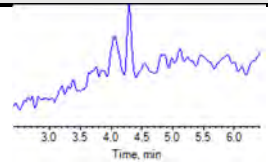
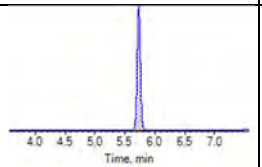
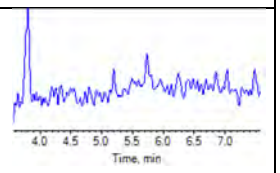
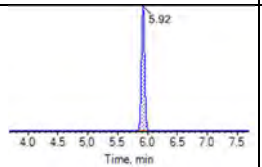
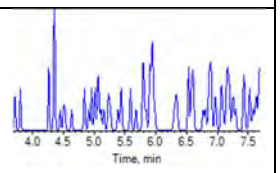
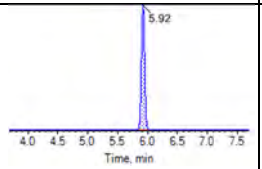
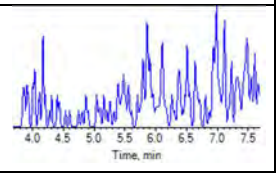
PFC103117112.wiff			
Sample Name	436518005	**Injection Vial**	45
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117112.wiff
Acquisition Date	11/2/2017 08:27:29	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117112.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	140000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	238200	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	163300	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	163300	N/A	N/A	N/A	N/A/ 0.45		

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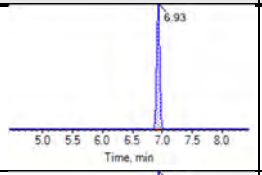
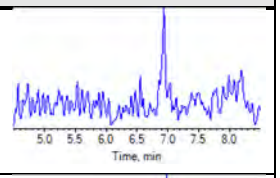
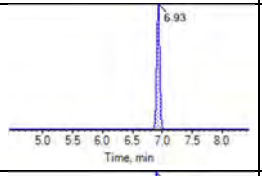
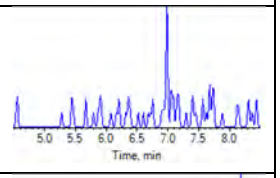
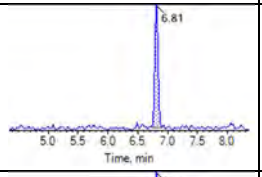
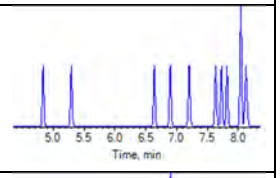
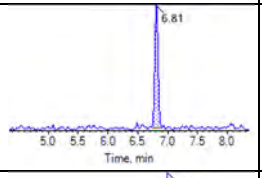
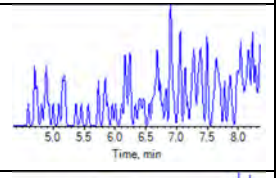
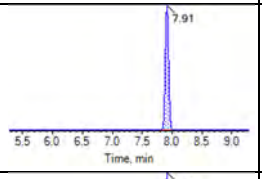
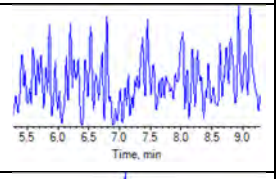
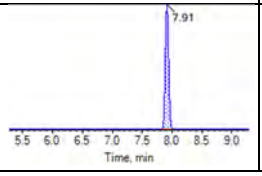
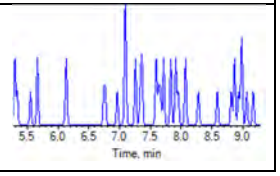
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	321900	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	321900	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	37490	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	37490	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	255500	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	255500	N/A	N/A	N/A	N/A/ 0.26		

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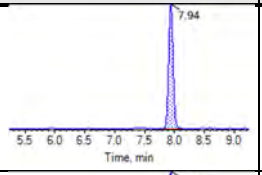
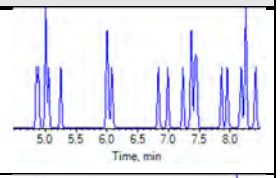
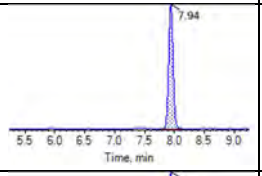
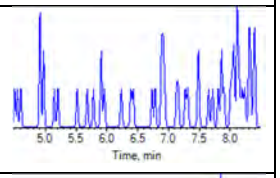
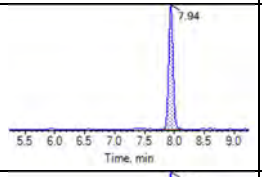
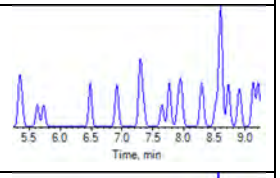
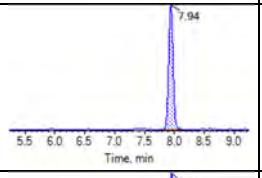
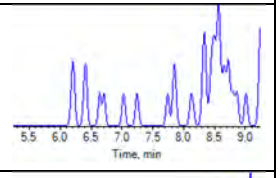
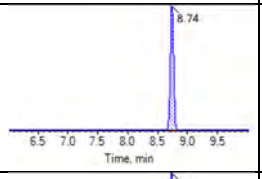
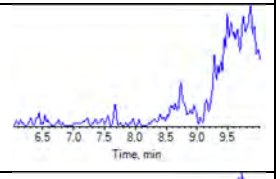
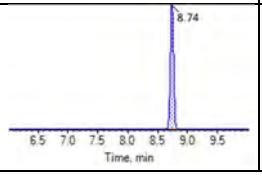
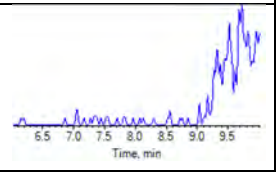
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	75280	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	75280	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	75280	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	75280	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	245400	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	245400	N/A	N/A	N/A	N/A/ 0.37		

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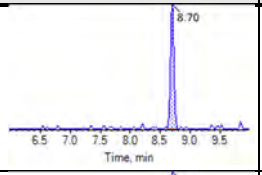
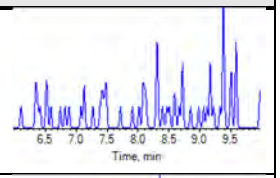
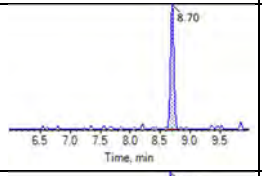
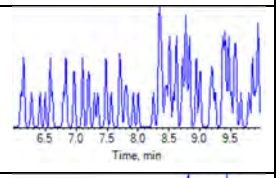
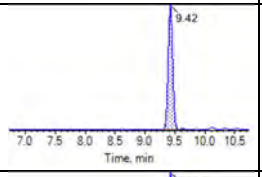
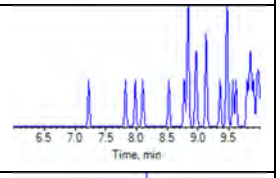
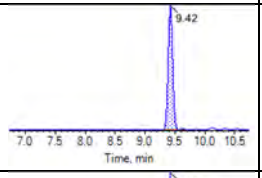
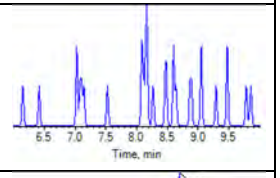
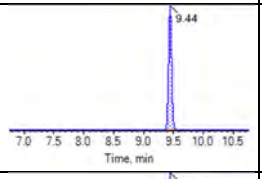
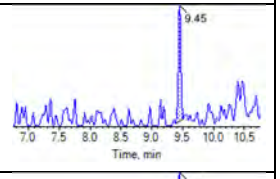
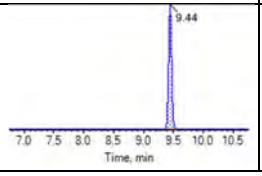
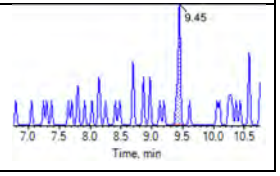
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	34300	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	34300	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	6859	13C9_PFNA	262100	N/A	7.8	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	2070	13C9_PFNA	262100	N/A	9.7	N/A	0.30/ 0.24		

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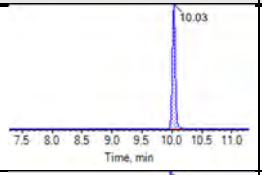
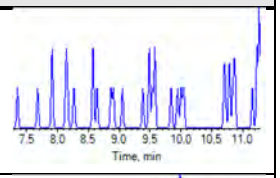
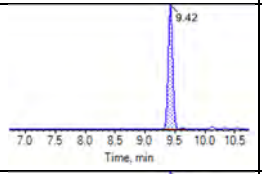
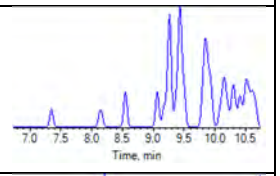
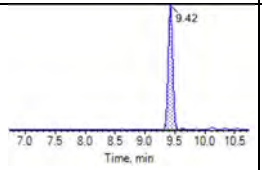
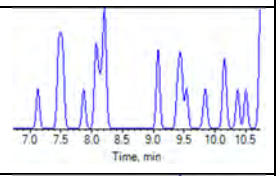
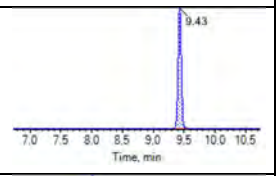
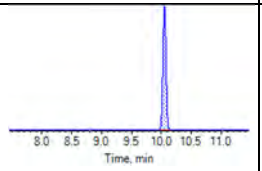
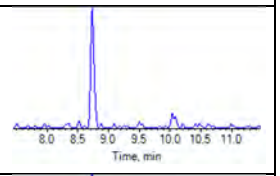
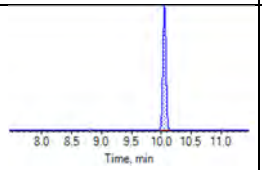
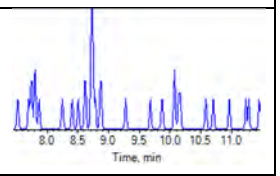
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	459800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1571000	N/A	N/A	N/A	937.0	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	140800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	140800	N/A	N/A	N/A	N/A/ 0.13		

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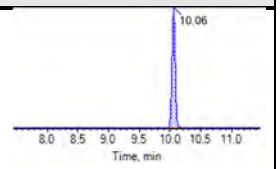
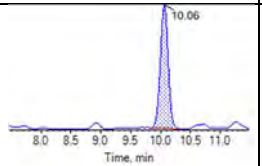
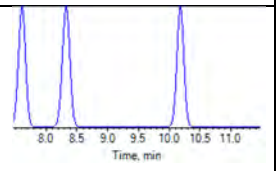
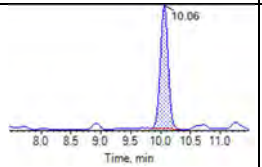
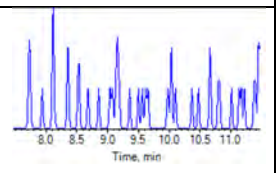
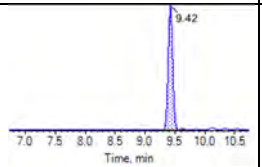
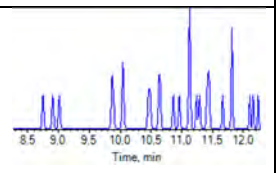
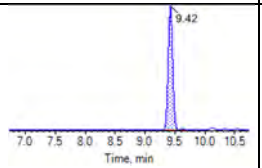
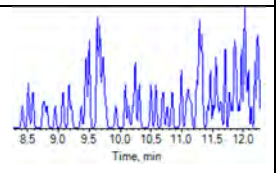
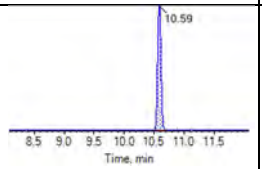
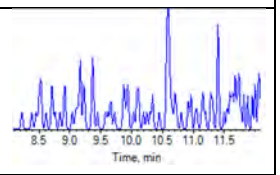
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1042000	N/A	N/A	N/A	903.0	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	26390	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	26390	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	190000	N/A	N/A	N/A	N/A/ 1.00		

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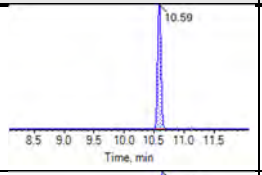
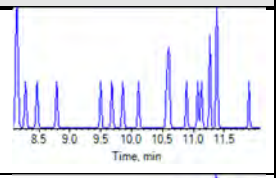
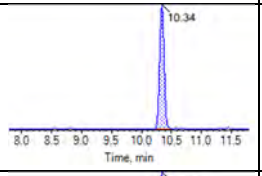
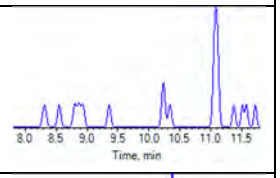
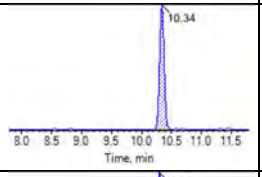
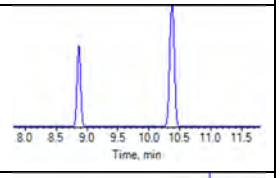
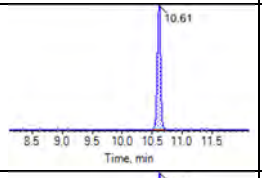
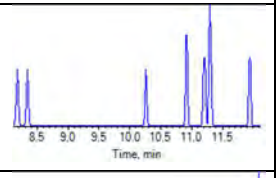
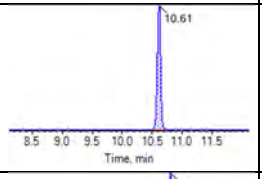
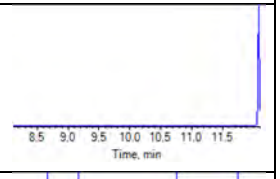
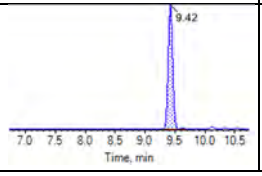
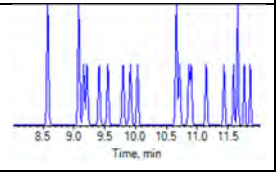
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	190000	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	51960	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	51960	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	44500	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	44500	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 1.00		

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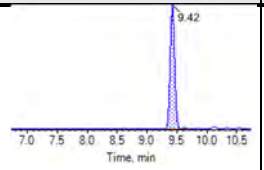
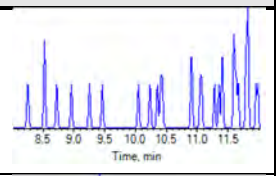
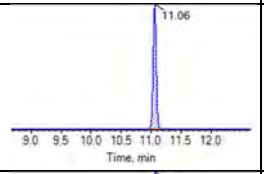
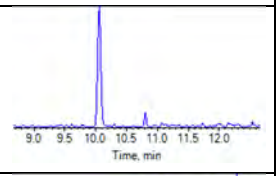
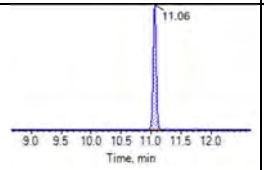
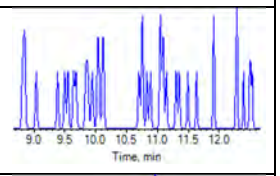
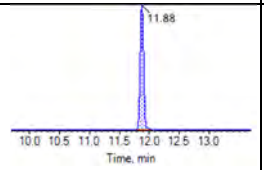
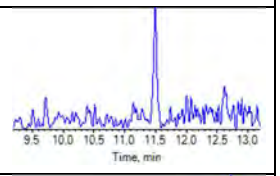
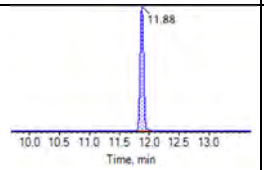
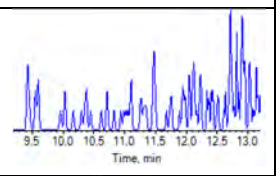
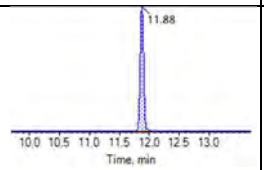
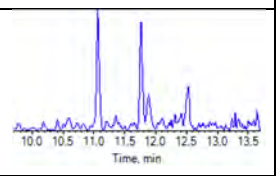
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	67540	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	168800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	168800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	125100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	125100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	125100	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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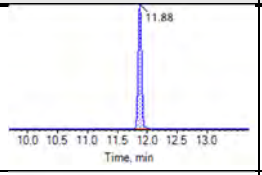
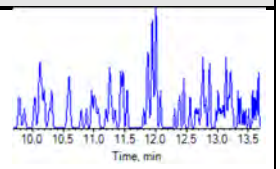
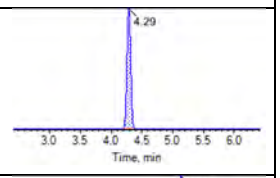
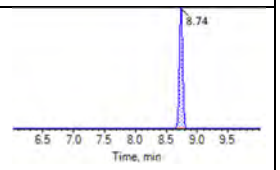
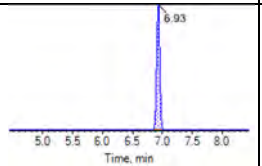
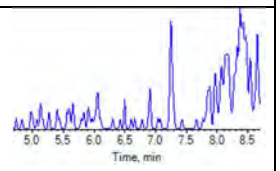
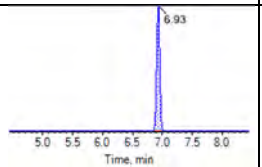
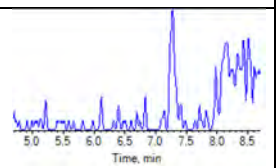
PFC103117112.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	125100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1676000	N/A	N/A	N/A	968.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1175000	N/A	N/A	N/A	955.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	321900	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	321900	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:30**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518006**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**EBGW102717**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**EBGW102717**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 08:48**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.26 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117113.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00247	ug/L	0.00123	0.00247	0.00371
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00247	ug/L	0.00123	0.00247	0.00371
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00124	ug/L	0.000613	0.00124	0.00165
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00124	ug/L	0.000724	0.00124	0.00186
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00113	ug/L	0.000613	0.00113	0.00169
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
1763-23-1	Perfluorooctanesulfonate (PFOS)	J	0.000966	ug/L	0.000613	0.00123	0.00186
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00123	ug/L	0.00065	0.00123	0.00186
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000613	0.00123	0.00186

JISB
11/06/2017

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LCMSMS#6

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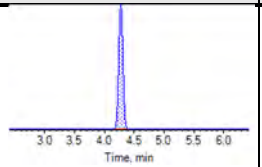
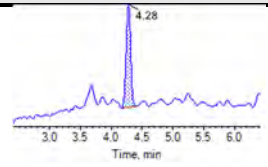
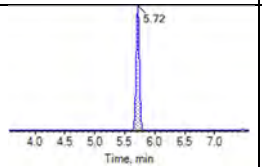
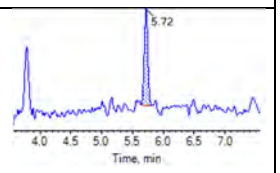
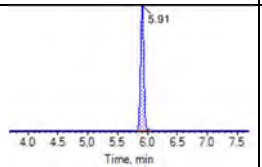
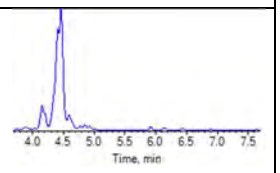
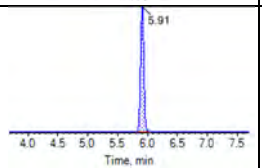
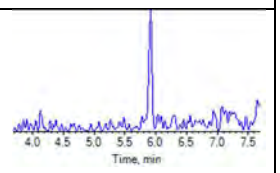
PFC103117113.wiff			
Sample Name	436518006	**Injection Vial**	46
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117113.wiff
Acquisition Date	11/2/2017 08:48:53	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117113.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	21580	13C4_PFBA	110200	N/A	27.8	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	22350	13C5_PFPeA	255900	N/A	20.3	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	162600	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	162600	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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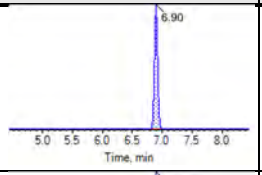
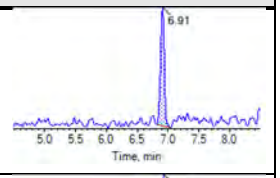
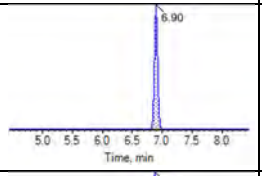
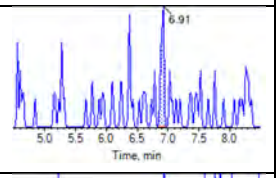
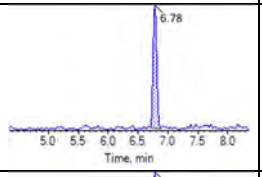
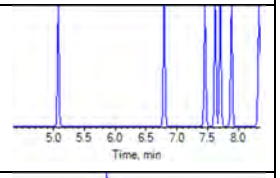
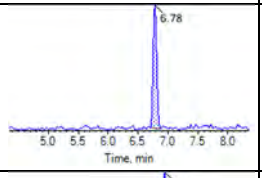
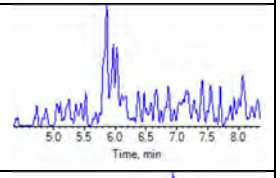
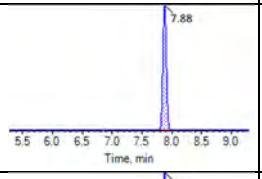
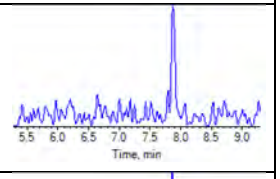
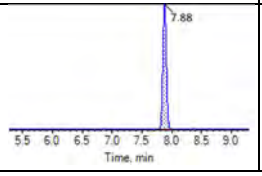
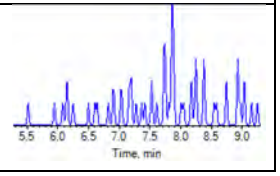
PFC103117113.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.91 (6.92)	35070	13C5_PFHxA	303600	N/A	30.4	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.91 (6.92)	1341	13C5_PFHxA	303600	N/A	16.5	N/A	0.04/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	46320	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	46320	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	233600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	233600	N/A	N/A	N/A	N/A/ 0.26		

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LCMSMS#6

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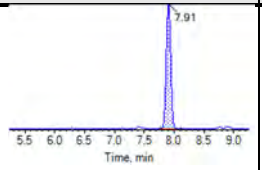
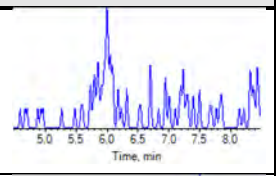
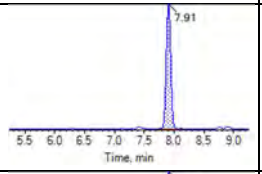
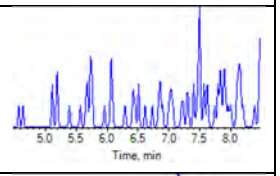
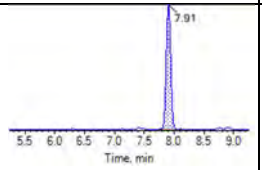
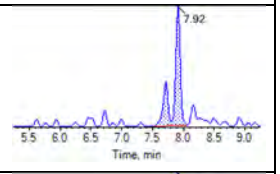
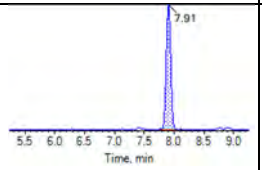
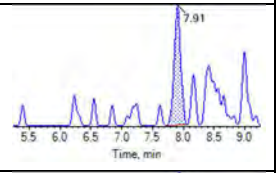
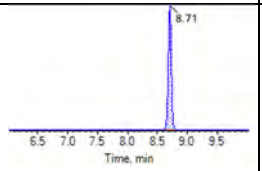
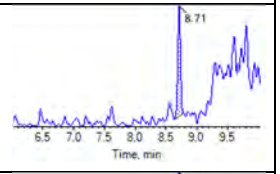
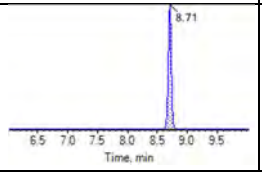
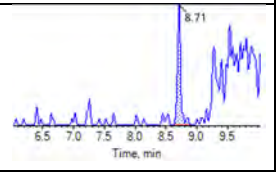
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	74440	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	74440	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	7.92 (7.96)	15200	13C3_PFHxS	74440	N/A	10.6	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	5736	13C3_PFHxS	74440	N/A	15.8	N/A	0.38/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	19470	13C8_PFOA	253800	N/A	18.2	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	9364	13C8_PFOA	253800	N/A	23.4	N/A	0.48/ 0.37		

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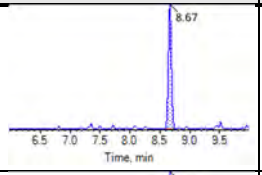
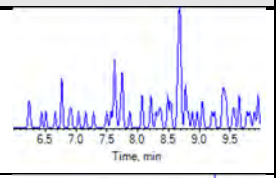
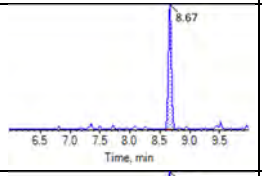
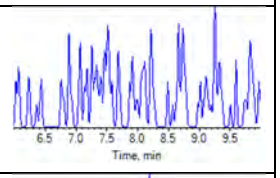
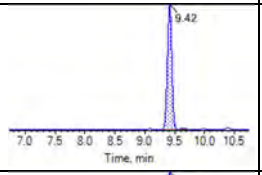
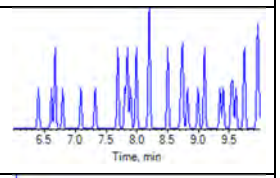
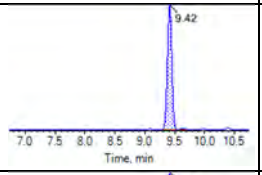
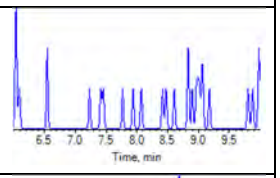
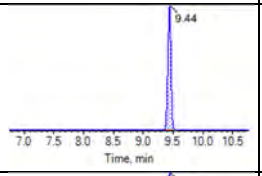
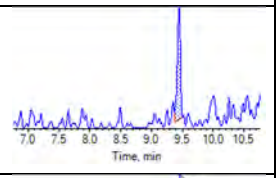
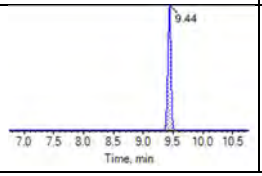
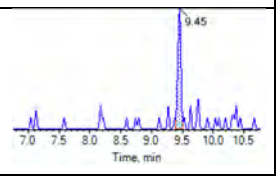
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	39230	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	39230	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	10840	13C9_PFNA	248000	N/A	13.0	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	5181	13C9_PFNA	248000	N/A	25.8	N/A	0.48/ 0.24		

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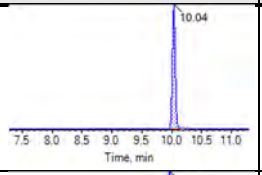
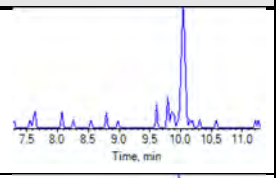
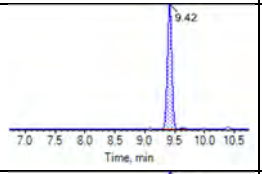
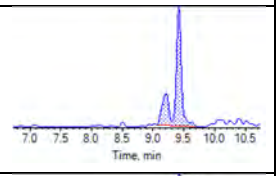
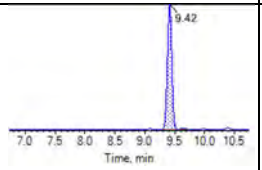
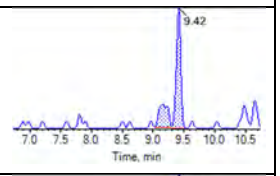
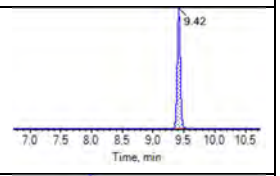
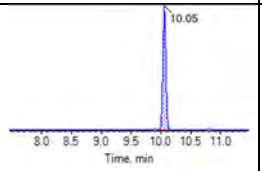
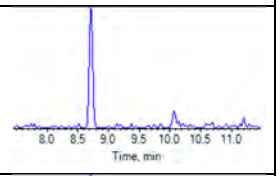
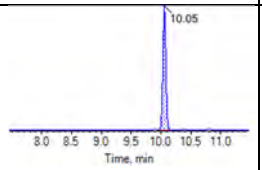
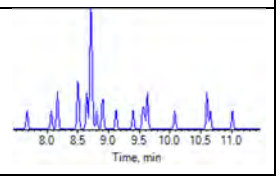
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	502500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.42 (9.45)	46550	13C8_PFOS	55090	N/A	52.0	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.42 (9.45)	7700	13C8_PFOS	55090	N/A	58.2	N/A	0.17/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1577000	N/A	N/A	N/A	940.6	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	155700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	155700	N/A	N/A	N/A	N/A/ 0.13		

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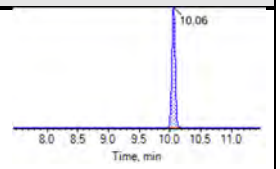
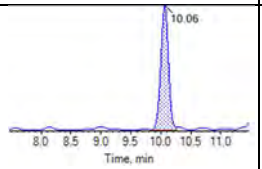
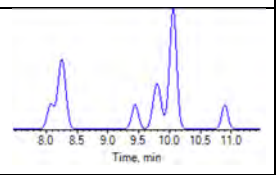
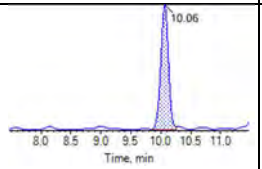
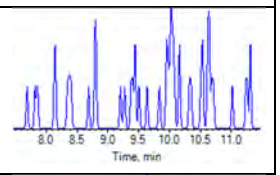
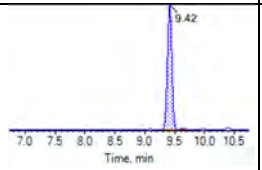
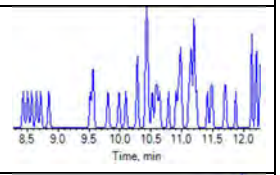
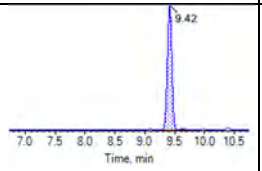
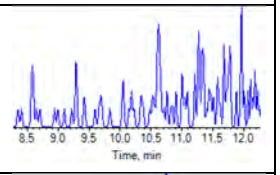
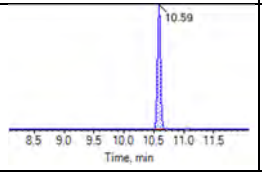
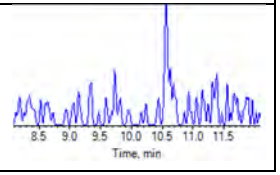
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1101000	N/A	N/A	N/A	954.2	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	30240	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	30240	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	183300	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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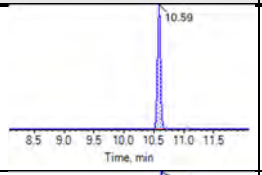
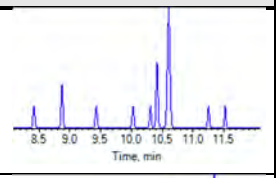
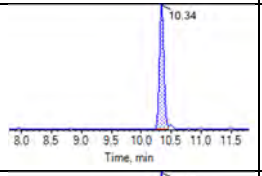
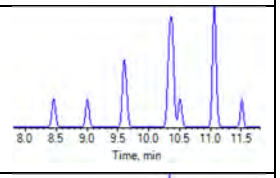
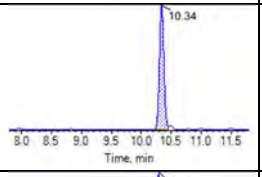
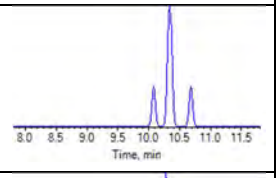
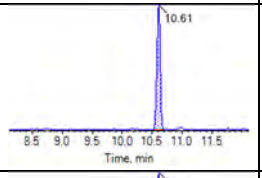
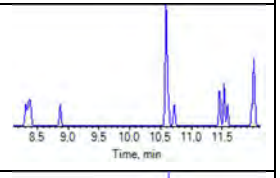
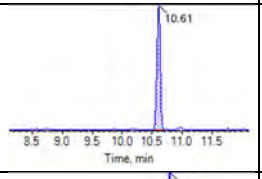
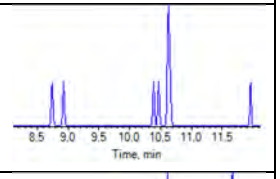
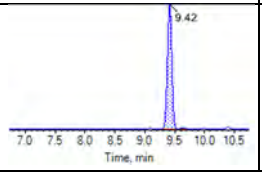
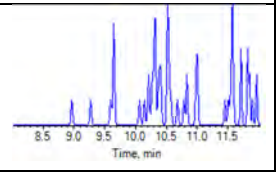
PFC103117113.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	183300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	63640	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	63640	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49940	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49940	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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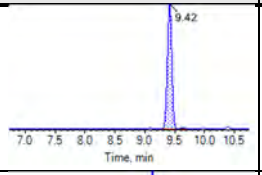
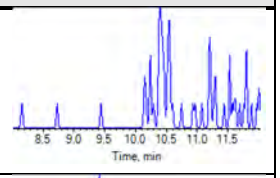
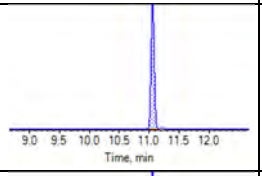
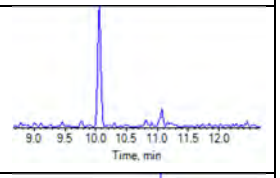
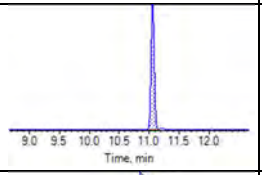
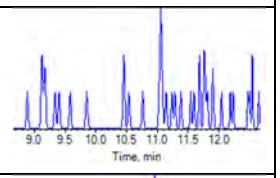
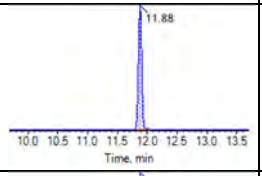
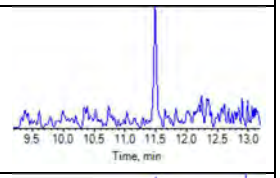
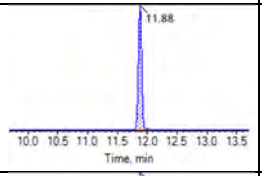
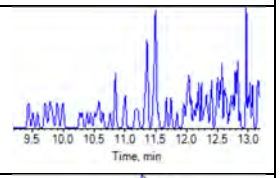
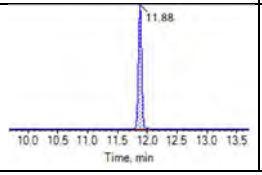
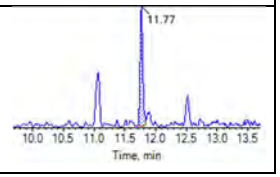
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	55090	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	177900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	177900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	120000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	120000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	11.77 (11.91)	4410	13C2_PFTeDA	120000	N/A	10.2	N/A	1.00/ 1.00		

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LCMSMS#6

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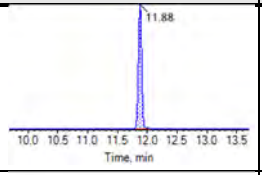
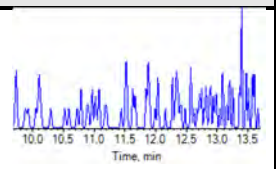
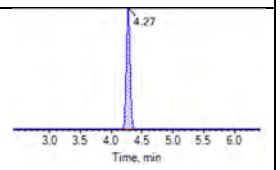
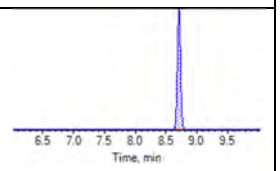
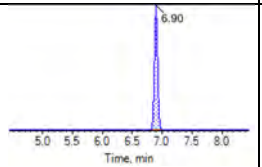
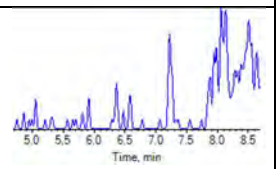
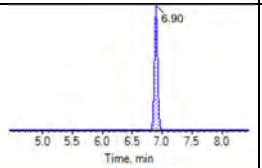
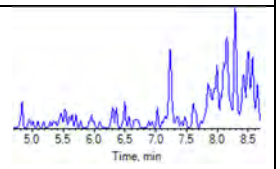
PFC103117113.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	120000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1630000	N/A	N/A	N/A	942.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1156000	N/A	N/A	N/A	939.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	303600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	303600	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 10:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518001**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-01**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW01_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/02/2017 15:13**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**265.79 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117131.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.112	ug/L	0.00621	0.0124	0.0188

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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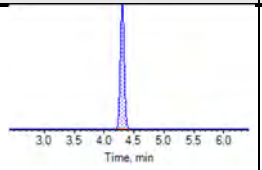
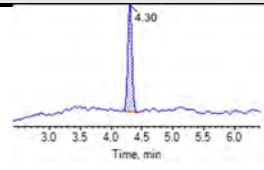
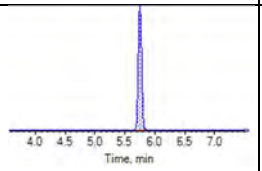
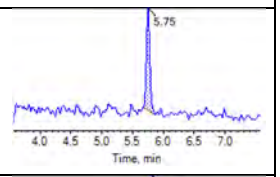
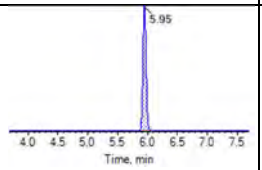
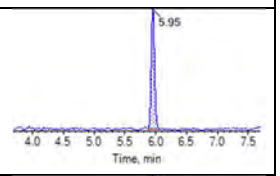
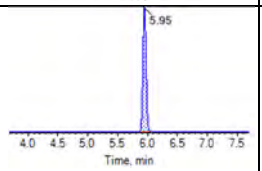
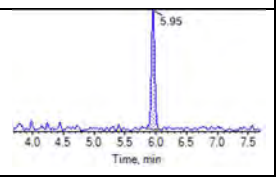
PFC103117131.wiff			
Sample Name	436518001	**Injection Vial**	9
Batch|Dilution|Analyst	1714407|10|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117131.wiff
Acquisition Date	11/2/2017 15:13:58	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117131.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	28910	13C4_PFBA	123800	N/A	33.1	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	34230	13C5_PFPeA	184200	N/A	43.2	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	41960	13C3_PFBS	120000	N/A	35.5	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.95 (5.89)	15080	13C3_PFBS	120000	N/A	28.4	N/A	0.36/ 0.45		

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LCMSMS#6

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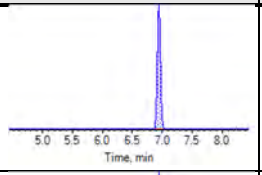
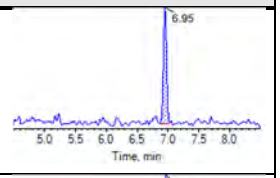
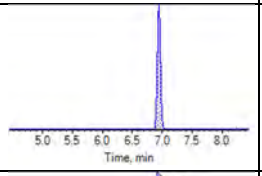
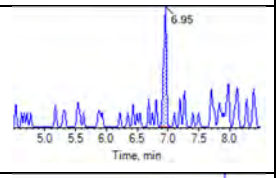
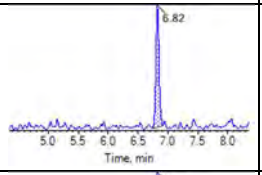
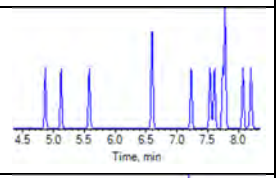
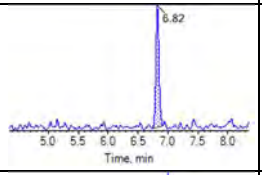
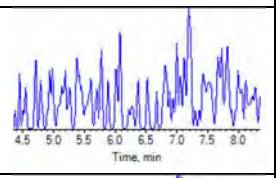
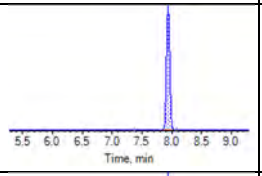
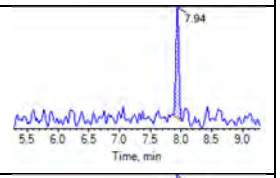
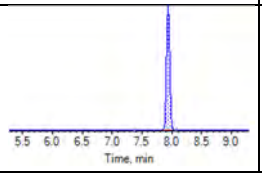
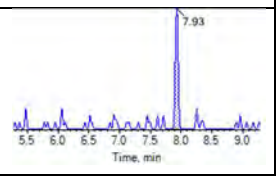
PFC103117131.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	48040	13C5_PFHxA	222000	N/A	57.0	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	2526	13C5_PFHxA	222000	N/A	42.4	N/A	0.05/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	28020	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	28020	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.94 (7.93)	23250	13C4_PFHpA	198500	N/A	28.0	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	7654	13C4_PFHpA	198500	N/A	35.3	N/A	0.33/ 0.26		

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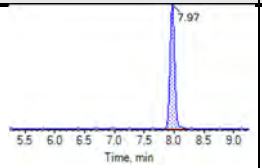
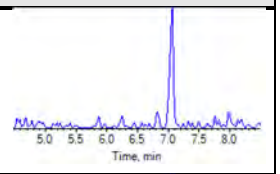
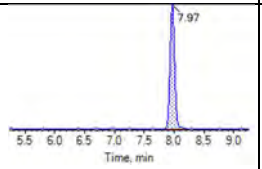
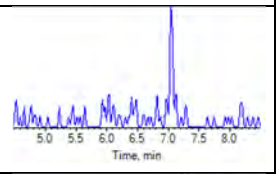
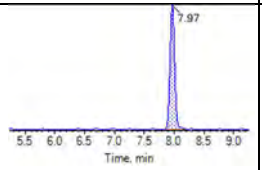
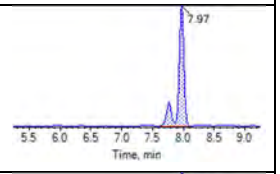
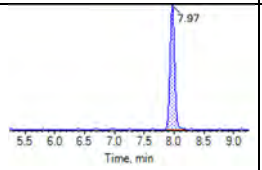
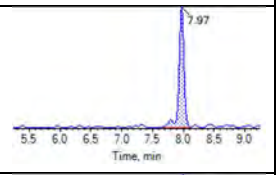
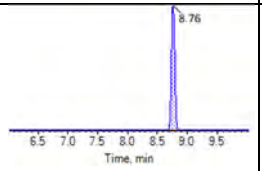
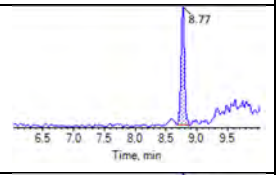
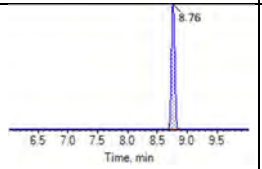
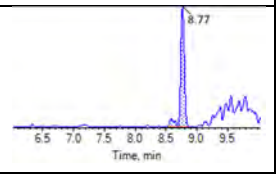
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	59700	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	59700	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	173800	13C3_PFHxS	59700	N/A	150.9	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	41560	13C3_PFHxS	59700	N/A	142.9	N/A	0.24/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	93700	13C8_PFOA	181300	N/A	122.5	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	39650	13C8_PFOA	181300	N/A	138.9	N/A	0.42/ 0.37		

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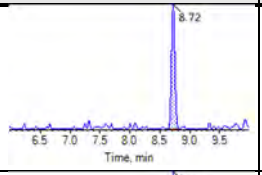
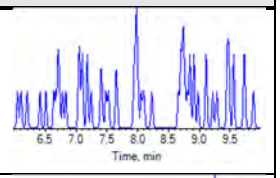
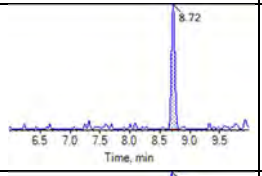
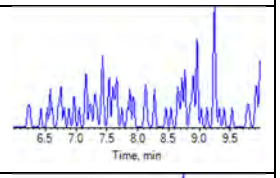
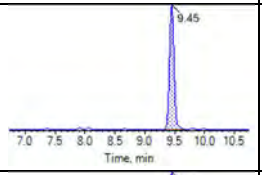
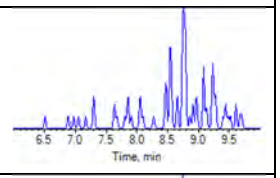
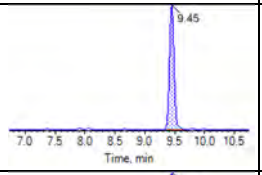
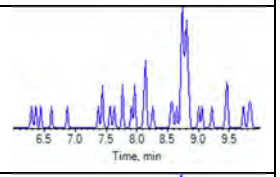
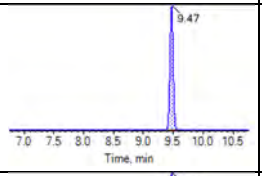
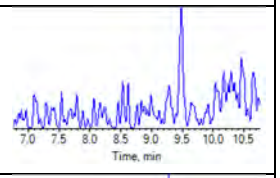
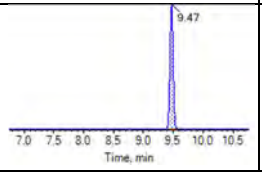
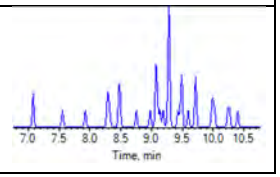
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	26120	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	26120	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	192600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	192600	N/A	N/A	N/A	N/A/ 0.24		

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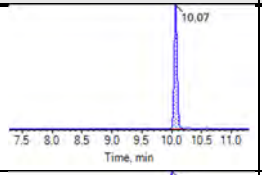
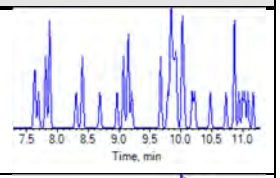
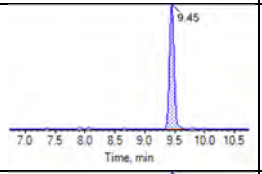
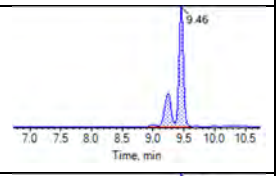
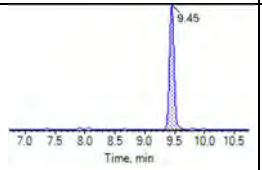
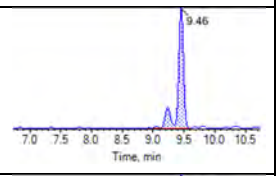
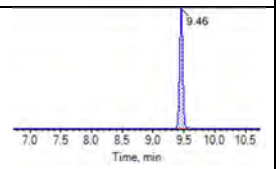
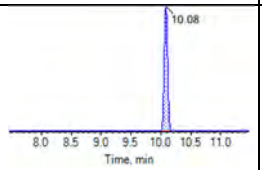
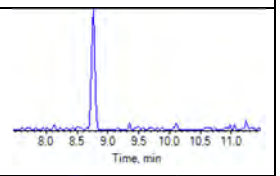
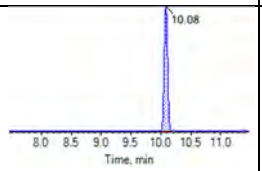
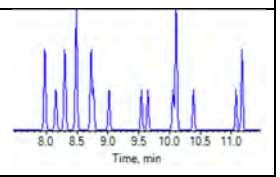
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	378900	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	506000	13C8_PFOS	52210	N/A	596.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	79270	13C8_PFOS	52210	N/A	632.8	N/A	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1124000	N/A	N/A	N/A	670.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	110100	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	110100	N/A	N/A	N/A	N/A/ 0.13		

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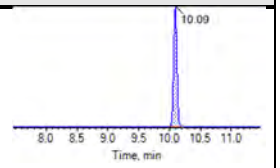
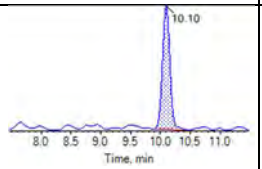
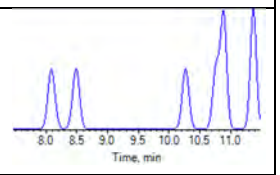
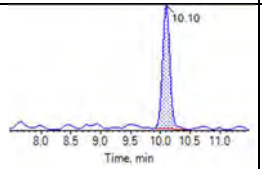
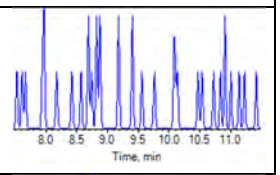
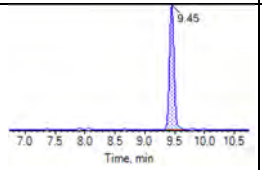
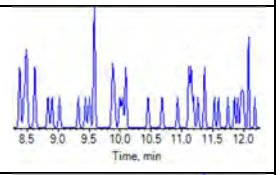
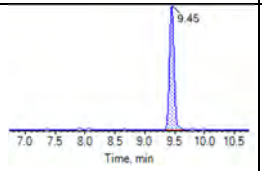
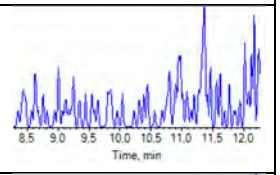
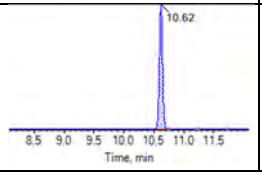
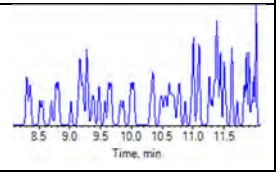
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	795200	N/A	N/A	N/A	689.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	20700	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	20700	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	134300	N/A	N/A	N/A	N/A/ 1.00		

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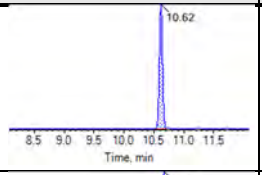
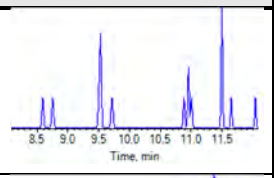
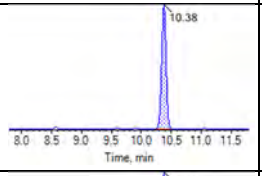
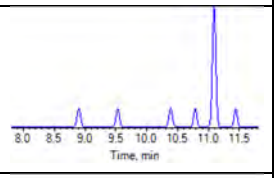
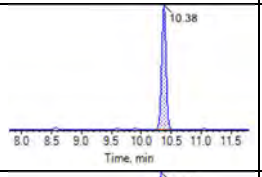
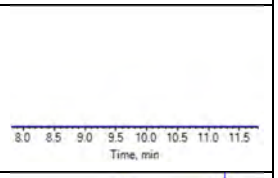
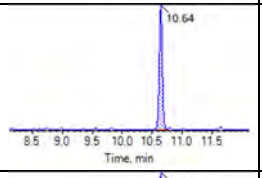
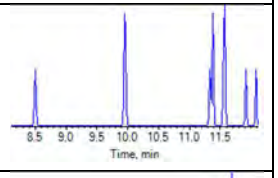
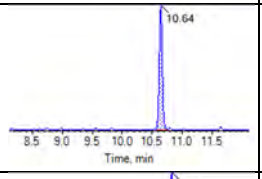
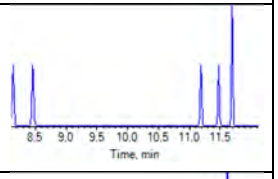
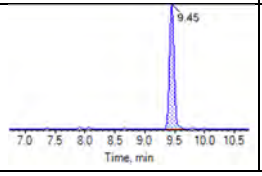
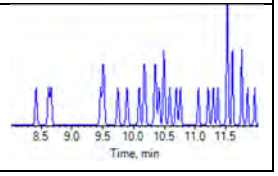
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	134300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42320	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42320	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	45600	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	45600	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 1.00		

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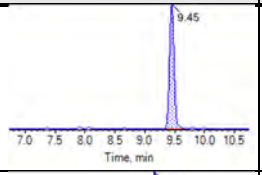
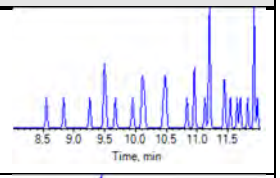
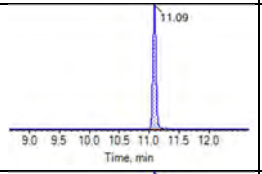
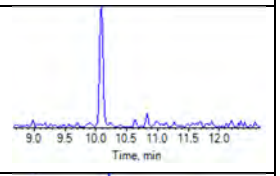
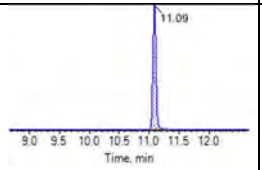
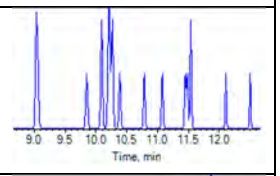
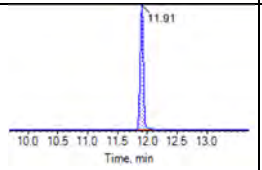
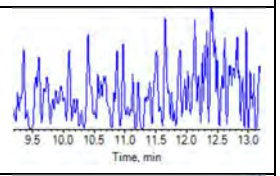
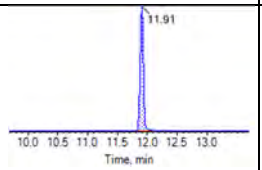
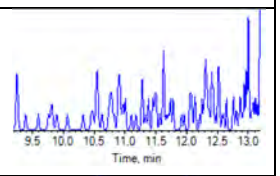
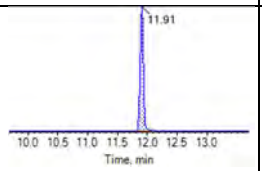
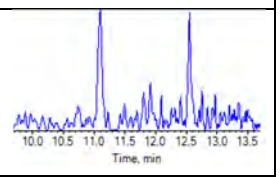
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	52210	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	126800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	126800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	90410	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	90410	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	90410	N/A	N/A	N/A	N/A/ 1.00		

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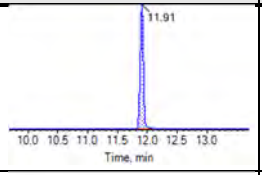
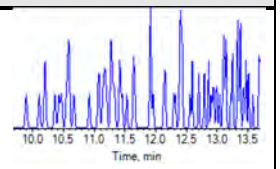
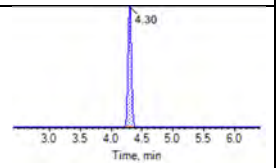
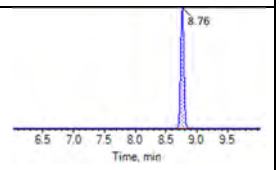
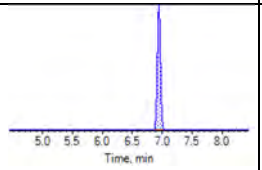
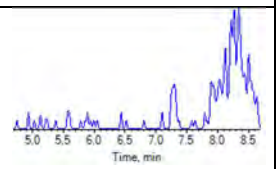
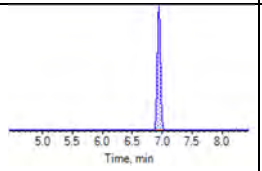
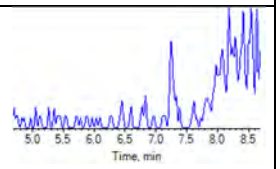
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	90410	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1270000	N/A	N/A	N/A	734.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	896100	N/A	N/A	N/A	728.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	222000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	222000	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**100**
Run Date:	**11/02/2017 15:35**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117132.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.575	ug/L	0.088	0.179	0.267
307-24-4	Perfluorohexanoic acid (PFHxA)		1.87	ug/L	0.088	0.179	0.267

JISB GC
11/06/2017 11/06/2017

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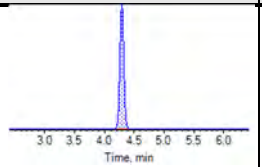
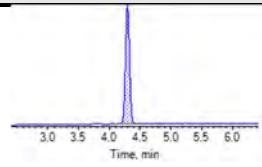
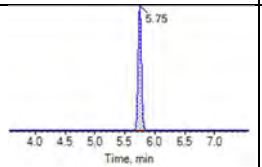
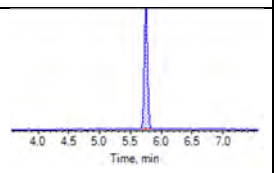
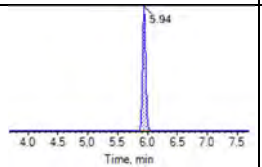
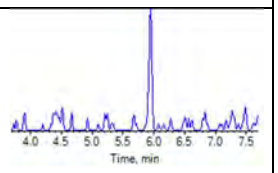
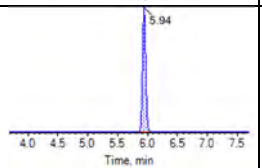
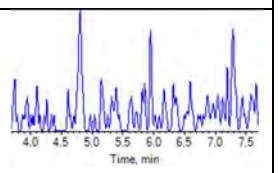
PFC103117132.wiff			
Sample Name	436518002	**Injection Vial**	10
Batch|Dilution|Analyst	1714407|100|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117132.wiff
Acquisition Date	11/2/2017 15:35:18	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117132.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	198700	13C4_PFBA	116700	N/A	241.7	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	838100	13C5_PFPeA	171300	N/A	1137.4	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	118000	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	118000	N/A	N/A	N/A	N/A/ 0.45		

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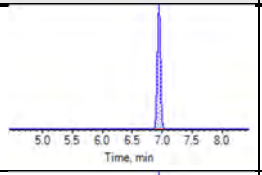
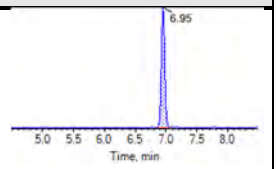
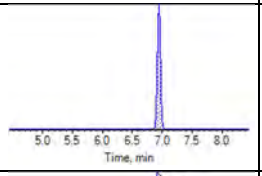
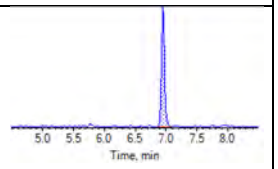
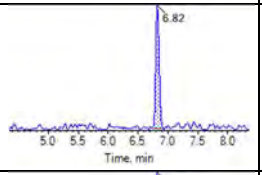
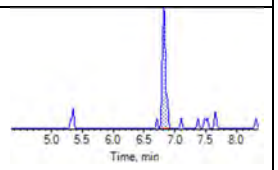
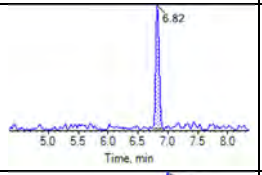
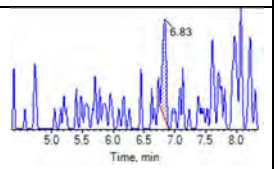
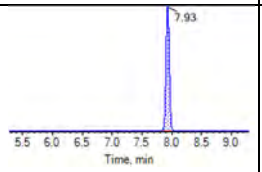
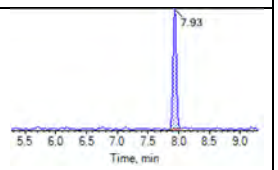
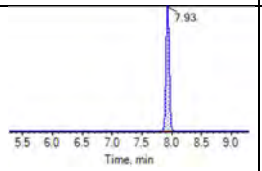
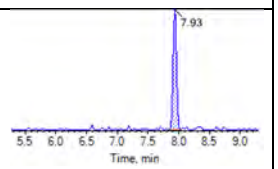
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	587300	13C5_PFHxA	220100	N/A	703.0	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	40640	13C5_PFHxA	220100	N/A	688.1	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.82 (6.80)	3481	13C2_4:2 FTS	23900	N/A	24.3	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.83 (6.80)	1537	13C2_4:2 FTS	23900	N/A	14.9	N/A	0.44/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	162600	13C4_PFHpA	180300	N/A	215.7	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	43420	13C4_PFHpA	180300	N/A	220.3	N/A	0.27/ 0.26		

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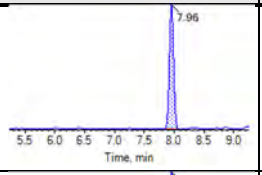
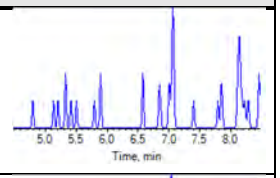
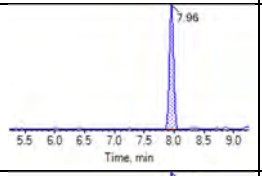
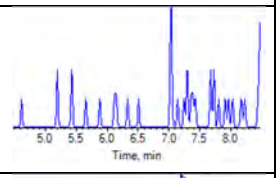
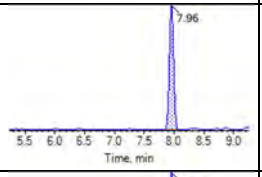
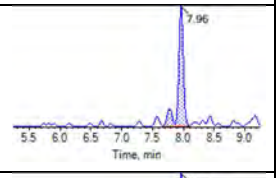
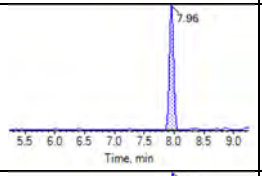
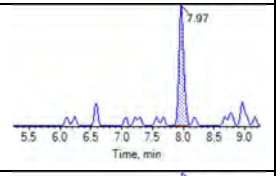
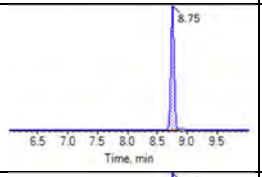
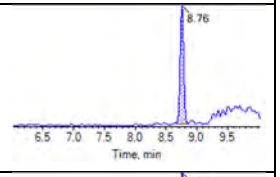
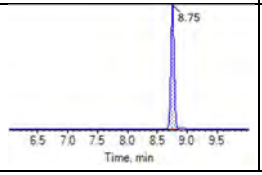
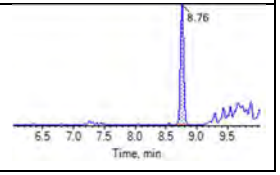
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	56260	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	56260	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	15330	13C3_PFHxS	56260	N/A	14.1	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	4991	13C3_PFHxS	56260	N/A	18.2	N/A	0.33/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	104600	13C8_PFOA	183400	N/A	135.1	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	44690	13C8_PFOA	183400	N/A	154.7	N/A	0.43/ 0.37		

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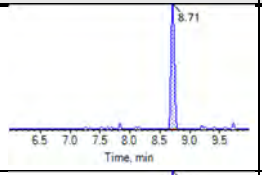
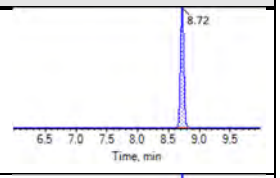
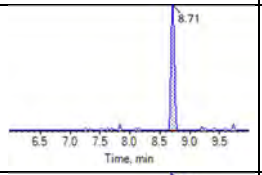
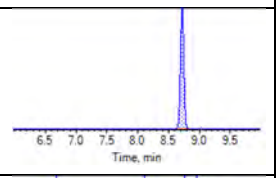
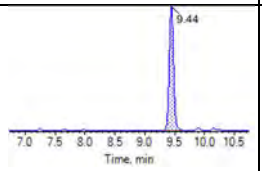
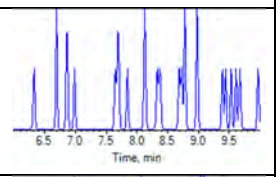
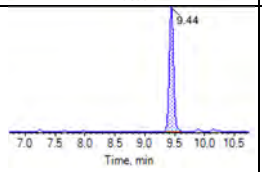
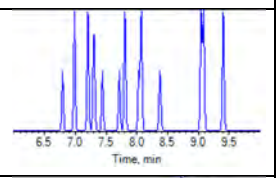
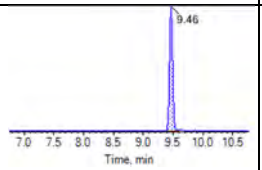
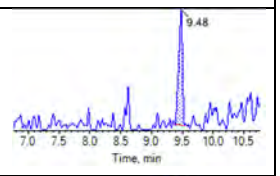
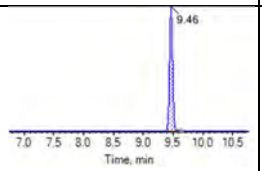
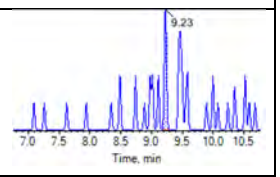
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	477900	13C2_6:2 FTS	33990	N/A	2666.3	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	425700	13C2_6:2 FTS	33990	N/A	2644.6	N/A	0.89/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	11880	13C9_PFNA	176600	N/A	20.0	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.23 (9.47)	1651	13C9_PFNA	176600	N/A	11.5	N/A	0.14/ 0.24		

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LCMSMS#6

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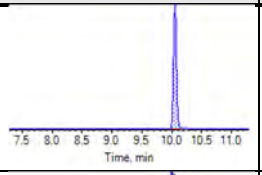
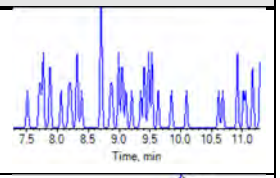
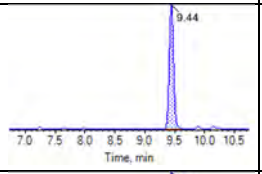
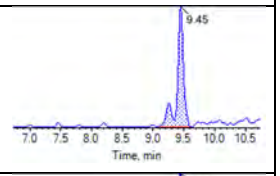
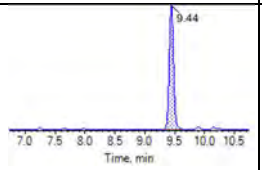
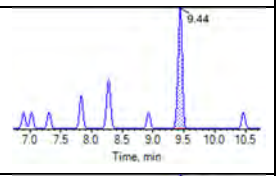
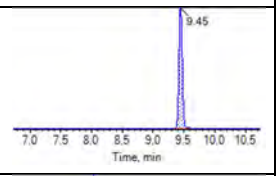
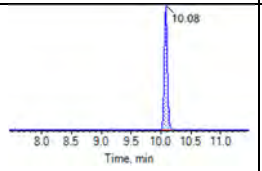
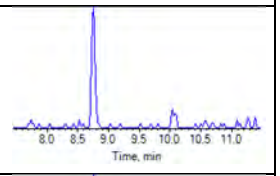
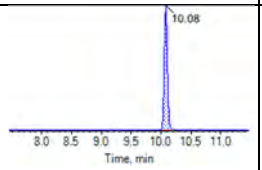
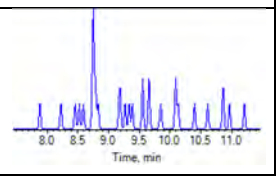
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	387300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	28010	13C8_PFOS	47060	N/A	36.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	2326	13C8_PFOS	47060	N/A	20.6	N/A	0.08/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1006000	N/A	N/A	N/A	599.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	92230	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	92230	N/A	N/A	N/A	N/A/ 0.13		

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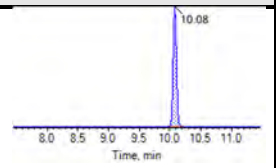
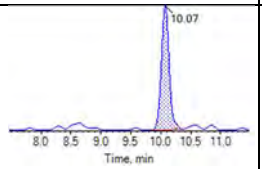
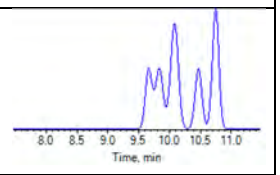
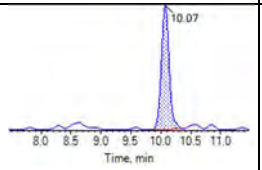
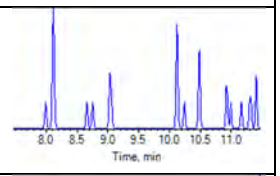
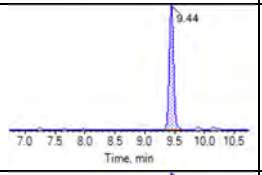
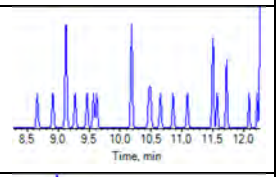
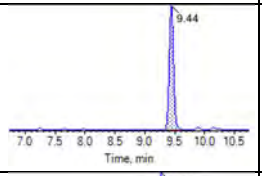
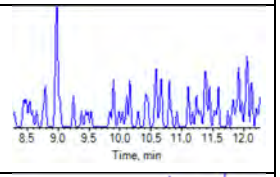
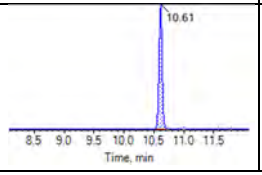
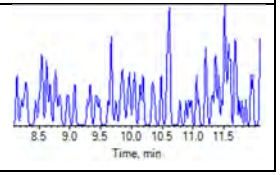
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	675700	N/A	N/A	N/A	585.7	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	18810	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	18810	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	122900	N/A	N/A	N/A	N/A/ 1.00		

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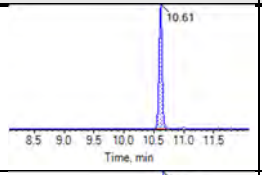
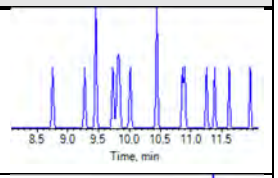
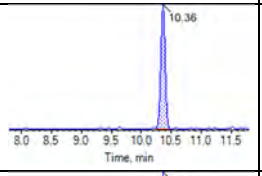
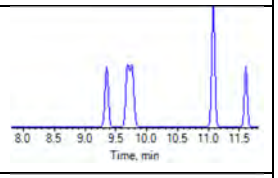
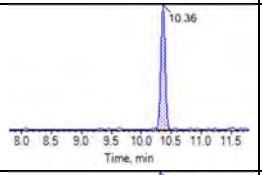
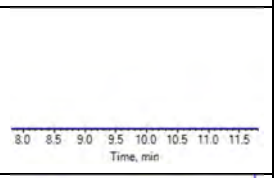
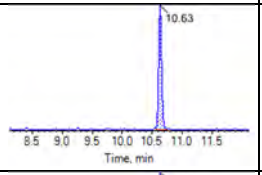
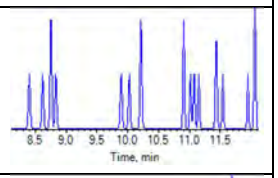
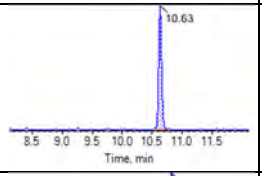
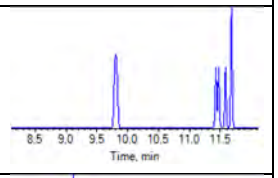
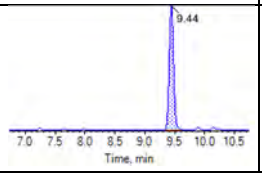
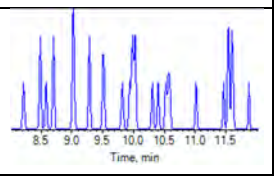
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	122900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	38010	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	38010	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	38630	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	38630	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 1.00		

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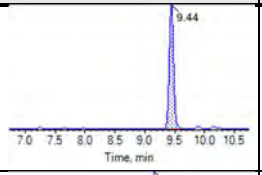
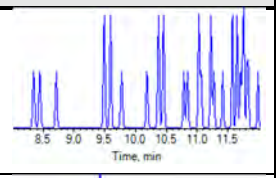
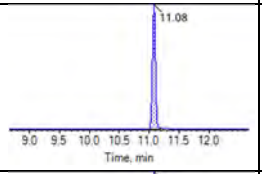
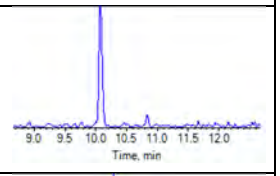
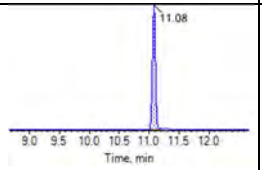
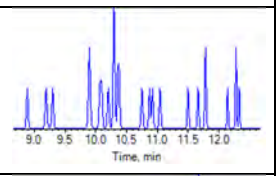
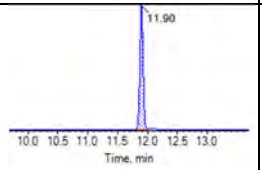
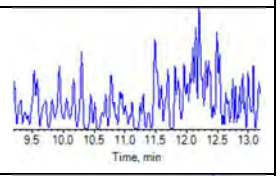
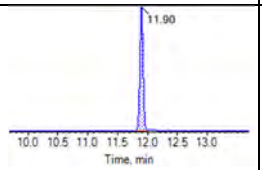
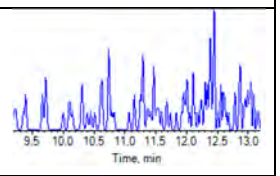
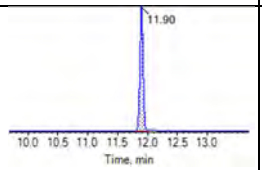
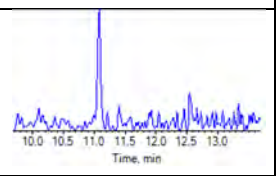
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	47060	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	124500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	124500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	84380	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	84380	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	84380	N/A	N/A	N/A	N/A/ 1.00		

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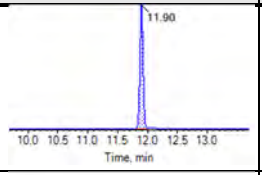
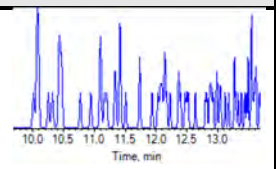
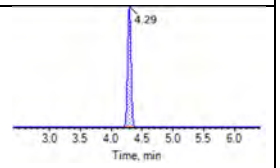
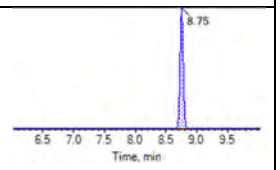
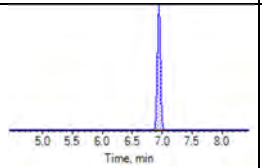
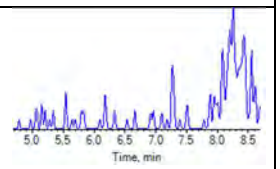
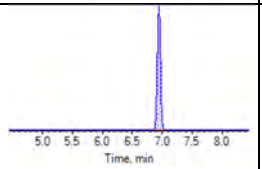
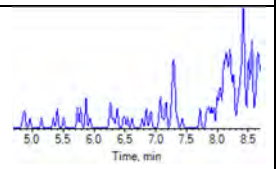
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	84380	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1219000	N/A	N/A	N/A	704.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	809800	N/A	N/A	N/A	658.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	220100	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	220100	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 08:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518003**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-09**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW09_1017DL**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**5**
Run Date:	**11/02/2017 16:39**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.13 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117135.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0591	ug/L	0.00307	0.00613	0.00929

JISB GC
11/06/2017 11/06/2017

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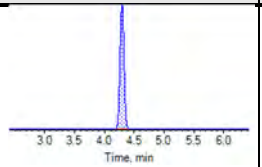
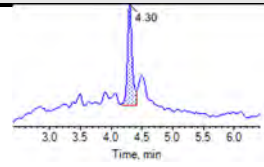
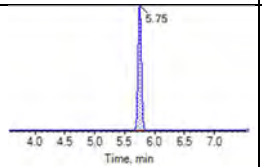
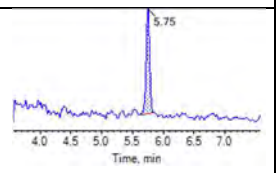
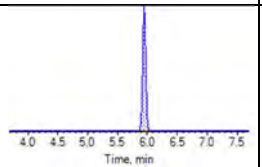
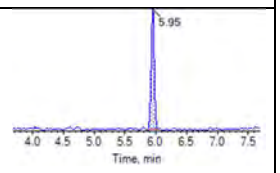
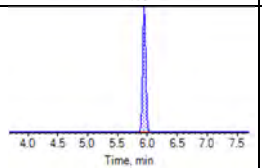
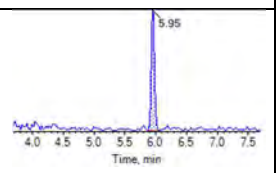
PFC103117135.wiff			
Sample Name	436518003	**Injection Vial**	13
Batch|Dilution|Analyst	1714407|5|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117135.wiff
Acquisition Date	11/2/2017 16:39:31	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117135.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	56770	13C4_PFBA	135300	N/A	59.6	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	55200	13C5_PFPeA	197500	N/A	65.0	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	39960	13C3_PFBS	133800	N/A	30.3	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.95 (5.89)	19830	13C3_PFBS	133800	N/A	33.5	N/A	0.50/ 0.45		

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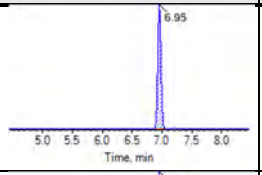
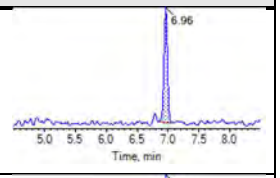
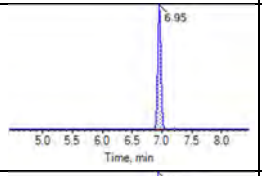
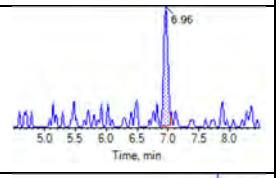
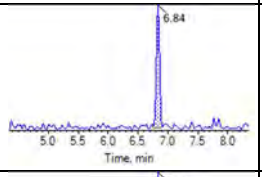
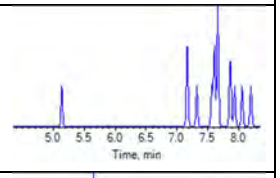
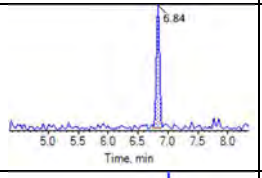
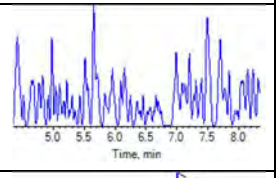
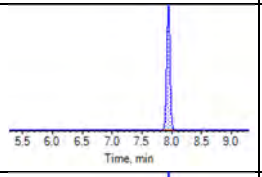
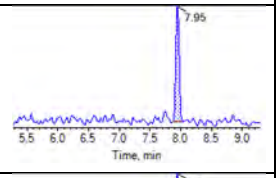
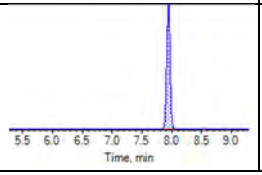
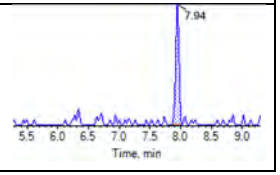
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.96 (6.92)	75850	13C5_PFHxA	235600	N/A	84.8	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.96 (6.92)	6311	13C5_PFHxA	235600	N/A	99.8	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	30500	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	30500	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	54320	13C4_PFHpA	197000	N/A	65.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.94 (7.93)	11310	13C4_PFHpA	197000	N/A	52.5	N/A	0.21/ 0.26		

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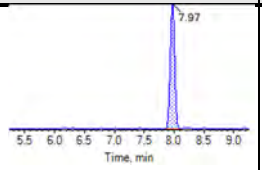
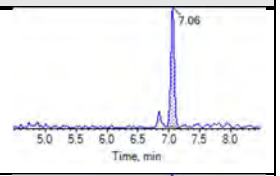
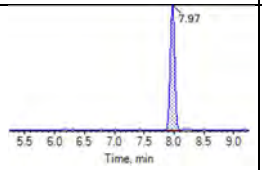
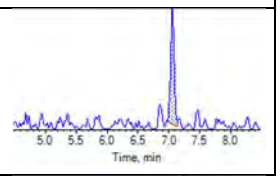
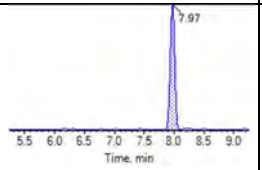
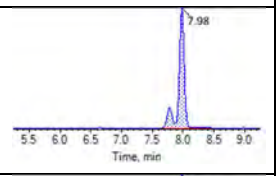
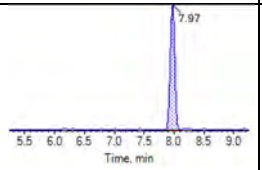
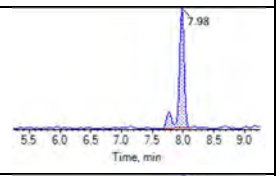
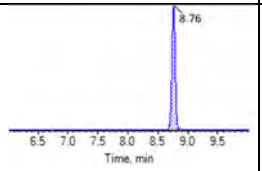
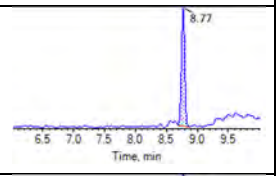
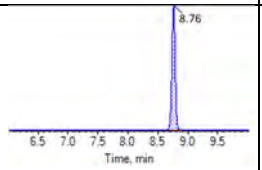
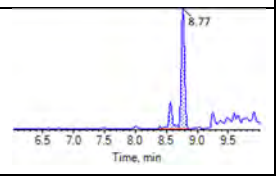
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.06 (7.02)	39830	13C3_PFHxS	58570	N/A	32.5	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.06 (7.02)	12540	13C3_PFHxS	58570	N/A	29.3	N/A	0.31/ 0.35		
PFHxS	399.0 / 80.0	7.98 (7.96)	336400	13C3_PFHxS	58570	N/A	297.8	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.98 (7.96)	68360	13C3_PFHxS	58570	N/A	239.6	N/A	0.20/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	149100	13C8_PFOA	190700	N/A	185.3	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	72520	13C8_PFOA	190700	N/A	241.6	N/A	0.49/ 0.37		

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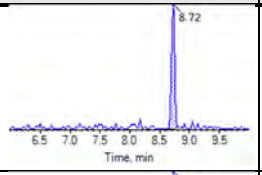
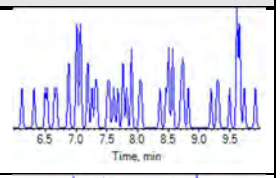
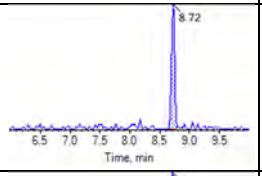
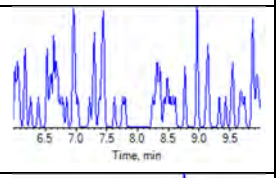
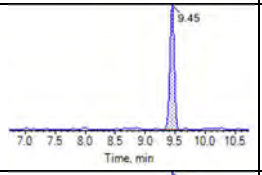
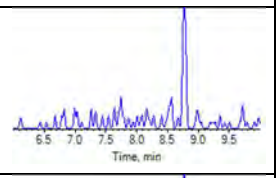
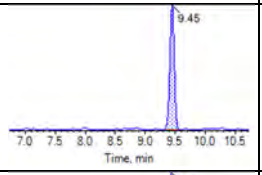
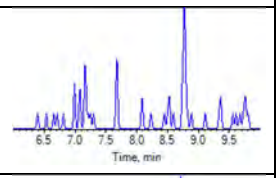
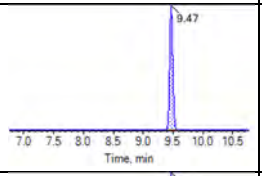
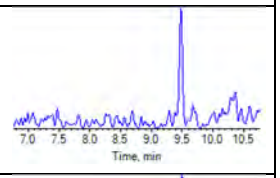
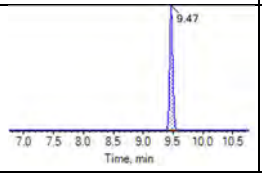
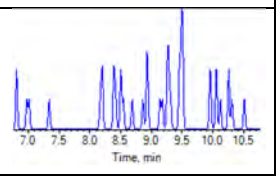
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	24410	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	24410	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.77)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	172800	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	172800	N/A	N/A	N/A	N/A/ 0.24		

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LCMSMS#6

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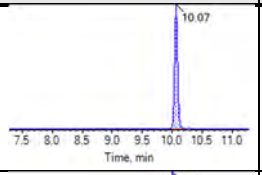
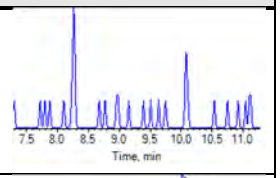
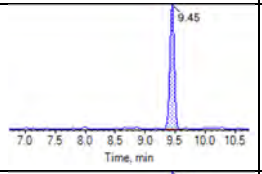
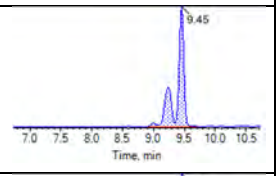
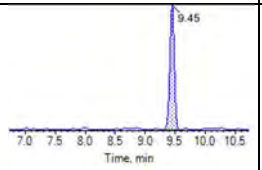
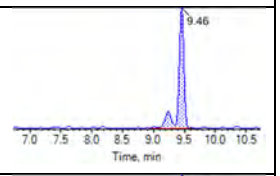
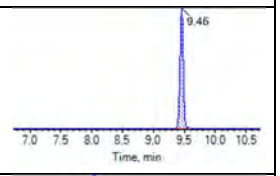
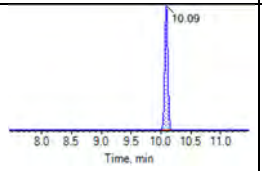
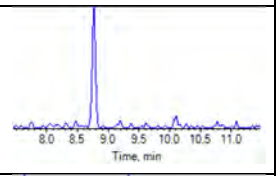
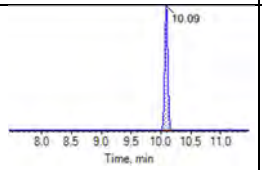
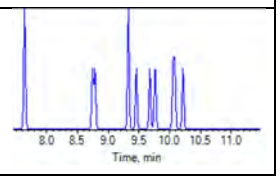
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	399400	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	523800	13C8_PFOS	50670	N/A	636.3	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	74320	13C8_PFOS	50670	N/A	611.3	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1095000	N/A	N/A	N/A	653.0	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	111500	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	111500	N/A	N/A	N/A	N/A/ 0.13		

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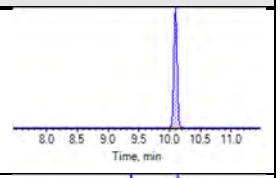
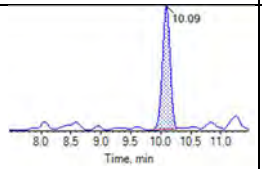
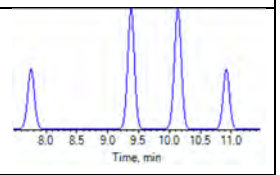
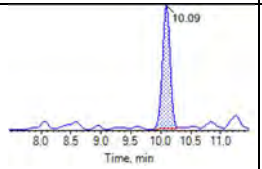
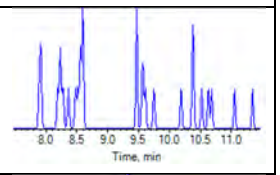
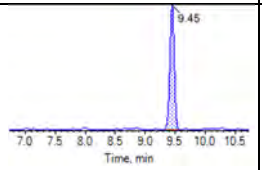
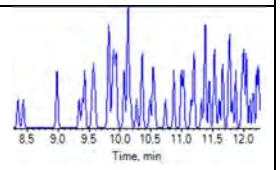
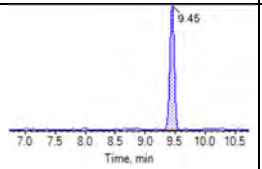
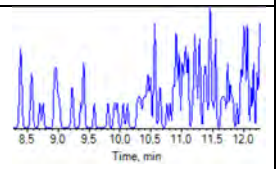
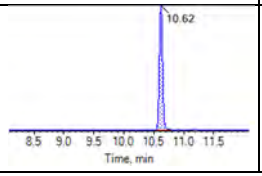
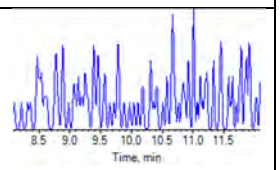
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	824300	N/A	N/A	N/A	714.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	16730	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	16730	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	147800	N/A	N/A	N/A	N/A/ 1.00		

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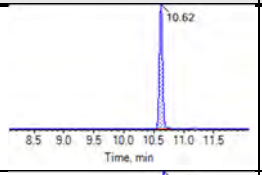
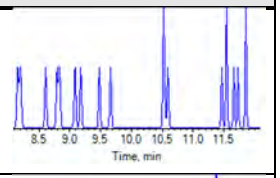
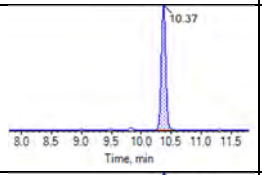
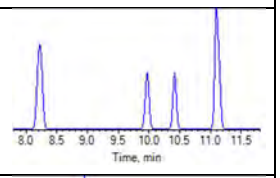
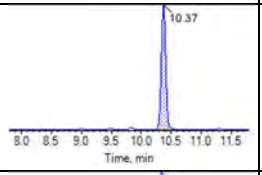
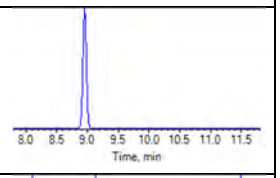
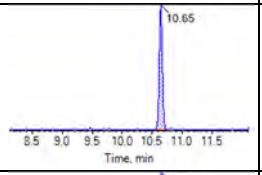
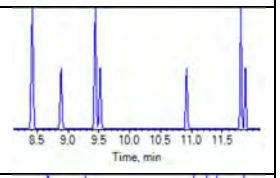
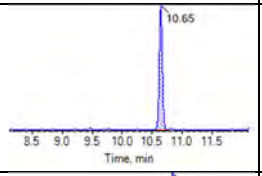
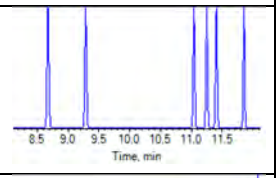
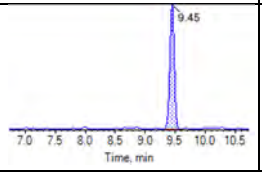
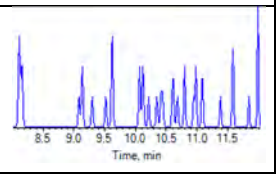
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	147800	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42850	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	42850	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	40250	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	40250	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 1.00		

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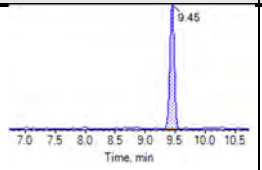
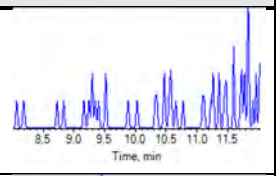
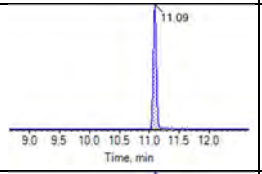
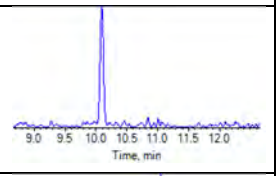
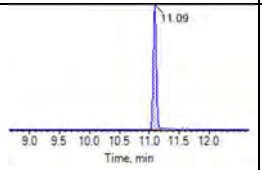
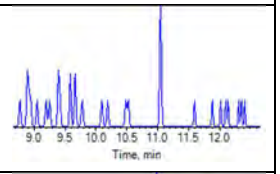
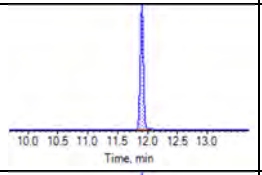
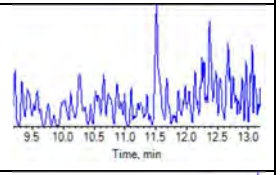
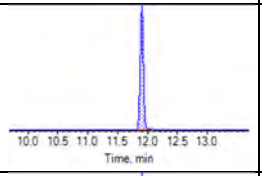
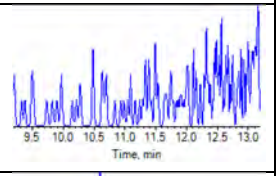
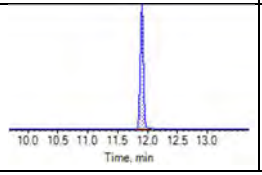
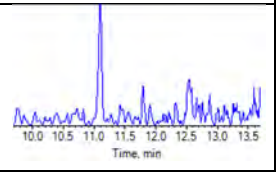
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	50670	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	122800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	122800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	93480	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	93480	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	93480	N/A	N/A	N/A	N/A/ 1.00		

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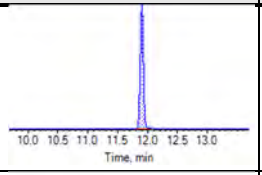
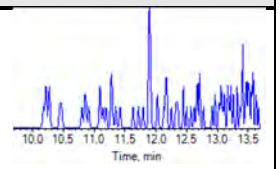
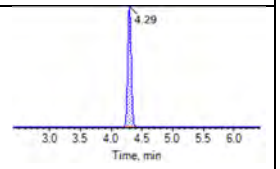
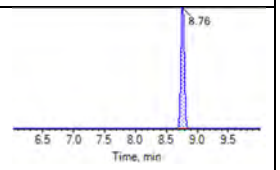
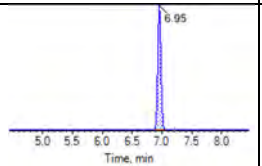
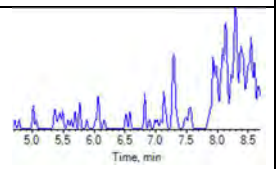
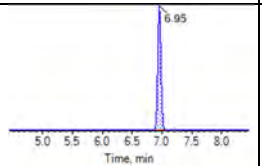
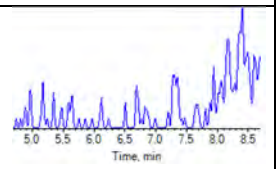
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	93480	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1302000	N/A	N/A	N/A	752.4	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	856500	N/A	N/A	N/A	696.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	235600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	235600	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 08:10**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518003**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**16-MW-09**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**16MW09_1017**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 17:00**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**269.13 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117136.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00247	ug/L	0.00123	0.00247	0.00372
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00247	ug/L	0.00123	0.00247	0.00372
375-73-5	Perfluorobutanesulfonate (PFBS)		0.00301	ug/L	0.000613	0.00124	0.00165
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00124	ug/L	0.000725	0.00124	0.00186
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00124	ug/L	0.000613	0.00124	0.00186
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.00603	ug/L	0.000613	0.00124	0.00186
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0254	ug/L	0.000613	0.00113	0.00169
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0094	ug/L	0.000613	0.00124	0.00186
375-95-1	Perfluorononanoic acid (PFNA)	J	0.00153	ug/L	0.000613	0.00123	0.00186
335-67-1	Perfluorooctanoic acid (PFOA)		0.0165	ug/L	0.00065	0.00123	0.00186
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00123	ug/L	0.000613	0.00123	0.00186
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00123	ug/L	0.000613	0.00123	0.00186

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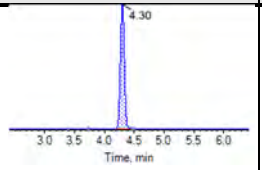
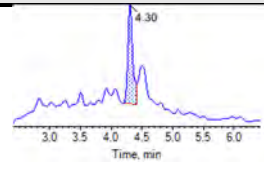
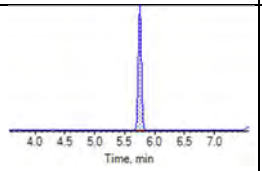
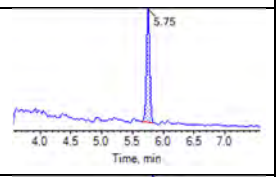
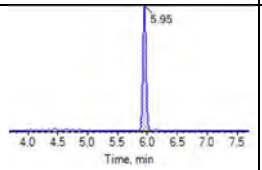
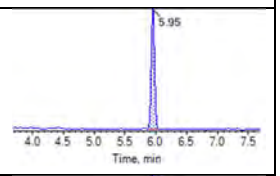
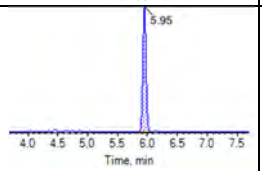
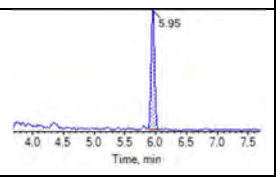
Sample Name	436518003	**Injection Vial**	14
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117136.wiff
Acquisition Date	11/2/2017 17:00:55	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117136.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	275800	13C4_PFBA	123700	N/A	316.3	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	317700	13C5_PFPeA	214300	N/A	344.6	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	249200	13C3_PFBS	155900	N/A	162.2	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.95 (5.89)	101900	13C3_PFBS	155900	N/A	147.7	N/A	0.41/ 0.45		

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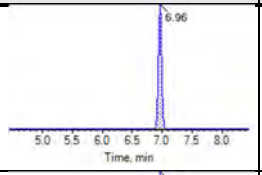
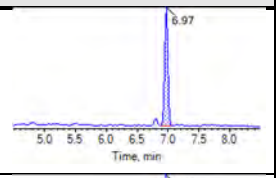
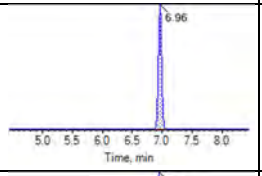
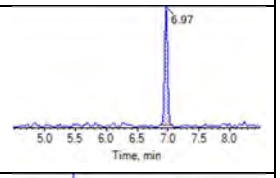
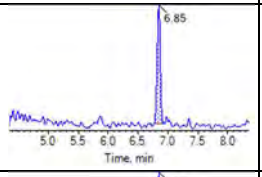
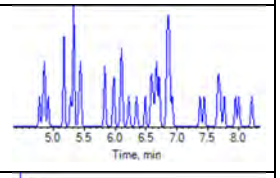
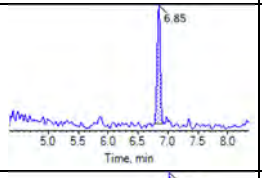
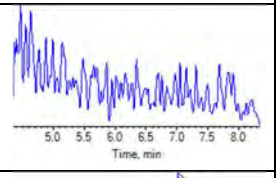
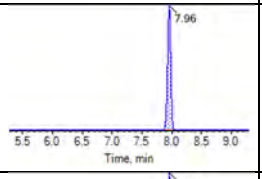
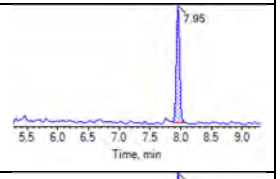
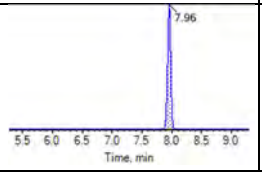
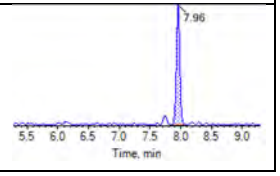
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.97 (6.92)	489700	13C5_PFHxA	254900	N/A	506.1	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.97 (6.92)	33160	13C5_PFHxA	254900	N/A	484.9	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	41860	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	41860	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	291400	13C4_PFHpA	214600	N/A	324.6	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.96 (7.93)	72980	13C4_PFHpA	214600	N/A	311.0	N/A	0.25/ 0.26		

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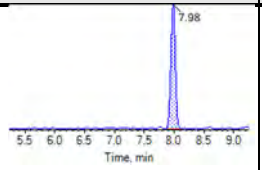
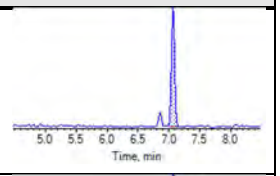
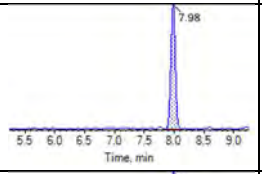
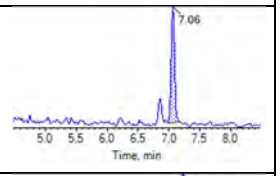
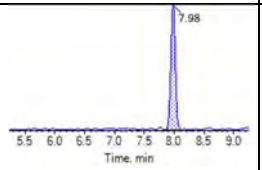
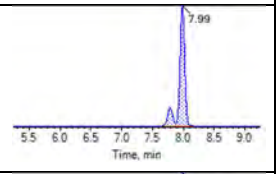
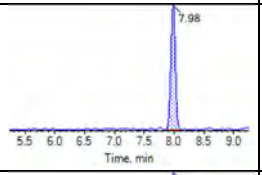
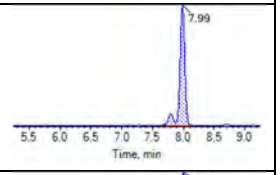
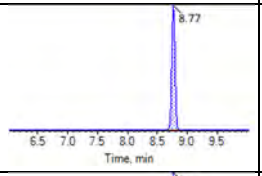
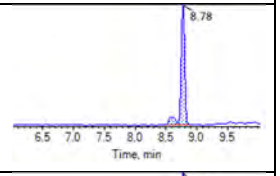
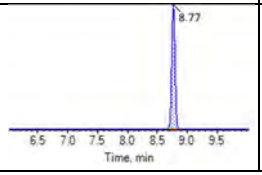
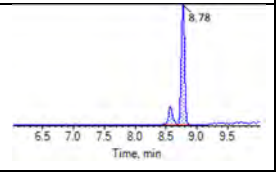
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.07 (7.02)	166900	13C3_PFHxS	74550	N/A	106.9	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.06 (7.02)	62860	13C3_PFHxS	74550	N/A	115.3	N/A	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.99 (7.96)	1964000	13C3_PFHxS	74550	N/A	1366.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.99 (7.96)	484300	13C3_PFHxS	74550	N/A	1333.8	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.78 (8.75)	858800	13C8_PFOA	229800	N/A	885.7	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.78 (8.75)	390400	13C8_PFOA	229800	N/A	1079.0	N/A	0.45/ 0.37		

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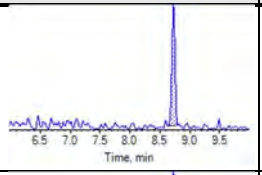
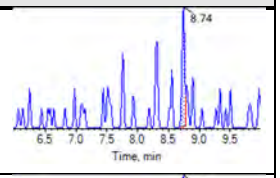
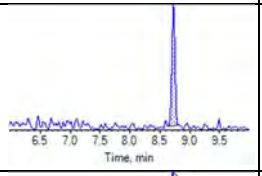
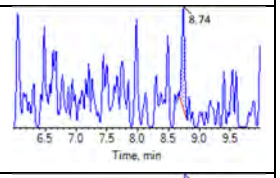
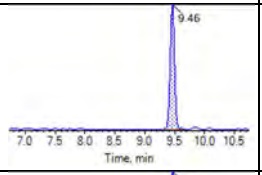
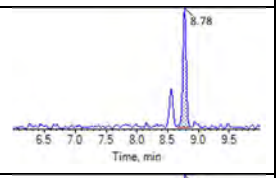
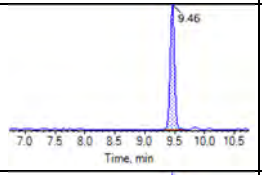
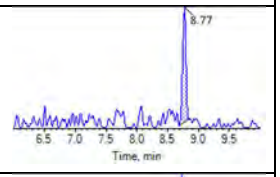
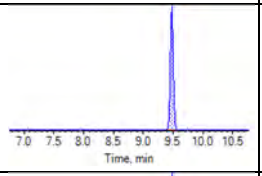
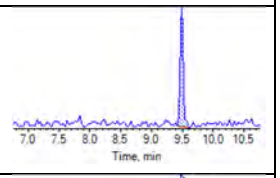
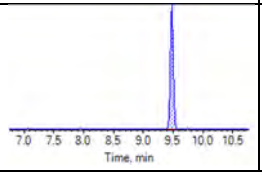
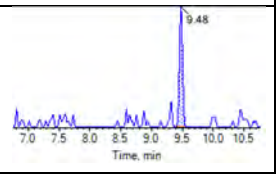
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.74 (8.72)	2401	13C2_6:2 FTS	32570	N/A	14.0	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.74 (8.72)	2754	13C2_6:2 FTS	32570	N/A	17.9	N/A	1.15/ 0.91		
PFHpS	449.0 / 80.0	8.78 (8.76)	64160	13C8_PFOS	49900	N/A	65.9	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.77 (8.76)	13260	13C8_PFOS	49900	N/A	67.7	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.49 (9.47)	52310	13C9_PFNA	188900	N/A	82.4	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.48 (9.47)	9309	13C9_PFNA	188900	N/A	60.8	N/A	0.18/ 0.24		

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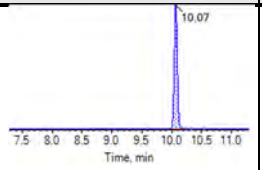
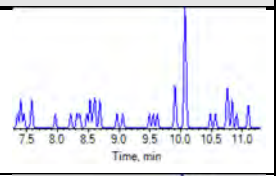
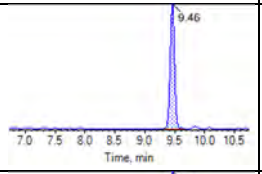
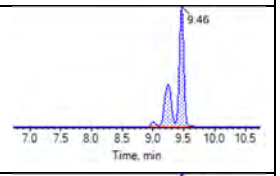
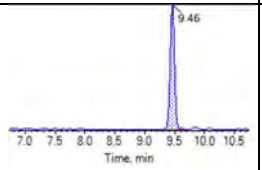
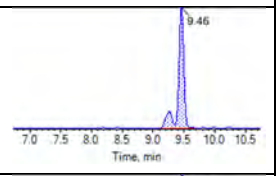
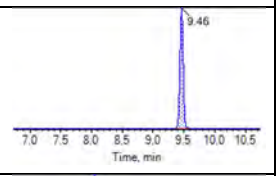
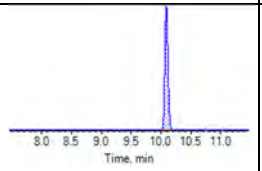
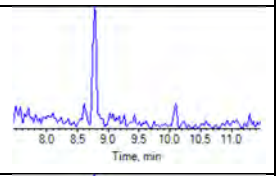
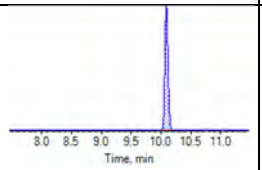
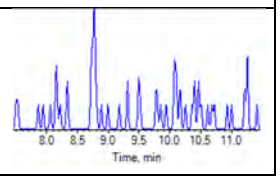
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	365500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	2972000	13C8_PFOS	49900	N/A	3665.9	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	425900	13C8_PFOS	49900	N/A	3556.8	N/A	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1181000	N/A	N/A	N/A	704.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.09)	N/A	13C6_PFDA	97550	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	97550	N/A	N/A	N/A	N/A/ 0.13		

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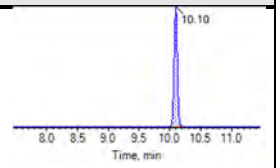
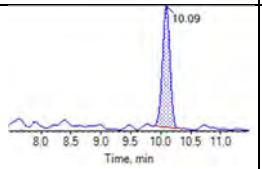
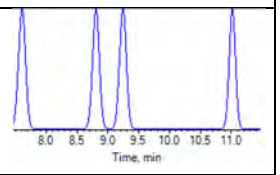
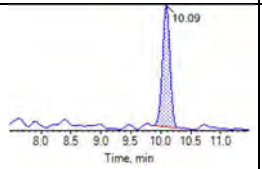
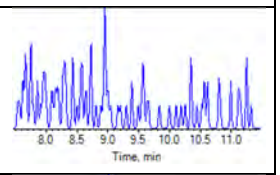
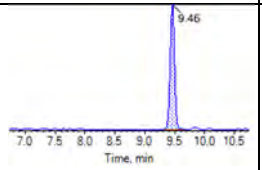
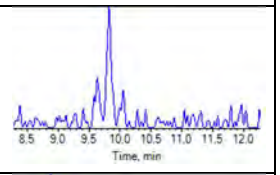
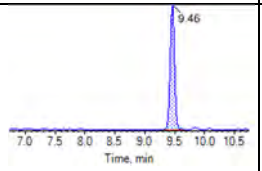
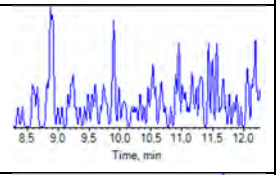
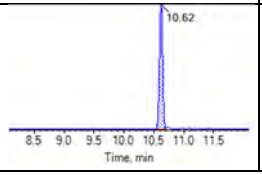
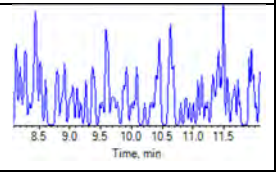
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	789400	N/A	N/A	N/A	684.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25050	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25050	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	49900	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	49900	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	151300	N/A	N/A	N/A	N/A/ 1.00		

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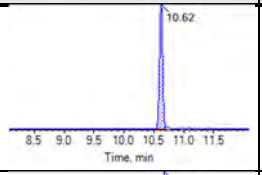
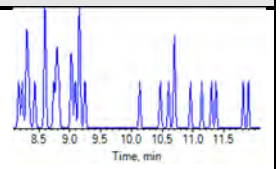
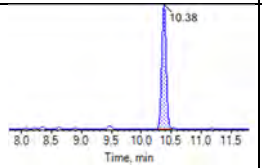
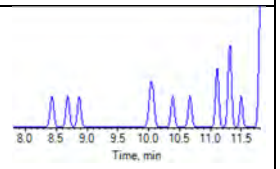
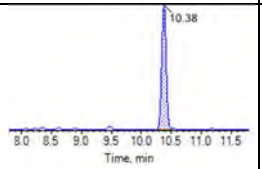
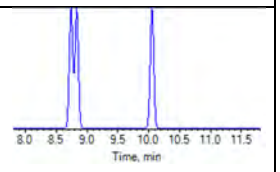
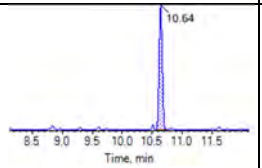
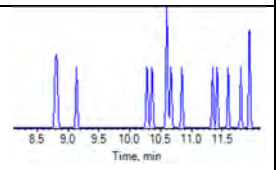
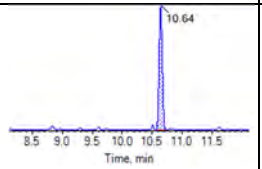
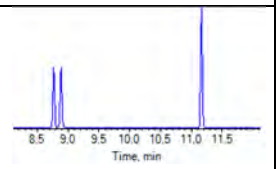
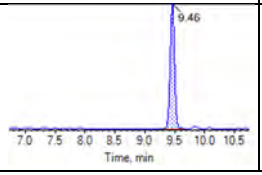
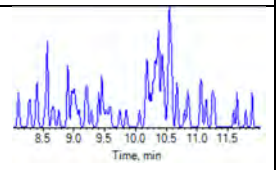
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	151300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	40200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	40200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	33840	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	33840	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	49900	N/A	N/A	N/A	N/A/ 1.00		

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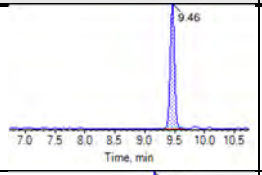
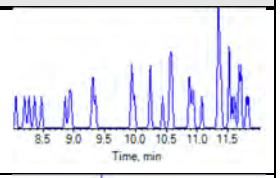
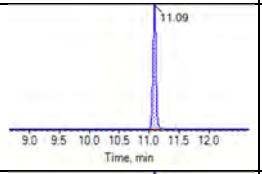
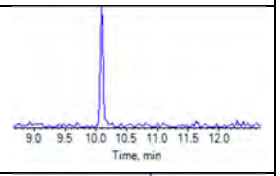
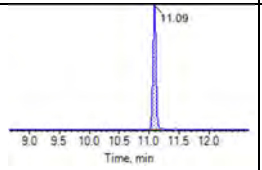
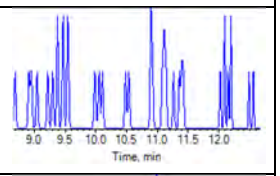
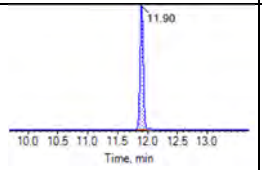
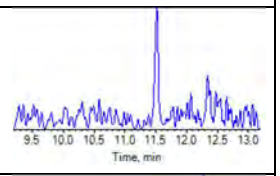
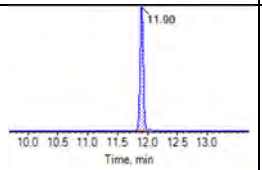
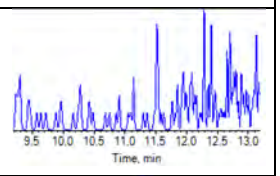
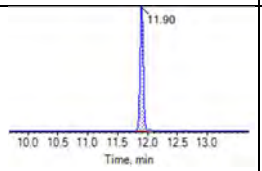
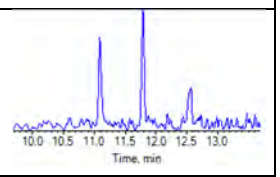
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	49900	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	125700	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	125700	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	93390	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	93390	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	93390	N/A	N/A	N/A	N/A/ 1.00		

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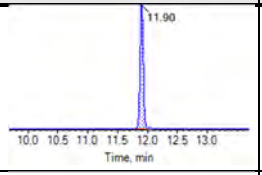
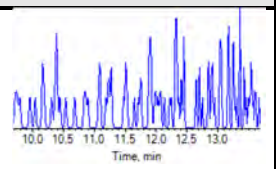
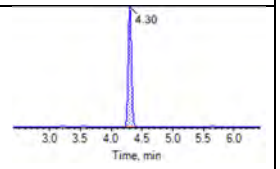
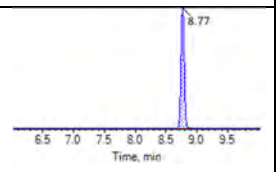
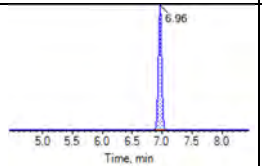
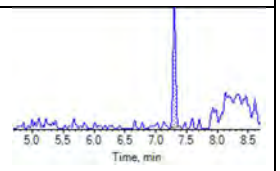
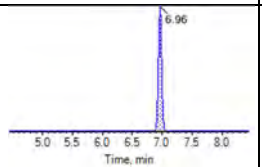
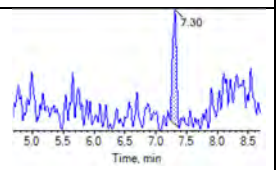
PFC103117136.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	93390	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1293000	N/A	N/A	N/A	747.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	977800	N/A	N/A	N/A	794.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.30 (7.26)	11180	13C5_PFHxA	254900	N/A	17.6	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.30 (7.26)	8093	13C5_PFHxA	254900	N/A	17.0	N/A	0.72/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/27/2017 11:15**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**436518002**	**Date Received:**	**10/28/2017 08:50**		
Client Sample:	**29-MW-02**	**Client:**	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**29MW02_1017DL2**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**10**
Run Date:	**11/03/2017 20:50**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**187.52 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117192.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
375-95-1	Perfluorononanoic acid (PFNA)		0.069	ug/L	0.0088	0.0176	0.0267
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0825	ug/L	0.0088	0.0176	0.0267
335-67-1	Perfluorooctanoic acid (PFOA)		0.421	ug/L	0.00933	0.0176	0.0267

JISB GC
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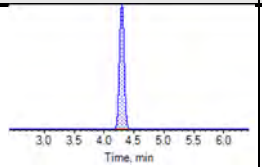
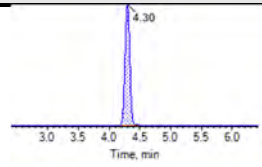
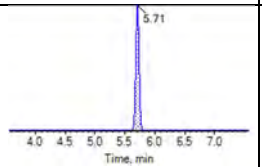
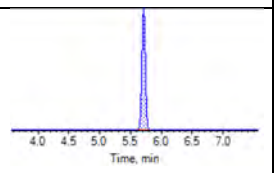
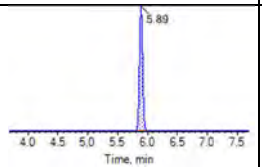
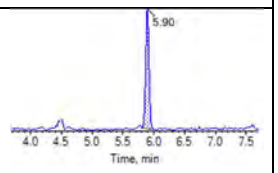
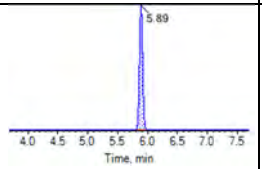
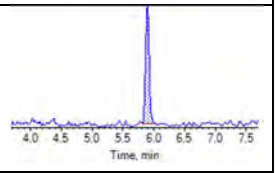
PFC103117192.wiff			
Sample Name	436518002	**Injection Vial**	29
Batch|Dilution|Analyst	1714407|10|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117192.wiff
Acquisition Date	11/3/2017 20:50:00	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117192.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	2936000	13C4_PFBA	172000	N/A	2422.6	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	11360000	13C5_PFPeA	267400	N/A	9876.7	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	41420	13C3_PFBS	189000	N/A	22.2	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	18400	13C3_PFBS	189000	N/A	22.0	N/A	0.44/ 0.45		

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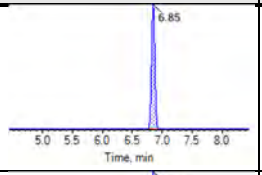
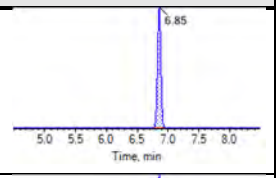
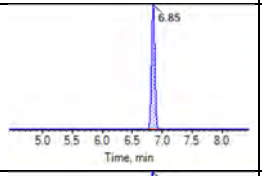
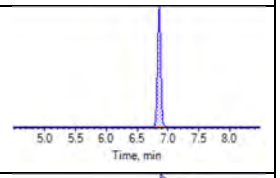
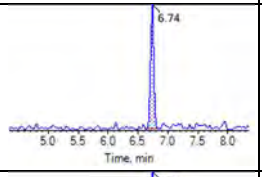
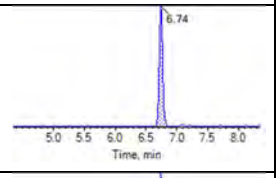
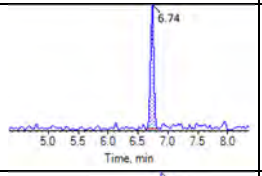
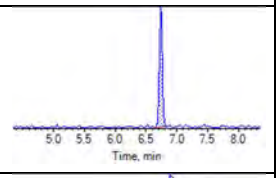
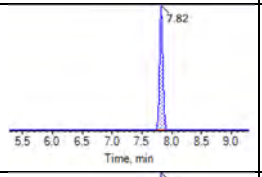
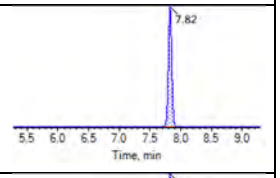
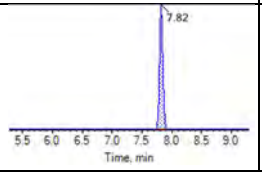
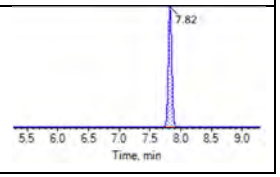
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.85 (6.92)	8524000	13C5_PFHxA	301900	N/A	7437.7	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.85 (6.92)	665400	13C5_PFHxA	301900	N/A	8212.5	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.74 (6.80)	54200	13C2_4:2 FTS	42260	N/A	214.3	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.74 (6.80)	49130	13C2_4:2 FTS	42260	N/A	270.3	N/A	0.91/ 0.72		
PFHpA	363.0 / 319.0	7.82 (7.93)	2062000	13C4_PFHpA	245100	N/A	2011.5	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.82 (7.93)	533200	13C4_PFHpA	245100	N/A	1989.3	N/A	0.26/ 0.26		

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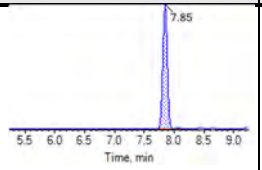
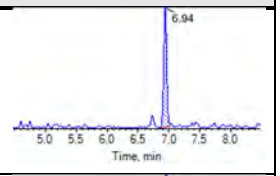
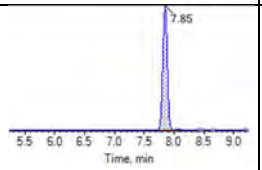
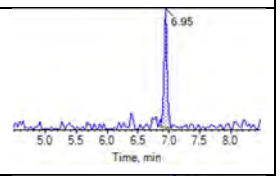
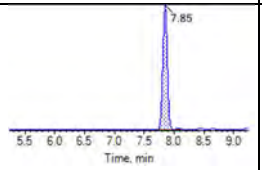
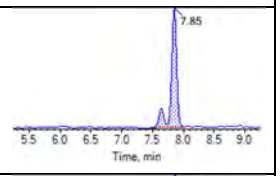
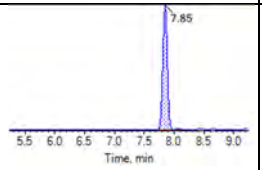
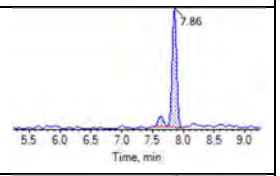
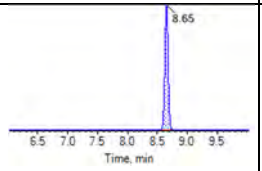
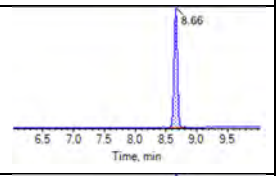
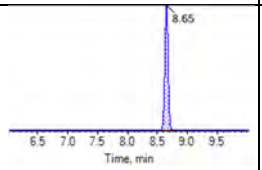
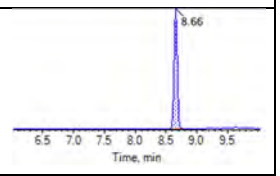
PFC103117192.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.94 (7.02)	31690	13C3_PFHxS	93190	N/A	16.2	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.95 (7.02)	14320	13C3_PFHxS	93190	N/A	21.0	N/A	0.45/ 0.35		
PFHxS	399.0 / 80.0	7.85 (7.96)	235900	13C3_PFHxS	93190	N/A	131.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.86 (7.96)	59210	13C3_PFHxS	93190	N/A	130.4	N/A	0.25/ 0.25		
PFOA	413.0 / 369.0	8.66 (8.75)	1716000	13C8_PFOA	257500	N/A	1579.0	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.66 (8.75)	630900	13C8_PFOA	257500	N/A	1556.2	N/A	0.37/ 0.37		

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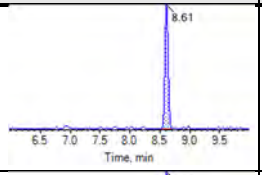
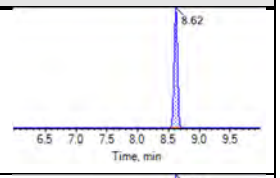
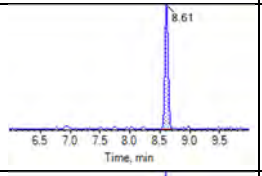
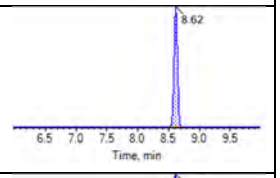
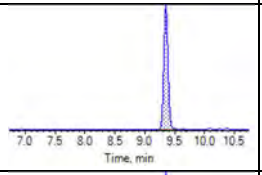
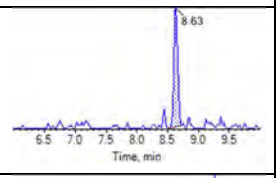
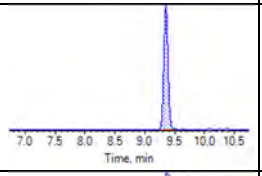
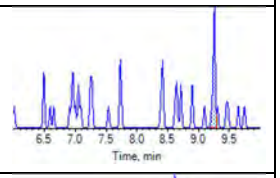
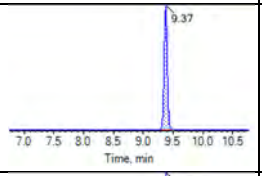
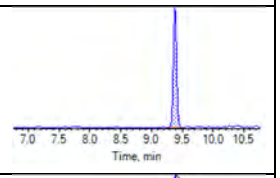
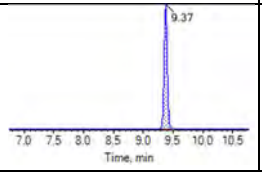
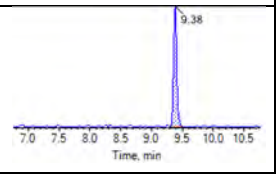
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.62 (8.72)	7932000	13C2_6:2 FTS	61210	N/A	24571.4	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.62 (8.72)	6425000	13C2_6:2 FTS	61210	N/A	22163.0	N/A	0.81/ 0.91		
PFHpS	449.0 / 80.0	8.63 (8.76)	22920	13C8_PFOS	67000	N/A	17.5	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	9.26 (8.76)	1933	13C8_PFOS	67000	N/A	7.4	N/A	0.08/ 0.20		
PFNA	463.0 / 419.0	9.38 (9.47)	224500	13C9_PFNA	257900	N/A	259.0	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.38 (9.47)	47800	13C9_PFNA	257900	N/A	228.7	N/A	0.21/ 0.24		

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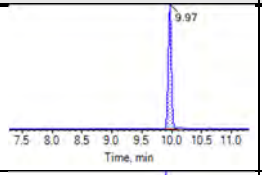
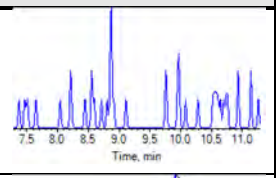
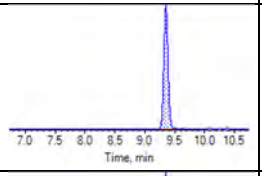
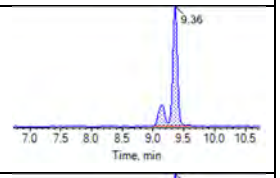
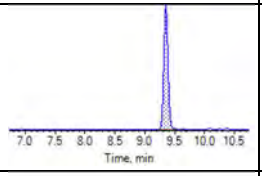
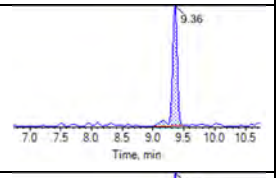
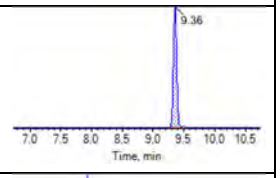
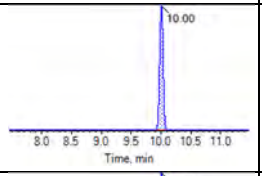
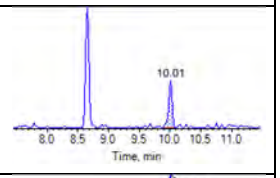
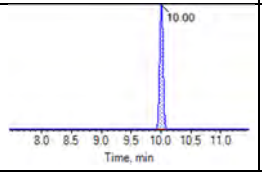
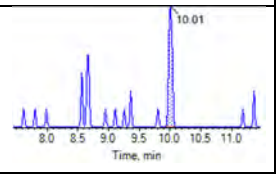
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	521700	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	9.36 (9.45)	336700	13C8_PFOS	67000	N/A	309.3	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.36 (9.45)	41960	13C8_PFOS	67000	N/A	261.0	N/A	0.12/ 0.15		
13C4_PFOS	503.0 / 80.0	9.36 (9.45)	1476000	N/A	N/A	N/A	880.3	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.01 (10.08)	13730	13C6_PFDA	141200	N/A	18.9	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.01 (10.08)	3665	13C6_PFDA	141200	N/A	40.2	N/A	0.27/ 0.13		

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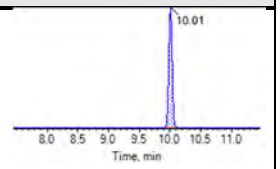
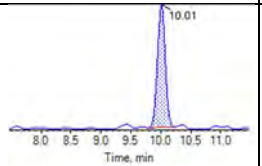
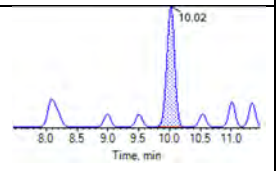
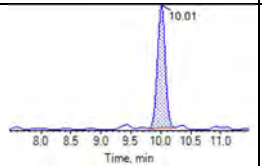
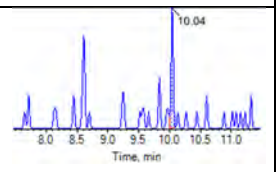
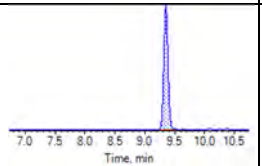
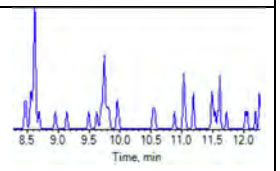
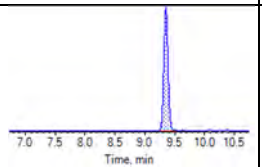
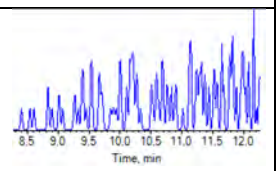
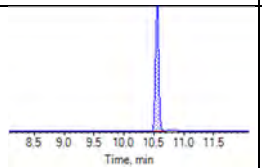
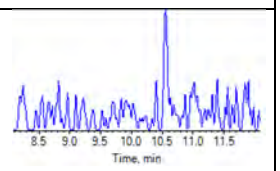
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1060000	N/A	N/A	N/A	918.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.02 (10.09)	2802	13C2_8:2 FTS	26630	N/A	20.4	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	2187	13C2_8:2 FTS	26630	N/A	16.4	N/A	0.78/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	67000	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	67000	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	196200	N/A	N/A	N/A	N/A/ 1.00		

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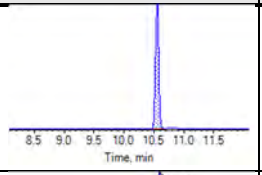
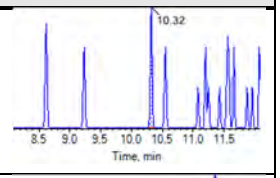
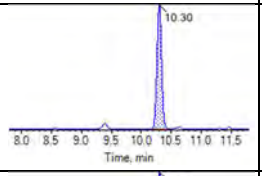
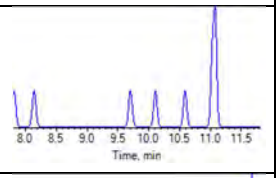
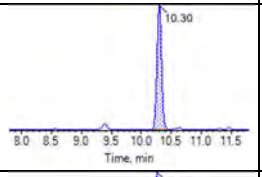
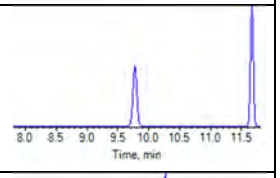
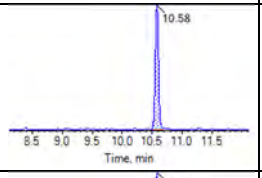
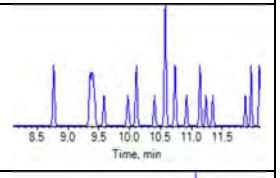
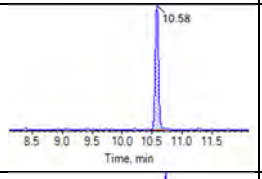
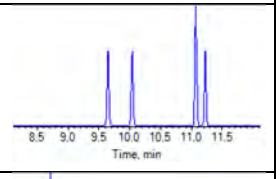
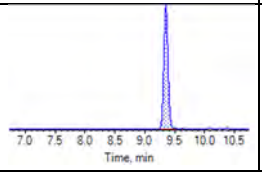
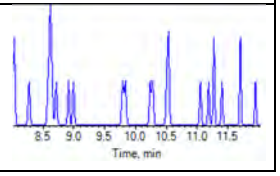
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.32 (10.62)	658	13C7_PFUdA	196200	N/A	7.9	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46040	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46040	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	57200	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	57200	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	67000	N/A	N/A	N/A	N/A/ 1.00		

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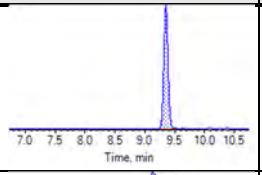
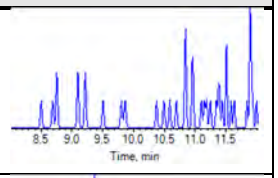
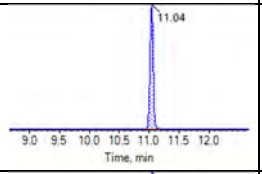
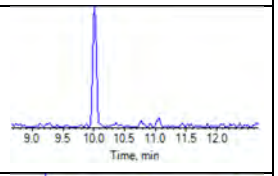
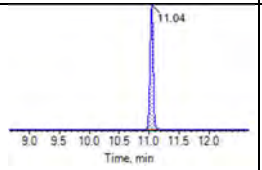
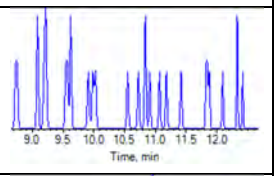
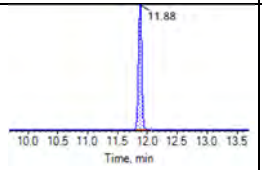
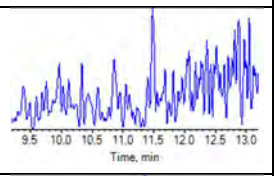
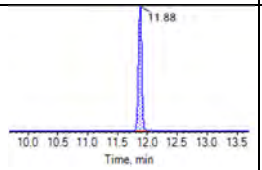
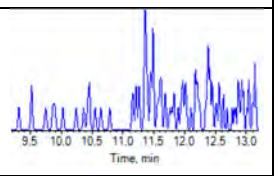
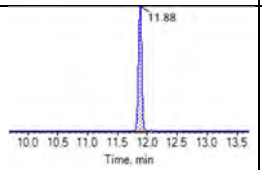
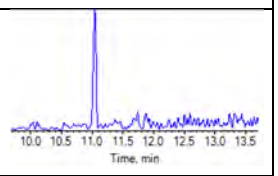
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	67000	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	188000	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	188000	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	134000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	134000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	134000	N/A	N/A	N/A	N/A/ 1.00		

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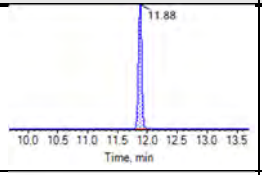
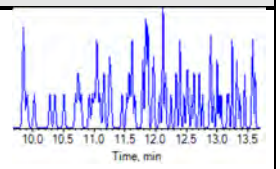
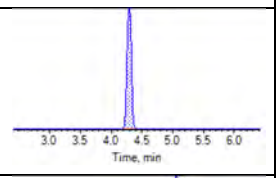
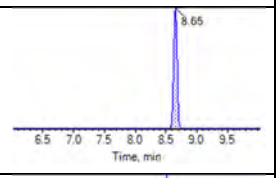
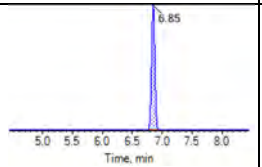
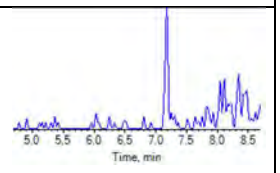
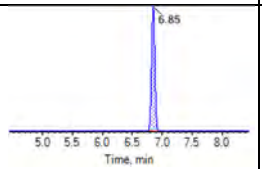
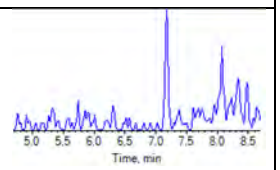
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	134000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1753000	N/A	N/A	N/A	1013.2	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.65 (8.75)	1035000	N/A	N/A	N/A	841.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	301900	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	301900	N/A	N/A	N/A	N/A/ 0.75		

Standards

Extraction ISTD Recoveries against ICAL

10/31/2017

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WPF171018-01	158100	247400	261300	617800	56550	56960	180000	74460	173900	37890	331600	94830	37260	254000	291600	24490	158400	223700	146600
WPF171018-02	156000	238500	237600	522200	44720	50990	180800	70880	150600	31560	303300	74500	35810	273800	233000	22510	153100	192800	131300
WPF171018-03	143800	225300	228000	504200	42130	44930	181100	69320	157400	31670	280900	65190	36320	235000	234300	27340	141800	201900	125000
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WPF171018-05	142000	235000	260000	517000	49860	51440	192600	60240	145100	26660	287400	82910	28340	237800	240000	24270	156800	198300	123800
WPF171018-06	150400	237800	237500	588100	43350	56120	185200	71370	153900	33620	304900	64940	32970	252800	232700	26430	152400	189300	133400
WPF171018-07	145700	223300	239900	519300	42350	47710	182900	66190	152900	27160	294500	83220	29880	225600	223400	22570	138600	215200	124800
Avg	149400	234114.2857	245000	547257.1429	47158.57143	50827.14286	182014.2857	68784.28571	155800	31750	301714.2857	77114.28571	32801.42857	245042.8571	244057.1429	24465.71429	146914.2857	203500	129885.7143
50%	74700	117057.1429	122500	273628.5714	23579.28571	25413.57143	91007.14286	34392.14286	77900	15875	150857.1429	38557.14286	16400.71429	122521.4286	122028.5714	12232.85714	73457.14286	101750	64942.85714
150%	224100	351171.4286	367500	820885.7143	70737.85714	76240.71429	273021.4286	103176.4286	233700	47625	452571.4286	115671.4286	49202.14286	367564.2857	366085.7143	36698.57143	220371.4286	305250	194828.5714

Red Highlighting if > 150%

Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFBA	13C5_PFPeA	13C4_PFHpA	13C8_PFOSA	d3-N-MeFOSAA	d5-N-EtFOSAA	13C2_PFDoA	13C8_PFOS	13C3_PFBS	13C2_4:2 FTS	13C5_PFHxA	13C3_PFHxS	13C2_6:2 FTS	13C8_PFOA	13C9_PFNA	13C2_8:2 FTS	13C6_PFDA	13C7_PFUdA	13C2_PFTeDA
PFC103117001	PFCIBLK01	106.69%	111.61%	101.47%	106.20%	92.07%	91.11%	102.19%	99.59%	107.83%	134.83%	89.42%	110.33%	96.76%	84.60%	93.30%	118.37%	106.66%	100.39%	102.71%
PFC103117002	PFCIBLK01	112.32%	113.88%	108.04%	109.89%	125.53%	105.44%	113.40%	92.10%	115.15%	121.23%	102.25%	98.96%	122.65%	115.53%	111.24%	99.12%	103.94%	101.38%	117.03%
PFC103117003	WPF171018-01	105.82%	105.67%	106.65%	112.89%	119.91%	112.07%	98.89%	108.25%	111.62%	119.34%	109.91%	122.97%	113.59%	103.66%	119.48%	100.10%	107.82%	109.93%	112.87%
PFC103117004	WPF171018-02	104.42%	101.87%	96.98%	95.42%	94.83%	100.32%	99.33%	103.05%	96.66%	99.40%	100.53%	96.61%	109.17%	111.74%	95.47%	92.01%	104.21%	94.74%	101.09%
PFC103117005	WPF171018-03	96.25%	96.24%	93.06%	92.13%	89.34%	88.40%	99.50%	100.78%	101.03%	99.75%	93.10%	84.54%	110.73%	95.90%	96.00%	111.75%	96.52%	99.21%	96.24%
PFC103117006	WPF171018-04	100.27%	98.88%	102.33%	102.73%	108.46%	93.73%	94.22%	100.36%	100.64%	106.11%	102.55%	96.23%	88.50%	96.43%	103.83%	96.67%	86.65%	99.90%	95.70%
PFC103117007	WPF171018-05	95.05%	100.38%	106.12%	94.47%	105.73%	101.21%	105.82%	87.58%	93.13%	83.97%	95.26%	107.52%	86.40%	97.04%	98.34%	99.20%	106.73%	97.44%	95.31%
PFC103117008	WPF171018-06	100.67%	101.57%	96.94%	107.46%	91.92%	110.41%	101.75%	103.76%	98.78%	105.89%	101.06%	84.21%	100.51%	103.17%	95.35%	108.03%	103.73%	93.02%	102.71%
PFC103117009	WPF171018-07	97.52%	95.38%	97.92%	94.89%	89.80%	93.87%	100.49%	96.23%	98.14%	85.54%	97.61%	107.92%	91.09%	92.07%	91.54%	92.25%	94.34%	105.75%	96.08%
PFC103117010	WPF171018-08ISC	108.70%	107.13%	104.16%	113.27%	127.34%	121.18%	109.94%	91.31%	110.33%	109.57%	97.74%	111.99%	110.27%	102.39%	105.96%	126.95%	98.42%	105.95%	107.63%
PFC103117011	WPF171018-11ISC	106.69%	103.24%	100.86%	112.16%	128.88%	96.09%	111.42%	100.02%	104.43%	112.13%	98.74%	120.74%	123.35%	105.94%	103.09%	126.38%	104.69%	97.74%	102.47%
PFC103117012	WPF171018-09ICV	96.65%	98.11%	95.76%	96.21%	90.88%	104.53%	87.58%	91.71%	95.12%	103.84%	99.43%	92.36%	95.30%	91.21%	88.34%	103.16%	95.63%	83.83%	99.47%
PFC103117013	Technical PFOA	5.27%	0.07%	0.11%	0.21%	0.57%	0.74%	0.61%	0.45%	0.13%	4.53%	0.11%	1.02%	3.16%	0.22%	0.35%	#VALUE!	0.39%	0.32%	0.35%
PFC103117014	Carry Over Std	95.18%	93.84%	94.33%	89.43%	106.75%	92.73%	95.49%	95.52%	97.43%	90.33%	88.59%	97.60%	90.51%	98.55%	93.30%	112.57%	97.06%	92.43%	102.32%
PFC103117015	PFCIBLK02	116.00%	111.91%	117.43%	119.65%	124.56%	120.51%	115.71%	119.18%	122.21%	123.75%	114.58%	114.47%	107.56%	105.45%	112.10%	87.39%	112.17%	110.61%	121.72%
PFC103117016	1203907522	99.67%	104.86%	108.16%	96.99%	107.47%	103.31%	98.84%	100.72%	99.81%	94.68%	90.32%	99.94%	105.39%	103.82%	107.02%	111.99%	108.77%	93.46%	107.63%
PFC103117017	1203907523	101.00%	103.45%	95.80%	102.09%	134.46%	115.33%	108.01%	104.88%	102.82%	91.37%	96.61%	103.65%	121.67%	107.65%	98.50%	105.25%	97.95%	101.52%	103.24%
PFC103117018	436205001	6.59%	0.07%	0.22%	0.05%	0.57%	0.42%	0.41%	26.47%	348.01%	3.55%	0.11%	0.37%	37.19%	0.11%	0.12%	#VALUE!	0.21%	0.79%	0.19%
PFC103117019	1203907526	6.96%	0.06%	0.11%	0.06%	1.13%	1.25%	0.25%	28.76%	359.50%	4.96%	0.05%	1.82%	33.14%	0.11%	0.11%	#VALUE!	0.63%	1.37%	0.08%
PFC103117020	1203907529	6.29%	0.06%	0.12%	0.11%	0.69%	0.42%	0.30%	19.50%	323.62%	5.92%	0.11%	1.41%	32.13%	#VALUE!	#VALUE!	#VALUE!	0.20%	0.79%	0.05%
PFC103117021	1203907529	104.15%	104.05%	88.90%	67.77%	102.78%	104.87%	106.26%	69.03%	115.08%	132.22%	97.97%	104.04%	98.59%	91.09%	56.38%	59.59%	31.78%	102.56%	101.55%
PFC103117022	436205002	6.51%	0.07%	#VALUE!	0.05%	#VALUE!	0.42%	0.15%	7.44%	0.30%	4.39%	0.10%	0.46%	46.37%	0.11%	0.11%	#VALUE!	0.20%	0.20%	0.27%
PFC103117023	1203907527	6.18%	0.13%	0.12%	0.05%	#VALUE!	0.88%	0.10%	5.38%	0.13%	5.75%	0.11%	2.92%	55.15%	0.11%	0.11%	#VALUE!	0.64%	0.11%	0.17%
PFC103117024	1203907530	5.92%	0.05%	#VALUE!	0.05%	1.89%	1.25%	0.10%	5.12%	0.13%	2.18%	0.05%	1.30%	52.74%	0.12%	0.11%	#VALUE!	#VALUE!	#VALUE!	0.02%
PFC103117025	1203907530	99.93%	102.13%	91.67%	49.41%	105.05%	109.71%	87.96%	70.18%	104.94%	119.02%	93.86%	92.73%	117.37%	76.23%	55.93%	53.05%	24.19%	91.45%	98.16%
PFC103117026	WPF171018-09CCV	98.66%	104.14%	100.29%	102.11%	107.34%	98.71%	96.86%	92.54%	98.33%	105.45%	98.74%	99.22%	107.80%	89.33%	100.55%	86.53%	96.79%	94.30%	95.31%
PFC103117027	PFCIBLK03	133.47%	140.27%	121.27%	142.69%	153.10%	142.01%	133.51%	122.11%	134.15%	117.17%	130.72%	146.15%	151.91%	136.67%	132.31%	142.98%	140.56%	146.68%	137.81%
PFC103117028	436205003	6.05%	0.04%	0.11%	0.10%	1.20%	1.68%	0.18%	2.32%	0.09%	4.79%	0.16%	1.02%	56.80%	0.11%	0.11%	#VALUE!	0.40%	0.32%	0.37%
PFC103117029	1203907525	6.14%	0.10%	0.12%	0.05%	1.12%	0.83%	0.15%	2.61%	0.10%	3.09%	0.16%	3.87%	52.25%	0.11%	0.11%	#VALUE!	0.40%	0.11%	0.08%
PFC103117030	1203907528	5.93%	0.08%	0.11%	0.05%	0.63%	0.76%	0.15%	6.57%	0.04%	2.49%	0.16%	4.08%	57.89%	0.11%	#VALUE!	#VALUE!	0.23%	#VALUE!	0.04%
PFC103117031	1203907528	104.62%	101.45%	102.12%	30.37%	111.31%	82.50%	89.33%	52.18%	104.04%	112.79%	100.92%	87.00%	112.34%	81.82%	48.51%	54.93%	21.03%	99.41%	107.48%
PFC103117032	BLANK	97.05%	93.89%	88.65%	99.55%	94.28%	115.80%	100.54%	94.32%	94.22%	107.34%	93.70%	104.17%	90.61%	104.35%	105.88%	102.35%	91.14%	94.55%	98.16%
PFC103117033	BLANK	99.67%	100.21%	90.82%	98.33%	120.95%	106.56%	92.69%	92.84%	100.00%	124.63%	99.03%	99.27%	108.93%	105.86%	94.24%	120.25%	92.43%	92.53%	105.86%
PFC103117034	436205001	103.35%	106.14%	96.86%	65.29%	113.89%	115.78%	114.44%	72.40%	106.16%	141.17%	100.72%	111.68%	110.27%	95.37%	57.12%	52.97%	39.79%	109.19%	106.56%
PFC103117035	1203907526	102.54%	108.66%	102.00%	64.47%	110.18%	118.66%	114.11%	79.10%	114.44%	121.07%	98.67%	109.89%	116.58%	94.19%	58.35%	71.20%	38.14%	106.93%	108.40%
PFC103117036	1203907529	100.54%	110.84%	101.27%	61.20%	113.57%	122.47%	115.38%	84.84%	102.63%	127.91%	100.29%	114.10%	100.88%	86.19%	59.54%	61.80%	43.93%	96.07%	100.32%
PFC103117037	436205002	105.49%	103.37%	102.53%	49.94%	112.41%	90.31%	102.68%	71.91%	100.39%	112.76%	98.57%	91.73%	120.12%	90.60%	53.72%	48.35%	31.71%	95.53%	103.01%
PFC103117038	1203907527	102.48%	107.51%	107.88%	50.18%	92.37%	102.05%	94.88%	57.69%	100.77%	129.80%	103.61%	98.57%	97.59%	86.27%	55.93%	77.17%	31.92%	96.95%	105.25%
PFC103117039	1203907530	99.80%	102.39%	87.71%	47.66%	121.57%	118.97%	89.72%	69.54%	101.60%	99.84%	92.34%	103.38%	117.01%	78.03%	51.59%	47.00%	27.38%	94.50%	101.24%
PFC103117040	WPF171018-09CCV	94.58%	96.92%	97.84%	95.82%	110.92%	91.66%	95.21%	89.86%	94.87%	99.31%	86.74%	106.45%	88.44%	96.35%	88.50%	87.02%	94.14%	95.77%	95.85%
PFC103117041	PFCIBLK04	96.99%	99.57%	92.33%	100.15%	113.64%	98.31%	95.87%	87.21%	91.14%	90.46%	90.15%	99.23%	103.14%	96.31%	93.67%	89.31%	95.57%	93.76%	105.94%
PFC103117042	436205003	101.61%	100.46%	88.65%	27.59%	104.52%	114.58%	90.16%	70.67%	97.75%	111.28%	100.16%	105.27%	87.83%	76.35%	44.17%	52.48%	21.75%	90.42%	99.40%
PFC103117043	1203907525	98.46%	97.22%	88.45%	27.86%	102.21%	94.06%	88.40%	53.38%	99.61%	93.29%	96.42%	105.77%	77.86%	81.17%	43.02%	47.29%	11.20%	94.64%	96.85%
PFC103117044	1203907528	95.98%	95.77%	87.59%	29.07%	109.61%	94.60%	84.55%	57.51%	103.79%	66.99%	93.40%	99.66%	106.79%	77.01%	45.97%	39.43%	20.00%	84.18%	93.00%
PFC103117045	1203906756	105.56%	103.20%	108.37%	104.54%	114.72%	104.71%	95.60%	113.24%	104.56%	95.06%	88.93%	116.39%	75.18%	100.39%	101.41%	100.06%	94.54%	101.03%	103.24%
PFC103117046	1203906757	92.30%	96.41%	96.94%	95.48%	124.33%	103.31%	93.01%	93.97%	91.72%	74.43%	86.94%	104.29%	103.38%	101.00%	92.48%	92.70%	93.86%	96.95%	93.31%
PFC103117047	435984002	104.22%	101.57%	99.96%	106.07%	120.40%	104.81%	99.50%	103.45%	105.13%	89.10%	100.59%	100.72%	105.91%	97.29%	99.16%	99.65%	101.96%	106.44%	108.33%
PFC103117048	435984003	100.87%	97.43%	99.63%	100.23%	92.01%	95.97%	91.26%	103.00%	92.62%	86.52%	94.23%	102.08%	102.40%	95.90%	87.73%	91.76%	95.36%	95.72%	98.09%
PFC103117049	435706001	89.76%	95.00%	77.18%	80.77%	99.94%	110.04%	80.10%	69.94%	88.06%	91.21%	77.92%	77.69%	99.93%	81.37%	75.35%	70.71%	73.44%	102.70%	102.55%
PFC103117050	435706002	91.03%	90.64%	80.16%	81.28%	93.79%	101.26%	84.94%	84.21%	92.23%	93.04%	78.58%	89.32%	113.41%	76.93%	74.24%	69.20%	86.38%	107.17%	94.78%
PFC103117051	435706003	93.44%	95.51%	79.63%	87.69%	107.49%	92.98%	83.35%	80.82%	90.82%	77.01%	85.88%	96.86%	85.03%	86.19%	94.28%	78.85%	84.95%	76.61%	82.46%
PFC103117052	WPF171018-09CCV	93.98%	91.15%	91.80%	95.46%	119.83%	86.67%	83.45%	90.98%	93.00%	78.71%	94.00%	108.62%	88.29%	89.45%	78.92%	93.80%	88.96%	85.16%	90.70%
PFC103117053	PFCIBLK07	93.37%	100.89%	96.65%	95.66%	101.66%	102.90%	89.72%	98.86%	95.12%	81.80%	90.18%	100.28%	70.00%	94.96%	91.37%	85.22%	90.46%	90.42%	89.85%

Extraction ISTD Recoveries against ICAL

PFC103117054	435706004	86.55%	87.99%	80.78%	79.58%	135.25%	111.24%	81.70%	65.03%	89.47%	86.33%	77.99%	74.02%	79.60%	64.52%	80.10%	79.62%	81.54%	90.86%	97.86%
PFC103117055	1203906758	83.73%	83.76%	85.76%	80.64%	114.00%	97.07%	88.45%	75.93%	85.11%	92.54%	84.62%	79.36%	74.72%	65.29%	79.65%	95.73%	75.49%	101.72%	96.78%
PFC103117056	1203906759	87.01%	85.51%	81.39%	76.87%	94.83%	106.20%	84.28%	71.06%	88.45%	81.13%	73.75%	87.36%	84.14%	67.70%	74.49%	87.39%	74.47%	92.78%	86.69%
PFC103117057	436205001	101.14%	98.54%	89.55%	56.65%	97.71%	88.52%	103.18%	70.67%	116.30%	118.20%	95.98%	94.39%	103.26%	85.37%	60.64%	63.84%	35.82%	99.36%	102.09%
PFC103117058	436205002	102.34%	103.92%	98.65%	41.97%	122.67%	89.24%	92.14%	74.07%	105.46%	85.80%	89.99%	102.16%	106.49%	81.33%	55.19%	59.31%	28.40%	79.85%	94.93%
PFC103117059	436205003	101.20%	102.22%	99.31%	23.08%	91.99%	99.61%	86.70%	65.12%	105.84%	79.02%	91.11%	98.58%	114.87%	75.95%	47.78%	53.71%	17.96%	84.28%	100.09%
PFC103117060	1203907529	103.68%	103.33%	103.71%	51.58%	114.76%	117.89%	106.53%	80.03%	127.15%	137.92%	100.33%	112.53%	96.52%	88.47%	60.85%	61.76%	38.76%	98.18%	100.78%
PFC103117061	1203907530	103.88%	104.82%	92.29%	40.42%	119.28%	111.87%	91.70%	81.82%	97.95%	86.20%	95.16%	101.30%	104.42%	80.60%	57.94%	56.86%	35.12%	90.96%	103.40%
PFC103117062	1203907528	101.20%	108.88%	95.18%	21.27%	110.18%	98.31%	86.48%	73.84%	110.14%	95.28%	95.79%	96.82%	109.69%	81.21%	46.01%	26.01%	21.62%	92.58%	102.47%
PFC103117063	WPF171018-09CCV	99.53%	104.78%	101.80%	97.72%	111.62%	114.90%	97.96%	103.77%	95.89%	82.99%	93.93%	96.07%	76.89%	96.96%	93.38%	89.59%	95.84%	93.46%	94.01%
PFC103117064	PFCIBLK08	104.42%	99.44%	105.18%	101.03%	104.48%	98.81%	90.43%	98.51%	96.53%	119.87%	93.63%	102.72%	88.11%	102.10%	94.77%	77.62%	90.87%	91.40%	92.00%
PFC103117065	1203907530	104.02%	102.68%	94.61%	45.35%	109.86%	107.05%	91.31%	64.88%	101.54%	99.84%	99.43%	97.31%	121.43%	79.99%	54.45%	64.87%	32.22%	90.96%	98.16%
PFC103117066	1203907528	100.07%	104.14%	99.76%	21.56%	122.71%	106.24%	88.40%	67.66%	102.25%	96.41%	98.54%	98.92%	106.98%	80.43%	48.23%	56.65%	25.80%	87.86%	98.16%
PFC103117067	436205002	99.20%	99.78%	88.00%	66.35%	103.25%	99.18%	89.94%	77.10%	93.20%	93.73%	96.18%	110.60%	111.40%	87.41%	72.77%	79.46%	61.91%	91.74%	95.16%
PFC103117068	1203907527	102.54%	101.06%	105.80%	66.46%	99.98%	97.11%	98.29%	68.66%	94.09%	91.75%	96.58%	103.03%	115.45%	90.47%	78.83%	79.25%	58.63%	91.40%	98.63%
PFC103117069	1203907530	97.86%	99.61%	102.61%	66.71%	130.67%	90.86%	97.46%	91.34%	100.51%	96.63%	89.79%	102.04%	97.22%	86.27%	77.44%	81.62%	51.86%	86.19%	89.08%
PFC103117070	1203907528	96.45%	100.55%	102.45%	52.63%	103.35%	102.48%	88.12%	78.11%	95.89%	97.89%	100.66%	116.09%	93.81%	88.23%	70.89%	58.90%	42.22%	92.68%	95.39%
PFC103117071	1203907525	100.67%	95.34%	93.71%	55.37%	107.95%	92.27%	95.43%	74.86%	100.58%	96.88%	92.44%	98.81%	105.21%	85.50%	69.90%	59.47%	46.12%	84.52%	92.47%
PFC103117072	436205003	95.31%	94.06%	101.35%	54.60%	116.88%	108.54%	84.99%	78.56%	91.72%	95.84%	91.94%	88.65%	80.21%	88.60%	72.28%	67.73%	47.08%	86.09%	89.23%
PFC103117073	WPF171018-09CCV	96.45%	92.09%	101.02%	89.81%	100.36%	122.06%	92.63%	86.87%	88.38%	79.75%	84.15%	83.50%	113.59%	86.23%	93.05%	107.42%	89.98%	82.01%	94.93%
PFC103117074	PFCIBLK09	109.77%	112.72%	115.06%	110.77%	128.42%	131.33%	109.99%	103.02%	117.27%	122.80%	111.46%	112.57%	108.84%	120.02%	111.29%	98.38%	103.33%	102.16%	119.49%
PFC103117075	436205001	108.10%	99.48%	100.29%	24.83%	134.44%	128.99%	121.09%	74.23%	114.96%	177.39%	99.10%	85.06%	102.40%	74.35%	56.26%	52.85%	26.46%	120.59%	106.25%
PFC103117076	1203907526	109.57%	100.25%	86.04%	86.91%	103.33%	118.03%	125.92%	39.05%	145.57%	155.81%	96.65%	113.49%	123.90%	65.50%	58.96%	45.33%	26.42%	97.00%	103.63%
PFC103117077	1203907529	107.50%	106.79%	90.94%	56.99%	109.42%	112.48%	113.67%	39.81%	137.80%	144.72%	97.14%	89.05%	98.78%	82.03%	37.30%	32.51%	26.31%	108.21%	101.09%
PFC103117078	436205002	104.42%	101.70%	82.33%	29.44%	102.80%	93.32%	88.40%	45.45%	96.34%	105.20%	94.23%	93.30%	118.99%	59.50%	32.96%	50.93%	12.10%	85.45%	99.47%
PFC103117079	1203907527	105.09%	103.88%	85.55%	24.89%	109.59%	89.20%	93.23%	50.74%	100.39%	104.50%	85.35%	90.67%	138.47%	61.42%	33.58%	39.69%	18.06%	85.36%	100.24%
PFC103117080	1203907530	107.03%	114.47%	86.73%	24.72%	105.05%	109.23%	88.89%	52.96%	107.25%	106.80%	109.28%	99.51%	103.04%	57.17%	38.46%	41.28%	20.96%	100.54%	100.78%
PFC103117081	436205003	106.22%	101.02%	87.59%	7.85%	93.09%	107.07%	78.46%	46.91%	101.03%	105.39%	93.37%	83.99%	133.62%	56.97%	28.05%	30.05%	14.77%	86.78%	98.09%
PFC103117082	1203907525	104.89%	100.89%	76.16%	6.92%	107.34%	95.80%	79.33%	50.48%	91.98%	113.76%	87.14%	79.95%	93.62%	54.19%	30.09%	30.35%	13.18%	84.62%	98.09%
PFC103117083	1203907528	102.68%	96.49%	76.57%	7.71%	98.24%	83.70%	76.15%	56.99%	96.66%	98.71%	88.06%	84.19%	94.45%	47.67%	29.88%	39.34%	14.83%	82.65%	90.39%
PFC103117084	Blank	95.85%	94.53%	105.27%	86.25%	89.74%	89.95%	100.65%	93.22%	94.93%	103.62%	98.27%	100.57%	90.51%	97.41%	94.53%	64.99%	101.42%	92.04%	98.24%
PFC103117085	Blank	97.79%	93.12%	97.39%	96.83%	107.34%	101.21%	90.60%	85.70%	101.03%	96.82%	94.69%	95.16%	118.14%	92.88%	94.81%	103.16%	87.60%	91.30%	93.85%
PFC103117086	WPF171018-09CCV	95.45%	95.59%	99.10%	97.30%	102.40%	112.91%	92.41%	85.31%	97.63%	95.69%	90.12%	93.95%	89.17%	95.86%	87.60%	84.44%	86.24%	91.89%	96.47%
PFC103117087	PFCIBLK10	93.11%	91.66%	99.02%	95.22%	93.73%	99.14%	92.47%	89.47%	94.93%	87.87%	81.80%	100.27%	111.00%	97.98%	84.37%	100.30%	105.30%	86.54%	101.70%
PFC103117088	1203908641	92.97%	103.58%	114.53%	81.72%	96.55%	94.34%	86.92%	105.26%	108.54%	106.96%	103.61%	104.99%	114.42%	105.21%	108.17%	105.58%	95.50%	97.25%	100.24%
PFC103117089	1203908642	102.41%	110.03%	119.63%	90.67%	104.71%	99.53%	91.92%	100.74%	112.26%	122.80%	108.25%	117.57%	107.65%	111.49%	105.67%	109.46%	113.26%	95.82%	97.09%
PFC103117090	436081001	104.02%	107.90%	107.47%	104.38%	107.34%	94.34%	99.44%	109.84%	103.02%	102.58%	94.82%	113.91%	107.31%	95.04%	109.85%	113.59%	110.20%	97.59%	103.94%
PFC103117091	1203908643	107.36%	106.91%	100.86%	96.21%	123.22%	118.83%	105.38%	98.50%	108.86%	103.06%	103.97%	93.15%	110.30%	110.76%	110.51%	103.53%	107.00%	101.52%	104.32%
PFC103117092	1203908645	107.70%	110.54%	115.47%	107.35%	118.45%	105.89%	107.13%	91.30%	108.73%	106.30%	102.18%	110.90%	121.37%	109.33%	106.37%	101.41%	113.60%	98.08%	109.56%
PFC103117093	436081002	109.30%	107.38%	123.35%	105.43%	126.74%	122.49%	106.42%	121.44%	102.76%	103.56%	102.28%	118.75%	123.90%	105.12%	115.46%	115.35%	118.30%	95.63%	105.25%
PFC103117094	436081003	110.37%	109.39%	114.20%	111.10%	115.69%	108.33%	116.47%	108.64%	102.95%	99.02%	104.11%	101.67%	88.32%	96.51%	108.58%	111.09%	92.23%	103.14%	109.02%
PFC103117095	436488001	92.24%	105.72%	100.16%	69.53%	75.55%	85.07%	72.91%	71.03%	107.83%	156.69%	96.95%	110.71%	129.48%	91.29%	86.78%	96.13%	81.27%	79.61%	68.54%
PFC103117096	1203908644	88.22%	104.09%	101.02%	79.63%	95.87%	72.13%	77.91%	79.52%	105.91%	143.69%	93.00%	96.14%	113.56%	99.90%	94.20%	103.00%	86.24%	83.39%	77.76%
PFC103117097	1203908646	89.22%	101.45%	106.86%	81.55%	99.03%	91.19%	75.27%	79.13%	105.58%	165.04%	99.03%	109.37%	115.21%	100.72%	91.99%	102.35%	90.32%	81.62%	80.30%
PFC103117098	WPF171018-09CCV	102.61%	100.04%	101.14%	95.28%	111.03%	98.73%	92.79%	86.10%	101.09%	97.26%	91.38%	92.41%	100.82%	99.82%	95.26%	84.98%	100.13%	100.54%	99.32%
PFC103117099	PFCIBLK11	99.73%	102.77%	104.08%	96.35%	107.34%	97.29%	96.97%	98.86%	95.89%	86.36%	100.16%	95.13%	122.25%	91.82%	98.75%	91.43%	94.75%	98.23%	92.70%
PFC103117100	436488002	83.33%	102.22%	100.33%	82.23%	106.77%	86.29%	86.26%	84.13%	106.61%	139.43%	96.18%	102.61%	125.60%	104.80%	93.99%	112.61%	88.35%	78.77%	90.16%
PFC103117101	436488003	96.32%	108.84%	95.96%	89.23%	109.67%	93.49%	93.62%	103.40%	115.60%	141.64%	101.49%	105.86%	129.26%	100.92%	97.03%	104.96%	94.27%	88.21%	97.86%
PFC103117102	436488004	88.55%	98.84%	102.33%	63.74%	74.73%	89.16%	74.06%	78.20%	101.60%	117.76%	90.65%	98.48%	107.13%	95.49%	89.86%	78.11%	95.23%	75.63%	52.48%
PFC103117103	436488005	108.43%	107.30%	101.35%	86.08%	92.01%	95.46%	86.81%	83.07%	111.42%	115.02%	100.66%	107.81%	125.36%	110.63%	105.71%	123.68%	96.45%	84.72%	95.47%
PFC103117104	436488006	94.38%	107.08%	96.29%	75.72%	104.46%	97.86%	88.29%	76.62%	113.29%	154.65%	97.54%	109.68%	142.28%	87.86%	85.18%	98.87%	89.71%	80.84%	89.54%
PFC103117105	436488007	96.32%	105.59%	95.14%	93.58%	105.09%	112.79%	97.63%	91.56%	108.15%	115.53%	102.45%	106.12%	123.10%	101.57%	105.96%	126.99%	97.34%	103.59%	97.32%
PFC103117106	436518001	92.64%	107.17%	110.00%	82.69%	90.91%	101.42%	94.17%	83.14%	108.99%	158.49%	98.11%	91.40%	117.56%	98.31%	90.06%	74.23%	96.45%	87.27%	86.00%
PFC103117107	436518002	97.19%	80.56%	88.57%	87.22%	99.39%	90.37%	86.70%	94.98%	116.17%	134.65%	79.55%	90.70%	710.64%	83.50%	88.42%	141.01%	89.24%	83.00%	55.26%
PFC103117108	436518003	96.32%	102.09%	108.16%	80.46%	103.35%	77.50%	90.32%	93.61%	110.01%	136.09%	101.42%	106.19%	110.73%	98.47%	88.05%	80.03%	82.16%	81.72%	89.23%
PFC103117109	436518004	104.55%	107.08%	96.53%	87.66%	85.75%	85.15%	91.31%	78.20%	109.31%	115.84%	98.93%	115.94%	114.51%	106.43%	98.87%	95.73%	88.76%	77.49%	95.24%
PFC103117110	WPF171018-09CCV	96.45%	89.23%	90.29%	88.28%	118.77%	97.86%	92.63%	80.61%	98.27%	97.86%	90.98%	97.19%	119.69%	93.94%	83.42%	68.83%	89.17%	76.66%	92.31%
PFC103117111	PFCIBLK12	96.52%	95.25%	98.57%	92.68%	111.33%	105.79%	92.58%	78.56%	95.57%	108.76%	92.47%	91.24%	101.73%	93.37%	108.83%	91.39%	91.35%	83.83%	100.40%
PFC103117112	436518005	93.71%	101.75%	104.29%	84.02%	110.18%	87.55%	92.74%	98.19%	104.81%	118.08%	106.69%	97.62%	104.57%	100.15%	107.39%	107.87%	95.84%	93.37%	96.32%
PFC103117113	436518006	73.76%	109.31%	95.35%	91.82%	134.95%	98.25%	97.74%	80.09%	104.36%	145.89%	100.63%	96.53%	119.60%	103.57%	101.62%	123.60%	105.98%	90.07%	92.39%
PFC103117114	436081001	101.47%	109.60%	82.61%	95.73%	120.95%	108.11%	104.17%	83.04%	107.96%	128.82%	88.86%	100.50%	162.13%	101.08%	91.04%	107.46%	98.63%	89.43%	96.32%
PFC103117115	1203908643	98.26%	103.97%	92.41%	92.57%	118.68%	97.90%	98.78%	85.34%	108.22%	122.74%	88.93%	96.12%	126.85%	97.86%	85.72%	95.44%	90.60%	98.18%	89.77%
PFC103117116	1203908645	100.54%	102.51%	92.24%	87.24%	100.51%	114.35%	89.33%	90.22%	108.34%	122.46%	90.42%	83.89%	136.24%	99.13%	91.62%	96.34%	84.81%	85.21%	87.85%
PFC103117117	436081002	100.74%	96.02%	83.27%	100.41%	100.60%	105.40%	97.25%	107.13%	95.96%	91.62%	83.89%	78.68%	176.79%	86.56%	84.45%	108.11%	103.12%	96.41%	98.16%
PFC103117118	436081003	101.27%	94.95%	87.84%	100.30%	106.81%	95.34%	88.56%	101.87%	104.17%	108.03%	83.85%	70.96%	171.85%	91.29%	95.06%	117.02%	93.93%	83.93%	89.08%
PFC103117119	Blank	95.25%	94.74%	102.78%	93.96%	101.08%	98.96%	87.41%	97.36%	93.84%	82.99%	89.42%	92.07%	71.77%	82.35%	86.09%	80.19%	97.68%	92.04%	88.62%
PFC103117120	Blank	92.50%	92.90%	90.82%	92.33%	110.18%	104.59%	97.63%	88.62%	95.83%	87.78%	95.19%	93.45%	102.37%	88.60%	100.35%	100.34%	90.73%	89.04%	94.39%
PFC103117121	WPF171018-09CCV	96.05%	92.48%	94.78%	88.09%	124.09%	99.63%	87.58%	84.58%	91.66%	98.68%	87.57%	101.02%	111.61%	96.23%	93.13%	87.84%	93.73%	85.45%	94.01%
PFC103117122	PFCIBLK13	74.50%	72.23%	74.12%	62.22%	80.03%	78.32%	66.59%	60.92%	70.73%	68.72%	68.61%	76.63%	73.78%	69.91%	60.72%	57.84%	61.60%	60.98%	62.54%
PFC103117123	436081001	104.89%	98.58%	102.24%	96.81%	104.01%	101.25%	93.34%	84.21%	99.49%	104.13%	98.70%	100.92%	120.21%	97.25%	99.77%	99.61%	93.05%	95.14%	95.93%
PFC103117124	1203908643	97.72%	86.07%	94.37%	80.58%	89.68%	107.46%	85.93%	84.34%	93.32%	78.71%	89.02%	94.28%	96.15%	91.94%	85.51%	71.16%	89.03%	86.54%	84.61%
PFC103117125	1203908645	113.65%	116.27%	115.63%	104.05%	115.84%	113.38%	108.89%	105.24%	105.91%	94.27%	106.19%	122.22%	123.50%	108.14%	111.53%	125.44%	103.80%	99.95%	105.86%

Extraction ISTD Recoveries against ICAL

PFC103117126	436081002	121.49%	122.89%	123.35%	122.15%	118.15%	139.55%	123.56%	113.89%	119.83%	113.76%	115.54%	125.53%	103.90%	125.57%	113.05%	114.00%	119.25%	105.60%	119.72%
PFC103117127	436081003	104.82%	104.09%	97.63%	97.16%	108.97%	107.05%	98.18%	88.96%	107.32%	105.39%	97.64%	107.33%	93.47%	96.31%	100.10%	81.54%	97.88%	90.86%	92.16%
PFC103117128	436488002	108.10%	109.73%	121.84%	105.84%	121.46%	122.89%	103.07%	95.01%	126.44%	102.24%	104.54%	114.10%	135.06%	115.29%	105.84%	138.52%	103.73%	95.92%	113.02%
PFC103117129	436488003	117.67%	121.05%	108.90%	103.97%	139.42%	123.56%	103.34%	102.20%	106.10%	105.51%	109.64%	128.52%	115.36%	116.71%	99.44%	107.01%	114.90%	96.46%	112.48%
PFC103117130	436488004	83.27%	84.40%	82.12%	66.84%	83.95%	68.25%	66.37%	71.03%	81.84%	73.70%	80.34%	78.90%	67.68%	70.80%	75.02%	91.56%	67.22%	61.43%	64.66%
PFC103117131	436518001	82.86%	78.68%	81.02%	69.24%	89.74%	89.72%	69.66%	75.90%	77.02%	88.25%	73.58%	77.42%	79.63%	73.99%	78.92%	84.61%	74.94%	66.00%	69.61%
PFC103117132	436518002	78.11%	73.17%	73.59%	70.77%	80.60%	76.00%	68.40%	68.42%	75.74%	75.28%	72.95%	72.96%	103.62%	74.84%	72.36%	76.88%	62.78%	60.39%	64.96%
PFC103117133	WPF171018-09CCV	101.74%	105.55%	98.04%	106.04%	106.17%	110.87%	96.97%	101.51%	103.66%	98.58%	105.30%	99.94%	108.53%	98.59%	103.54%	109.25%	98.42%	95.18%	104.78%
PFC103117134	PFCIBLK14	107.30%	108.28%	120.82%	104.01%	127.21%	114.58%	104.06%	101.65%	107.51%	108.69%	103.87%	107.53%	126.95%	104.92%	108.58%	128.06%	104.55%	102.95%	105.09%
PFC103117135	436518003	90.56%	84.36%	80.41%	72.98%	90.86%	79.19%	67.47%	73.67%	85.88%	96.06%	78.09%	75.95%	74.42%	77.82%	70.80%	68.38%	75.89%	72.63%	71.97%
PFC103117136	436518003	82.80%	91.54%	87.59%	66.79%	85.24%	66.58%	69.06%	72.55%	100.06%	131.84%	84.48%	96.67%	99.29%	93.78%	77.40%	102.39%	66.40%	74.35%	71.90%
PFC103117137	Blank	95.92%	99.78%	90.49%	91.82%	116.39%	105.32%	89.83%	92.42%	90.50%	86.43%	89.89%	84.50%	94.66%	88.92%	96.74%	91.47%	92.98%	80.74%	87.31%
PFC103117138	436205001	105.76%	108.92%	115.18%	83.85%	122.65%	132.72%	101.20%	97.67%	117.65%	115.84%	99.60%	95.40%	108.14%	101.08%	86.13%	78.52%	71.81%	97.99%	97.16%
PFC103117139	1203907526	83.33%	82.44%	77.59%	62.88%	85.22%	67.80%	67.25%	74.16%	88.45%	89.39%	84.29%	88.18%	67.22%	79.58%	64.41%	56.81%	60.55%	77.25%	73.49%
PFC103117140	1203907529	122.29%	120.54%	126.37%	97.36%	137.47%	132.47%	119.28%	84.58%	140.63%	132.41%	117.73%	132.27%	139.17%	109.33%	96.29%	70.38%	75.28%	122.41%	119.80%
PFC103117141	436205001	117.07%	106.49%	104.94%	26.02%	135.71%	151.32%	133.84%	66.38%	134.34%	210.39%	110.83%	101.82%	117.16%	90.19%	53.39%	59.55%	24.12%	116.61%	114.49%
PFC103117142	1203907526	109.17%	101.70%	101.71%	30.33%	123.35%	129.97%	121.09%	67.73%	123.88%	204.91%	107.12%	88.91%	107.28%	73.29%	52.32%	54.73%	24.68%	115.23%	106.79%
PFC103117143	1203907529	122.22%	114.69%	109.55%	29.51%	144.34%	138.39%	134.39%	76.46%	145.12%	278.83%	114.15%	127.89%	112.62%	92.96%	54.99%	49.38%	23.84%	122.31%	115.49%
PFC103117144	WPF171018-09CCV	103.68%	99.40%	106.04%	90.23%	100.53%	103.76%	102.52%	92.84%	116.62%	100.54%	98.30%	95.40%	113.14%	97.74%	99.32%	105.62%	83.11%	92.19%	93.31%
PFC103117145	PFCIBLK15	101.61%	102.56%	106.86%	91.11%	117.94%	100.81%	86.75%	76.31%	105.01%	99.34%	98.97%	97.43%	111.76%	85.66%	87.32%	126.09%	98.97%	98.08%	92.00%
PFC103117146	1203910649	81.86%	93.67%	92.37%	72.63%	114.15%	84.58%	80.21%	78.87%	90.05%	92.82%	89.99%	84.04%	94.36%	85.33%	85.43%	95.85%	91.89%	67.22%	74.44%
PFC103117147	1203910650	80.52%	92.05%	95.67%	71.10%	88.00%	74.15%	73.90%	76.54%	88.51%	89.20%	88.43%	81.72%	76.34%	85.90%	91.13%	84.81%	94.27%	68.26%	73.66%
PFC103117148	436646001	81.39%	82.22%	75.76%	75.43%	73.81%	87.91%	74.88%	72.94%	91.91%	72.82%	75.63%	92.08%	85.64%	75.09%	76.29%	66.50%	69.50%	75.14%	70.89%
PFC103117149	1203910651	69.08%	72.96%	72.73%	70.55%	76.10%	76.30%	60.00%	65.63%	80.42%	64.06%	66.75%	80.14%	58.63%	78.11%	66.42%	55.67%	63.81%	59.31%	58.62%
PFC103117150	1203910652	70.75%	74.15%	78.49%	71.50%	70.15%	69.55%	66.86%	68.42%	77.92%	51.46%	64.03%	89.32%	70.21%	68.52%	63.10%	71.57%	63.27%	63.24%	62.79%
PFC103117151	1203911346	85.54%	99.27%	93.43%	77.81%	98.33%	73.92%	87.19%	78.08%	89.60%	89.07%	99.83%	90.81%	85.06%	96.43%	83.34%	91.23%	84.74%	76.02%	75.65%
PFC103117152	Filter Paper MB	75.30%	89.14%	99.80%	66.75%	76.00%	72.07%	65.65%	63.44%	78.88%	95.87%	75.17%	79.41%	103.17%	87.70%	75.43%	96.75%	77.87%	70.37%	64.73%
PFC103117153	1203911347	84.47%	91.24%	95.02%	70.24%	94.72%	69.55%	71.09%	60.60%	99.94%	105.10%	92.87%	83.76%	88.14%	84.60%	95.80%	92.46%	69.84%	74.55%	72.21%
PFC103117154	1203911348	84.14%	89.87%	94.00%	74.12%	87.00%	79.17%	75.21%	82.36%	89.92%	97.17%	91.15%	82.19%	87.13%	95.45%	84.57%	77.05%	69.43%	75.04%	73.83%
PFC103117155	435984001	88.62%	99.82%	102.73%	79.54%	88.68%	79.25%	82.08%	78.56%	94.99%	104.85%	104.20%	95.14%	110.54%	95.78%	100.71%	92.50%	87.47%	70.81%	81.84%
PFC103117156	436427004	83.87%	92.73%	95.88%	68.74%	91.46%	73.11%	82.58%	74.49%	88.58%	105.04%	95.82%	90.46%	97.89%	87.82%	87.19%	82.77%	75.28%	74.20%	71.37%
PFC103117157	WPF171018-09CCV	86.01%	86.92%	91.96%	81.37%	88.32%	78.72%	83.89%	82.33%	80.62%	94.65%	89.92%	90.11%	85.15%	87.82%	83.91%	78.52%	70.18%	71.74%	82.46%
PFC103117158	PFCIBLK16	93.17%	93.03%	94.29%	93.48%	84.08%	87.08%	87.19%	87.21%	94.74%	94.93%	91.41%	97.74%	78.38%	88.15%	94.61%	75.04%	88.28%	87.57%	84.92%
PFC103117159	Rinse	80.32%	86.03%	0.23%	49.28%	71.86%	64.83%	0.10%	1.01%	0.19%	3.98%	0.11%	0.93%	4.51%	0.12%	#VALUE!	#VALUE!	#VALUE!	58.97%	66.38%
PFC103117160	PFCIBLK17	92.50%	84.79%	84.86%	74.74%	71.02%	63.51%	71.04%	75.16%	89.99%	178.68%	86.07%	97.04%	106.70%	76.60%	82.32%	71.77%	70.72%	66.14%	76.37%
PFC103117161	WPF171018-08DISC	116.87%	117.85%	127.84%	116.71%	110.65%	83.42%	108.34%	115.23%	123.17%	163.37%	116.87%	122.74%	121.95%	103.33%	111.90%	138.52%	99.79%	85.50%	110.64%
PFC103117162	PFCIBLK18	116.06%	118.87%	116.65%	108.21%	94.17%	93.85%	112.57%	115.48%	121.89%	135.81%	107.35%	118.51%	128.77%	106.84%	101.45%	105.49%	98.97%	94.79%	111.71%
PFC103117163	1203911346	106.83%	107.98%	124.45%	101.49%	103.88%	84.52%	95.49%	103.40%	113.29%	148.50%	105.99%	110.90%	115.39%	102.76%	100.18%	110.07%	92.09%	90.02%	94.78%
PFC103117164	Filter Paper MB	105.02%	99.18%	110.12%	99.00%	111.35%	78.78%	95.93%	106.78%	103.15%	159.34%	101.19%	103.37%	122.56%	88.80%	96.33%	82.81%	82.50%	85.26%	99.24%
PFC103117165	1203911347	106.63%	95.17%	103.10%	98.09%	101.17%	86.43%	99.44%	92.08%	117.20%	136.31%	102.98%	105.71%	107.22%	94.55%	94.45%	110.85%	94.82%	81.67%	97.86%
PFC103117166	1203911348	105.49%	106.74%	109.76%	99.57%	77.89%	91.66%	98.73%	99.22%	114.51%	127.72%	102.25%	106.40%	119.75%	97.90%	99.28%	108.15%	83.59%	86.24%	101.94%
PFC103117167	435984001	105.96%	99.57%	124.12%	95.38%	99.94%	92.41%	105.05%	100.75%	122.53%	138.49%	104.27%	124.30%	114.42%	98.02%	99.85%	103.94%	88.62%	98.28%	99.32%
PFC103117168	436427004	95.92%	92.86%	99.31%	94.07%	90.72%	89.99%	95.76%	83.45%	96.53%	109.35%	89.99%	108.33%	88.41%	86.39%	81.25%	91.07%	87.74%	84.08%	91.93%
PFC103117169	WPF171018-09CCV	101.54%	102.86%	105.55%	94.18%	103.67%	85.49%	95.43%	86.08%	110.78%	124.25%	95.26%	103.34%	82.77%	97.41%	90.27%	103.08%	78.69%	81.72%	89.16%
PFC103117170	PFCIBLK19	111.85%	116.05%	120.86%	105.89%	114.61%	96.98%	113.95%	101.13%	118.36%	146.02%	120.21%	119.28%	86.89%	99.08%	107.35%	100.75%	100.67%	97.89%	117.95%
PFC103117171	1203905293	95.38%	102.98%	96.29%	79.07%	92.01%	84.78%	81.86%	90.60%	107.57%	140.25%	95.16%	96.53%	92.13%	90.88%	91.66%	97.48%	94.82%	83.49%	94.31%
PFC103117172	1203905294	96.59%	103.37%	100.90%	77.97%	88.98%	88.81%	89.44%	100.39%	114.06%	133.92%	99.63%	103.87%	104.60%	96.02%	100.51%	89.06%	75.15%	81.38%	82.53%
PFC103117173	1203905295	100.33%	100.16%	105.96%	74.59%	98.86%	84.64%	88.18%	79.70%	111.75%	155.87%	105.83%	111.54%	112.16%	87.70%	96.45%	108.31%	90.26%	83.05%	83.92%
PFC103117174	435706005	99.46%	97.82%	104.24%	76.47%	95.25%	80.41%	93.95%	89.64%	108.99%	143.65%	104.77%	113.58%	117.01%	90.56%	88.75%	114.45%	87.87%	82.11%	90.85%
PFC103117175	435983002	93.78%	101.57%	108.04%	87.16%	98.82%	75.47%	87.25%	73.23%	104.17%	141.01%	94.73%	109.11%	119.35%	97.82%	89.41%	107.99%	91.55%	82.80%	88.77%
PFC103117176	435983003	94.98%	102.26%	118.04%	79.14%	90.04%	75.63%	89.61%	92.11%	116.62%	140.54%	101.32%	107.78%	105.79%	93.25%	89.61%	101.20%	89.44%	87.22%	94.78%
PFC103117177	436081001	110.91%	97.82%	108.98%	101.05%	107.93%	84.58%	102.41%	75.19%	106.74%	119.18%	108.51%	123.95%	111.09%	98.68%	95.26%	146.12%	99.58%	92.83%	102.40%
PFC103117178	436081002	111.11%	102.94%	104.65%	96.35%	125.85%	91.25%	99.17%	102.23%	113.67%	137.17%	106.76%	101.24%	104.14%	103.04%	94.73%	91.76%	92.23%	97.35%	97.01%
PFC103117179	436081003	113.79%	108.24%	95.35%	104.94%	100.02%	97.82%	103.07%	106.03%	112.13%	118.71%	102.08%	110.02%	112.28%	102.72%	105.51%	98.22%	106.80%	103.73%	104.78%
PFC103117180	436081005	98.80%	100.63%	97.92%	84.91%	84.01%	80.45%	88.23%	100.39%	106.74%	121.01%	95.12%	95.53%	111.52%	99.04%	90.47%	101.00%	102.51%	90.42%	95.70%
PFC103117181	WPF171018-09CCV	106.63%	98.50%	107.71%	94.73%	98.82%	98.63%	95.71%	88.73%	107.38%	112.16%	96.65%	93.04%	107.77%	91.09%	99.03%	99.69%	90.46%	90.76%	94.54%
PFC103117182	PFCIBLK20	117.14%	113.06%	121.55%	108.67%	106.79%	99.95%	114.22%	101.56%	119.77%	129.54%	119.19%	123.15%	122.22%	112.84%	103.75%	106.88%	105.71%	100.34%	111.79%
PFC103117183	436081006	95.98%	102.17%	96.37%	81.73%	106.49%	88.69%	92.08%	98.54%	98.78%	145.57%	100.23%	119.52%	120.67%	87.41%	97.93%	100.14%	84.33%	91.15%	98.16%
PFC103117184	436081001	105.42%	102.64%	92.98%	101.74%	96.63%	93.69%	98.45%	86.18%	103.40%	136.22%	95.52%	109.10%	102.83%	101.86%	95.59%	109.09%	93.39%	87.32%	99.09%
PFC103117185	436081002	112.45%	108.32%	97.14%	103.13%	101.08%	102.48%	94.88%	95.11%	113.86%	120.25%	92.94%	105.54%	108.84%	97.53%	94.61%	98.06%	97.81%	95.38%	103.24%
PFC103117186	436081003	107.50%	106.10%	103.27%	94.36%	103.93%	86.27%	101.70%	104.14%	116.37%	113.10%	108.88%	117.57%	122.56%	92.02%	102.31%	130.47%	105.98%	87.76%	99.86%
PFC103117187	436081001	68.01%	81.97%	58.12%	86.49%	98.29%	87.14%	81.81%	74.48%	87.36%	125.61%	65.23%	58.00%	221.30%	71.91%	64.21%	86.57%	78.28%	74.55%	63.16%
PFC103117188	436081002	61.53%	64.71%	52.82%	78.98%	104.56%	87.87%	86.09%	76.41%	64.25%	103.09%	47.89%	43.09%	384.13%	63.17%	59.33%	99.20%	71.81%	77.89%	72.79%
PFC103117189	436081003	64.32%	67.10%	51.59%	79.23%	94.66%	69.33%	80.76%	53.12%	69.51%	99.69%	46.90%	31.64%	340.84%	60.23%	66.21%	84.49%	86.58%	76.66%	71.66%
PFC103117190	BLANK	117.80%	111.10%	104.90%	107.99%	96.33%	107.88%	97.90%	107.52%	113.80%	124.47%	114.58%	120.06%	113.01%	97.04%	112.80%	111.58%	100.81%	95.68%	111.41%
PFC103117191	BLANK	112.85%	111.48%	112.98%	99.02%	97.12%	106.69%	99.39%	118.08%	110.27%	138.55%	110.63%	109.12%	98.93%	111.49%	106.57%	125.11%	107.34%	103.93%	102.09%
PFC103117192	436518002	115.13%	114.22%	100.04%	95.33%	97.63%	112.54%	103.29%	97.41%	121.31%	133.10%	100.06%	120.85%	186.61%	105.08%	105.67%	108.85%	96.11%	96.41%	103.17%
PFC103117193	BLANK	113.52%	111.78%	118.33%	104.45%	106.79%	102.90%	106.37%	90.24%	108.28%	128.09%	104.67%	119.61%	136.67%	104.96%	100.59%	94.91%	80.73%	104.32%	114.02%
PFC103117194	WPF171018-09CCV	118.21%	112.51%	105.84%	102.71%	117.37%	103.47%	100.71%	108.32%	120.60%	142.39%	115.77%	117.28%	100.76%	114.84%	112.97%	109.79%	109.18%	107.76%	111.79%
PFC103117195	PFCIBLK21	121.95%	114.77%	121.84%	117.17%	122.12%	124.19%	115.87%	107.55%	117.20%	120.88%	117.99%	124.72%	139.26%	111.61%	117.80%	120.17%	105.16%	101.97%	121.88%
PFC103117196	436205001	101.74%	102.86%	98.61%	94.45%	95.38%	96.88%	95.43%	78.84%	109.95%	113.64%	98.27%	98.05%	108.53%	96.35%	71.91%	78.93%	59.22%	87.08%	99.55%
PFC103117197	1203907526	111.71%	99.65%	104.69%	88.92%	106.77%	94.20%	97.46%	84.16%	112.90%	137.32%	95.59%	106.21%	102.86%	97.21%	81.70%	96.63%	65.62%	99.46%	104.25%

Extraction ISTD Recoveries against ICAL

PFC103117198	1203907529	103.55%	95.04%	109.51%	92.11%	100.49%	97.51%	106.42%	79.47%	110.72%	133.29%	103.48%	114.23%	130.36%	97.00%	74.24%	78.52%	72.08%	98.33%	108.17%
PFC103117199	436205002	107.43%	106.40%	99.67%	83.00%	97.69%	113.34%	94.88%	77.90%	103.79%	128.72%	102.18%	103.64%	116.46%	99.57%	74.37%	63.56%	62.78%	102.85%	98.16%
PFC103117200	1203907527	104.55%	103.20%	101.14%	88.81%	102.40%	91.25%	106.31%	85.75%	110.33%	101.26%	106.76%	101.87%	123.71%	98.68%	80.84%	73.04%	62.61%	88.99%	108.79%
PFC103117201	1203907530	110.17%	103.71%	96.65%	89.52%	112.43%	108.74%	98.07%	90.67%	113.48%	106.46%	99.07%	107.49%	105.39%	101.29%	70.23%	78.35%	55.79%	84.91%	101.78%
PFC103117202	436205003	108.90%	110.63%	112.04%	82.32%	98.37%	107.32%	98.29%	90.69%	111.42%	124.25%	103.14%	111.92%	88.38%	98.64%	68.22%	63.56%	45.84%	96.36%	100.78%
PFC103117203	1203907525	106.76%	104.69%	105.63%	84.49%	115.84%	87.43%	95.65%	83.11%	104.94%	104.19%	95.95%	85.77%	111.03%	83.74%	72.81%	66.54%	46.46%	85.11%	99.47%
PFC103117204	1203907528	105.76%	109.69%	105.47%	80.05%	106.17%	78.32%	97.41%	79.38%	100.83%	116.69%	102.08%	108.80%	110.82%	94.47%	75.31%	71.81%	48.70%	92.97%	96.78%
PFC103117205	WPF171018-09CCV	99.67%	97.77%	104.73%	97.18%	95.19%	83.62%	97.14%	96.30%	97.50%	115.84%	94.03%	113.71%	120.12%	85.29%	88.50%	94.01%	83.18%	98.53%	89.46%
PFC103117206	PFCIBLK22	114.46%	108.62%	100.94%	92.39%	134.97%	128.34%	110.10%	95.85%	116.05%	137.26%	116.17%	107.17%	117.07%	103.57%	96.41%	105.49%	89.98%	104.86%	103.09%

Injection ISTD Recoveries against Calibration Midpoint

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-05	1668000	1105000	1680000	1289000

Red Highlighting if >	150%	Yellow Highlighting if <	50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117001	PFCIBLK01	99.52%	103.62%	101.61%	91.62%
PFC103117002	PFCIBLK01	99.04%	111.86%	107.44%	96.28%
PFC103117003	WPF171018-01	103.66%	114.93%	109.52%	102.25%
PFC103117004	WPF171018-02	98.50%	105.07%	107.08%	90.30%
PFC103117005	WPF171018-03	98.08%	105.97%	103.39%	90.69%
PFC103117006	WPF171018-04	103.78%	106.24%	104.11%	95.27%
PFC103117007	WPF171018-05	100.00%	100.00%	100.00%	100.00%
PFC103117008	WPF171018-06	99.70%	100.54%	97.74%	98.14%
PFC103117009	WPF171018-07	100.12%	97.92%	99.05%	91.54%
PFC103117010	WPF171018-08ISC	105.10%	115.48%	107.86%	93.10%
PFC103117011	WPF171018-11ISC	105.28%	107.87%	104.29%	101.55%
PFC103117012	WPF171018-09ICV	90.47%	97.01%	96.43%	85.88%
PFC103117013	Technical PFOA	99.64%	106.61%	97.86%	96.28%
PFC103117014	Carry Over Std	92.81%	90.77%	96.01%	85.26%
PFC103117015	PFCIBLK02	116.61%	113.57%	113.99%	110.63%
PFC103117016	1203907522	96.04%	95.02%	97.20%	88.36%
PFC103117017	1203907523	99.64%	101.72%	97.14%	93.56%
PFC103117018	436205001	42.09%	13.33%	106.90%	44.10%
PFC103117019	1203907526	41.10%	12.32%	101.43%	45.80%
PFC103117020	1203907529	40.83%	12.71%	105.00%	45.83%
PFC103117021	1203907529	65.05%	40.57%	97.98%	86.73%
PFC103117022	436205002	27.31%	10.37%	100.00%	28.83%
PFC103117023	1203907527	26.31%	9.81%	103.75%	27.01%
PFC103117024	1203907530	24.50%	10.28%	101.96%	28.14%
PFC103117025	1203907530	64.63%	30.39%	98.04%	79.91%
PFC103117026	WPF171018-09CCV	96.46%	96.83%	99.76%	95.58%
PFC103117027	PFCIBLK03	126.26%	133.21%	136.19%	124.05%
PFC103117028	436205003	22.31%	7.90%	101.96%	24.54%
PFC103117029	1203907525	22.81%	8.56%	101.85%	27.39%
PFC103117030	1203907528	21.49%	7.90%	98.63%	26.28%
PFC103117031	1203907528	58.62%	18.92%	98.27%	73.27%
PFC103117032	BLANK	101.32%	101.00%	104.23%	100.70%
PFC103117033	BLANK	99.28%	97.65%	104.23%	96.12%
PFC103117034	436205001	69.18%	40.47%	104.58%	87.51%
PFC103117035	1203907526	71.22%	39.86%	96.79%	88.13%
PFC103117036	1203907529	73.68%	40.11%	99.40%	86.42%
PFC103117037	436205002	63.91%	28.92%	92.92%	75.79%
PFC103117038	1203907527	67.33%	29.33%	97.68%	76.98%
PFC103117039	1203907530	67.09%	29.98%	101.01%	79.91%
PFC103117040	WPF171018-09CCV	96.76%	90.24%	95.18%	87.35%
PFC103117041	PFCIBLK04	95.92%	101.00%	97.98%	95.50%
PFC103117042	436205003	58.70%	20.05%	98.04%	73.80%
PFC103117043	1203907525	54.84%	19.86%	91.61%	71.80%
PFC103117044	1203907528	58.08%	19.41%	90.24%	71.56%
PFC103117045	1203906756	92.15%	82.73%	93.10%	80.45%
PFC103117046	1203906757	99.64%	95.93%	91.96%	90.38%

PFC103117047	435984002	90.53%	97.38%	93.33%	82.39%
PFC103117048	435984003	94.06%	96.47%	93.21%	85.73%
PFC103117049	435706001	91.13%	106.43%	107.14%	94.41%
PFC103117050	435706002	91.01%	90.14%	99.17%	77.45%
PFC103117051	435706003	94.18%	98.37%	100.95%	83.94%
PFC103117052	WPF171018-09CCV	92.99%	92.49%	95.24%	84.79%
PFC103117053	PFCIBLK07	97.66%	87.38%	97.02%	85.73%
PFC103117054	435706004	89.03%	97.01%	98.93%	77.53%
PFC103117055	1203906758	85.37%	87.82%	94.52%	68.25%
PFC103117056	1203906759	79.38%	90.68%	97.38%	67.46%
PFC103117057	436205001	63.01%	38.24%	93.45%	67.30%
PFC103117058	436205002	68.23%	29.16%	91.90%	74.03%
PFC103117059	436205003	56.98%	19.54%	95.30%	68.20%
PFC103117060	1203907529	65.83%	37.57%	92.80%	71.37%
PFC103117061	1203907530	66.85%	29.93%	95.36%	76.80%
PFC103117062	1203907528	61.03%	20.69%	92.68%	68.99%
PFC103117063	WPF171018-09CCV	98.50%	100.00%	100.18%	84.95%
PFC103117064	PFCIBLK08	97.96%	107.33%	106.61%	90.54%
PFC103117065	1203907530	63.43%	28.05%	95.71%	76.52%
PFC103117066	1203907528	61.93%	18.96%	97.02%	73.79%
PFC103117067	436205002	84.23%	57.95%	93.39%	84.72%
PFC103117068	1203907527	81.83%	57.97%	99.94%	85.34%
PFC103117069	1203907530	85.13%	58.39%	93.51%	89.76%
PFC103117070	1203907528	82.91%	42.37%	94.29%	84.48%
PFC103117071	1203907525	76.14%	46.42%	97.74%	80.99%
PFC103117072	436205003	79.44%	46.47%	96.37%	83.71%
PFC103117073	WPF171018-09CCV	89.39%	95.02%	95.18%	82.31%
PFC103117074	PFCIBLK09	108.69%	107.15%	113.57%	106.13%
PFC103117075	436205001	65.11%	20.58%	92.02%	65.00%
PFC103117076	1203907526	41.20%	29.58%	124.58%	84.10%
PFC103117077	1203907529	51.01%	36.88%	147.14%	104.81%
PFC103117078	436205002	65.89%	32.53%	167.92%	105.35%
PFC103117079	1203907527	69.90%	31.64%	161.37%	98.91%
PFC103117080	1203907530	44.66%	17.25%	102.92%	59.45%
PFC103117081	436205003	59.80%	16.02%	137.62%	79.13%
PFC103117082	1203907525	66.61%	19.16%	154.52%	88.98%
PFC103117083	1203907528	101.92%	25.19%	200.89%	117.53%
PFC103117084	Blank	90.95%	94.30%	95.24%	90.30%
PFC103117085	Blank	94.66%	95.29%	95.42%	84.17%
PFC103117086	WPF171018-09CCV	95.38%	98.10%	100.12%	91.08%
PFC103117087	PFCIBLK10	89.57%	100.45%	92.62%	90.92%
PFC103117088	1203908641	94.48%	102.99%	102.56%	92.32%
PFC103117089	1203908642	95.74%	99.55%	101.90%	96.43%
PFC103117090	436081001	98.44%	101.27%	97.20%	91.54%
PFC103117091	1203908643	96.64%	91.40%	101.43%	93.25%
PFC103117092	1203908645	97.06%	97.92%	99.46%	97.44%
PFC103117093	436081002	100.90%	107.60%	102.86%	93.48%
PFC103117094	436081003	94.30%	96.47%	96.61%	88.91%
PFC103117095	436488001	90.35%	92.22%	85.95%	91.93%
PFC103117096	1203908644	94.78%	90.86%	84.17%	88.29%
PFC103117097	1203908646	91.19%	96.20%	85.06%	99.69%
PFC103117098	WPF171018-09CCV	98.62%	100.81%	103.57%	100.00%
PFC103117099	PFCIBLK11	93.05%	96.38%	98.04%	84.33%
PFC103117100	436488002	92.57%	97.83%	83.27%	99.22%
PFC103117101	436488003	87.89%	104.98%	92.56%	91.70%

PFC103117102	436488004	94.48%	96.47%	88.81%	101.24%
PFC103117103	436488005	93.94%	95.11%	98.87%	96.20%
PFC103117104	436488006	90.35%	92.76%	89.35%	90.22%
PFC103117105	436488007	90.23%	97.74%	98.69%	95.03%
PFC103117106	436518001	92.93%	89.54%	89.46%	93.72%
PFC103117107	436518002	90.05%	91.95%	95.77%	86.81%
PFC103117108	436518003	89.69%	98.91%	87.38%	91.54%
PFC103117109	436518004	92.87%	95.48%	99.64%	94.18%
PFC103117110	WPF171018-09CCV	94.36%	97.29%	103.15%	96.74%
PFC103117111	PFCIBLK12	102.16%	106.88%	98.81%	98.60%
PFC103117112	436518005	94.18%	94.30%	99.76%	91.16%
PFC103117113	436518006	94.54%	99.64%	97.02%	89.68%
PFC103117114	436081001	92.39%	104.07%	98.04%	98.68%
PFC103117115	1203908643	85.07%	98.91%	98.99%	91.31%
PFC103117116	1203908645	94.00%	100.09%	100.24%	85.03%
PFC103117117	436081002	93.23%	96.56%	101.85%	87.20%
PFC103117118	436081003	86.15%	97.65%	93.45%	85.49%
PFC103117119	Blank	88.13%	94.75%	94.82%	84.56%
PFC103117120	Blank	90.17%	91.76%	92.50%	88.60%
PFC103117121	WPF171018-09CCV	98.20%	103.53%	102.44%	93.48%
PFC103117122	PFCIBLK13	67.21%	69.20%	78.27%	65.27%
PFC103117123	436081001	84.05%	86.67%	86.25%	86.89%
PFC103117124	1203908643	76.98%	77.48%	88.75%	80.45%
PFC103117125	1203908645	89.45%	97.29%	97.20%	95.27%
PFC103117126	436081002	105.76%	112.31%	103.69%	100.70%
PFC103117127	436081003	86.15%	92.76%	93.04%	85.73%
PFC103117128	436488002	98.74%	104.07%	105.71%	99.22%
PFC103117129	436488003	98.80%	102.08%	112.86%	103.49%
PFC103117130	436488004	66.37%	68.34%	73.33%	66.02%
PFC103117131	436518001	67.39%	71.96%	75.60%	69.52%
PFC103117132	436518002	60.31%	61.15%	72.56%	62.82%
PFC103117133	WPF171018-09CCV	103.00%	103.62%	107.86%	95.35%
PFC103117134	PFCIBLK14	102.40%	106.43%	110.83%	105.97%
PFC103117135	436518003	65.65%	74.60%	77.50%	66.45%
PFC103117136	436518003	70.80%	71.44%	76.96%	75.86%
PFC103117137	Blank	83.93%	85.21%	95.06%	85.88%
PFC103117138	436205001	75.48%	65.78%	93.10%	87.74%
PFC103117139	1203907526	64.93%	53.88%	77.38%	67.39%
PFC103117140	1203907529	101.50%	77.38%	116.49%	106.52%
PFC103117141	436205001	67.03%	23.67%	104.70%	70.16%
PFC103117142	1203907526	62.95%	22.67%	102.14%	72.16%
PFC103117143	1203907529	71.22%	23.21%	111.55%	81.46%
PFC103117144	WPF171018-09CCV	98.38%	96.47%	103.51%	91.23%
PFC103117145	PFCIBLK15	95.50%	100.81%	103.69%	97.98%
PFC103117146	1203910649	78.06%	76.41%	81.31%	80.06%
PFC103117147	1203910650	74.94%	80.07%	83.39%	76.87%
PFC103117148	436646001	78.54%	79.17%	83.39%	75.84%
PFC103117149	1203910651	78.18%	75.92%	80.18%	75.67%
PFC103117150	1203910652	72.42%	76.60%	86.13%	76.45%
PFC103117151	1203911346	77.28%	81.35%	85.24%	80.29%
PFC103117152	Filter Paper MB	70.38%	76.05%	78.04%	68.99%
PFC103117153	1203911347	75.72%	78.13%	83.45%	72.23%
PFC103117154	1203911348	74.46%	75.54%	80.48%	73.93%
PFC103117155	435984001	81.00%	88.29%	90.89%	82.39%
PFC103117156	436427004	77.22%	86.84%	80.00%	78.28%

PFC103117157	WPF171018-09CCV	82.25%	81.93%	85.71%	84.95%
PFC103117158	PFCIBLK16	91.43%	91.31%	95.95%	87.28%
PFC103117159	Rinse	0.03%	0.02%	0.01%	0.02%
PFC103117160	PFCIBLK17	69.54%	62.98%	82.44%	67.43%
PFC103117161	WPF171018-08DISC	101.56%	102.44%	119.29%	101.01%
PFC103117162	PFCIBLK18	91.37%	93.03%	105.54%	96.28%
PFC103117163	1203911346	96.16%	92.85%	101.49%	90.69%
PFC103117164	Filter Paper MB	95.68%	95.84%	109.17%	91.39%
PFC103117165	1203911347	98.86%	96.74%	103.81%	88.21%
PFC103117166	1203911348	90.77%	92.58%	102.68%	90.77%
PFC103117167	435984001	95.68%	90.22%	105.89%	94.49%
PFC103117168	436427004	94.66%	96.47%	103.63%	92.24%
PFC103117169	WPF171018-09CCV	100.72%	97.19%	106.55%	89.22%
PFC103117170	PFCIBLK19	95.62%	99.46%	103.93%	89.45%
PFC103117171	1203905293	92.75%	90.14%	99.70%	83.01%
PFC103117172	1203905294	94.96%	89.19%	105.24%	87.04%
PFC103117173	1203905295	97.54%	100.63%	108.57%	92.86%
PFC103117174	435706005	94.48%	102.26%	105.00%	87.28%
PFC103117175	435983002	89.93%	95.20%	105.12%	93.33%
PFC103117176	435983003	98.68%	100.18%	108.27%	89.29%
PFC103117177	436081001	104.50%	105.43%	116.01%	91.31%
PFC103117178	436081002	97.66%	98.10%	106.01%	88.36%
PFC103117179	436081003	96.70%	97.38%	107.68%	91.23%
PFC103117180	436081005	93.71%	98.01%	105.83%	86.73%
PFC103117181	WPF171018-09CCV	107.91%	100.18%	111.90%	93.17%
PFC103117182	PFCIBLK20	98.86%	100.27%	107.26%	89.37%
PFC103117183	436081006	92.87%	103.44%	105.30%	91.08%
PFC103117184	436081001	94.48%	98.37%	108.15%	82.47%
PFC103117185	436081002	106.53%	104.80%	114.17%	93.10%
PFC103117186	436081003	94.72%	93.21%	104.40%	84.95%
PFC103117187	436081001	66.55%	83.55%	84.35%	72.34%
PFC103117188	436081002	61.33%	94.30%	79.82%	64.84%
PFC103117189	436081003	64.75%	92.49%	79.52%	62.75%
PFC103117190	BLANK	91.97%	96.38%	102.20%	81.54%
PFC103117191	BLANK	96.04%	92.40%	105.77%	87.20%
PFC103117192	436518002	88.49%	95.93%	104.35%	80.29%
PFC103117193	BLANK	96.76%	96.47%	104.70%	85.18%
PFC103117194	WPF171018-09CCV	114.93%	112.94%	127.44%	102.72%
PFC103117195	PFCIBLK21	97.18%	105.97%	110.89%	87.20%
PFC103117196	436205001	87.11%	80.57%	109.76%	89.22%
PFC103117197	1203907526	85.01%	67.38%	103.04%	79.21%
PFC103117198	1203907529	87.17%	73.91%	110.77%	89.91%
PFC103117199	436205002	81.83%	65.25%	105.42%	82.23%
PFC103117200	1203907527	83.87%	69.63%	107.62%	88.52%
PFC103117201	1203907530	83.75%	63.30%	104.88%	88.36%
PFC103117202	436205003	83.69%	56.20%	113.63%	87.74%
PFC103117203	1203907525	78.06%	55.57%	110.00%	90.46%
PFC103117204	1203907528	80.46%	55.96%	108.99%	83.09%
PFC103117205	WPF171018-09CCV	97.96%	102.26%	107.32%	90.46%
PFC103117206	PFCIBLK22	91.25%	95.38%	102.44%	90.07%

Injection ISTD Recoveries against initial Daily CCV

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-08DISC	1.69E+06	1.13E+06	2.00E+06	1.30E+06

Red Highlighting if > 150% Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117160	PFCIBLK17	68.48%	93.90%	71.31%	98.69%
PFC103117161	WPF171018-08DISC	100.00%	100.00%	100.00%	100.00%
PFC103117162	PFCIBLK18	89.96%	90.81%	88.47%	95.31%
PFC103117163	1203911346	94.69%	90.64%	85.08%	89.78%
PFC103117164	Filter Paper MB	94.21%	93.55%	91.52%	90.48%
PFC103117165	1203911347	97.34%	94.43%	87.03%	87.33%
PFC103117166	1203911348	89.37%	90.37%	86.08%	89.86%
PFC103117167	435984001	94.21%	88.07%	88.77%	93.55%
PFC103117168	436427004	93.21%	94.17%	86.88%	91.32%
PFC103117169	WPF171018-09CCV	99.17%	94.88%	89.32%	88.33%
PFC103117170	PFCIBLK19	94.16%	97.08%	87.13%	88.56%
PFC103117171	1203905293	91.32%	87.99%	83.58%	82.18%
PFC103117172	1203905294	93.51%	87.06%	88.22%	86.18%
PFC103117173	1203905295	96.04%	98.23%	91.02%	91.94%
PFC103117174	435706005	93.03%	99.82%	88.02%	86.41%
PFC103117175	435983002	88.55%	92.93%	88.12%	92.40%
PFC103117176	435983003	97.17%	97.79%	90.77%	88.40%
PFC103117177	436081001	102.89%	102.92%	97.26%	90.40%
PFC103117178	436081002	96.16%	95.76%	88.87%	87.48%
PFC103117179	436081003	95.22%	95.05%	90.27%	90.32%
PFC103117180	436081005	92.27%	95.67%	88.72%	85.87%
PFC103117181	WPF171018-09CCV	106.26%	97.79%	93.81%	92.24%
PFC103117182	PFCIBLK20	97.34%	97.88%	89.92%	88.48%
PFC103117183	436081006	91.44%	100.97%	88.27%	90.17%
PFC103117184	436081001	93.03%	96.02%	90.67%	81.64%
PFC103117185	436081002	104.90%	102.30%	95.71%	92.17%
PFC103117186	436081003	93.27%	90.99%	87.52%	84.10%
PFC103117187	436081001	65.53%	81.55%	70.71%	71.61%
PFC103117188	436081002	60.39%	92.05%	66.92%	64.19%
PFC103117189	436081003	63.75%	90.28%	66.67%	62.12%
PFC103117190	BLANK	90.55%	94.08%	85.68%	80.72%
PFC103117191	BLANK	94.57%	90.19%	88.67%	86.33%
PFC103117192	436518002	87.13%	93.64%	87.48%	79.49%
PFC103117193	BLANK	95.28%	94.17%	87.77%	84.33%
PFC103117194	WPF171018-09CCV	113.16%	110.25%	106.84%	101.69%
PFC103117195	PFCIBLK21	95.69%	103.45%	92.96%	86.33%
PFC103117196	436205001	85.77%	78.65%	92.02%	88.33%
PFC103117197	1203907526	83.71%	65.78%	86.38%	78.42%
PFC103117198	1203907529	85.83%	72.15%	92.86%	89.02%
PFC103117199	436205002	80.58%	63.69%	88.37%	81.41%
PFC103117200	1203907527	82.59%	67.97%	90.22%	87.63%
PFC103117201	1203907530	82.47%	61.79%	87.92%	87.48%
PFC103117202	436205003	82.41%	54.86%	95.26%	86.87%

Injection ISTD Recoveries against initial Daily CCV

PFC103117203	1203907525	76.86%	54.25%	92.22%	89.55%
PFC103117204	1203907528	79.22%	54.63%	91.37%	82.26%
PFC103117205	WPF171018-09CCV	96.46%	99.82%	89.97%	89.55%
PFC103117206	PFCIBLK22	89.85%	93.11%	85.88%	89.17%

PFC Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 436518

Lab Code: GEL

Run Date: 31-OCT-17

LCMSMS Instrument ID: LCMSMS6 **Method:** EPA 537 Modified **Column:** Gemini 3u C-18

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	7	Ave RF	RSD	Q
Data File:	PFC103117003.w	PFC103117004.w	PFC103117005.w	PFC103117006.w	PFC103117007.w	PFC103117008.w	PFC103117009.w			
Parmname										
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propano	.5849668	.6198483	.7141331	.6031028	.6394398	.6007434	.5904075	.62180597	7.1794	
Fluorotelomer sulfonate 4:2 (4:2 FTS)	1.390177	1.458897	1.423942	1.374597	1.751106	1.304821	1.771538	1.4964397	12.503	
Fluorotelomer sulfonate 6:2 (6:2 FTS)	1.378648	1.026985	1.161315	1.438318	1.538647	1.357960	1.327679	1.3185074	13.050	
Fluorotelomer sulfonate 8:2 (8:2 FTS)	1.465309	1.487186	1.234455	1.210947	1.106261	1.232948	1.281892	1.2884282	10.799	
N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	1.124912	.9550892	1.072891	1.053736	.9525661	.9414350	1.003458	1.0148698	6.9658	
N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA	.9363395	.9059146	1.016971	.9116976	.9376254	1.059592	1.172078	.99145982	9.8771	
Perfluoro-n-[1,2-13C2] decanoic acid	1270	1161	1171	1174	1105	1111	1082	1153.4286	5.4492	
Perfluoro-n-[1,2-13C2] octanoic acid	1318	1164	1169	1228	1289	1265	1180	1230.4286	5.0455	
Perfluoro-n-[2,3,4-13C3] butanoic acid	1840	1799	1737	1749	1680	1642	1664	1730.1429	4.2086	
Perfluorobutanesulfonate (PFBS)	2.266060	2.563194	2.449766	2.377109	2.700261	2.372710	2.518170	2.4638958	5.8278	
Perfluorobutyric acid (PFBA)	1.771031	1.835737	1.797983	1.706720	1.809859	1.650044	1.761325	1.7618142	3.6226	
Perfluorodecanesulfonate (PFDS)	5.020604	4.733242	4.471266	4.826316	5.638069	4.230066	4.775074	4.8135200	9.2339	
Perfluorodecanoic acid (PFDA)	1.124684	1.354507	1.285966	1.511129	1.139190	1.292651	1.310426	1.2883647	10.196	
Perfluorododecanoic acid (PFDoA)	.9456944	.9243639	.9445058	1.010884	.9226376	.9359251	.9069163	.94156109	3.5611	
Perfluoroheptanesulfonate (PFHpS)	4.803003	4.730011	4.671698	4.607201	5.818830	4.441888	5.047272	4.8742718	9.3399	
Perfluoroheptanoic acid (PFHpA)	.9806736	1.150568	1.070395	1.013961	1.011538	1.037895	1.054606	1.0456624	5.2742	
Perfluorohexanesulfonate (PFHxS)	3.650924	5.000442	5.596832	5.166506	4.400645	5.487522	4.448484	4.8216220	14.366	
Perfluorohexanoic acid (PFHxA)	.9597407	1.023739	.9962620	.9021763	.9298887	.8915491	.9401528	.94907263	5.0627	
Perfluorononanesulfonate (PFNS)	3.717740	3.944093	3.668073	4.134676	4.599657	3.634230	3.926512	3.9464258	8.5792	
Perfluorononanoic acid (PFNA)	1.589721	1.067328	.6541827	.5574849	.5830208	.5277539	.5238362	.78618961	10.554	
Perfluorooctanesulfonamide (PFOSA)	.8298735	1.005853	1.054888	.9071343	.9650281	.8681089	.9165395	.93534655	8.3910	
Perfluorooctanesulfonate (PFOS)	3.965216	4.167255	3.884882	3.854363	4.834827	3.769091	3.956413	4.0617210	8.9417	
Perfluorooctanoic acid (PFOA)	1.137795	.9810993	1.112340	1.038228	1.090202	.9401371	1.083223	1.0547178	6.8325	
Perfluoropentanesulfonate (PFPeS)	4.414394	5.228117	6.220769	5.485678	4.696197	5.730877	4.860866	5.2338426	12.034	
Perfluoropentanoic acid (PFPeA)	1.135812	1.081761	1.085220	1.091145	1.063298	.9966358	1.075347	1.0756027	3.8576	
Perfluorotetradecanoic acid (PFTeDA)	.8799454	.8878522	.8844	.9581657	.9664782	.8407046	.8864183	.90056636	5.0226	
Perfluorotridecanoic acid (PFTrDA)	1.213506	1.273800	1.2596	1.249665	1.268578	1.175787	1.163862	1.2292570	3.676	
Perfluoroundecanoic acid (PFUdA)	.7665400	1.078190	.8883110	.8534186	.9305345	.8734812	.8410781	.89022191	10.896	
Sodium perfluoro-1-[1,2,3,4-13C4]octanesulfonate	1729	1643	1636	1731	1668	1663	1670	1677.1429	2.2741	

Q column used to flag RSD value outside of Limit : (>20%)

* Value outside of QC Limit

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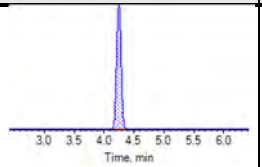
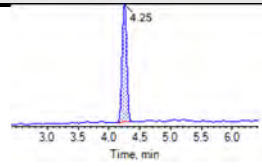
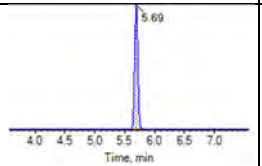
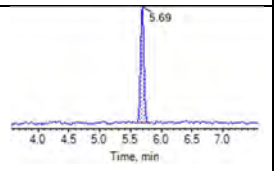
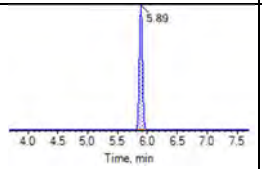
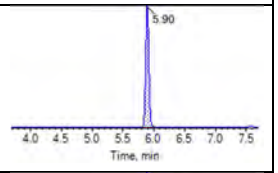
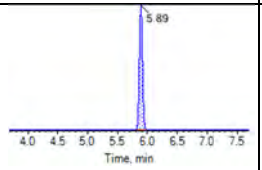
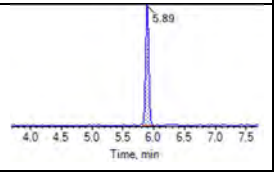
PFC103117003.wiff			
Sample Name	WPF171018-01	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117003.wiff
Acquisition Date	10/31/2017 16:55:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117003.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	112000	13C4_PFBA	158100	100.0	100.5	100.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	112400	13C5_PFPeA	247400	100.0	105.6	105.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	139500	13C3_PFBS	173900	88.5	81.4	92.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	64330	13C3_PFBS	173900	88.5	83.6	94.5	0.46/ 0.45		

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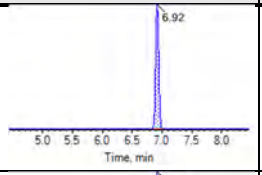
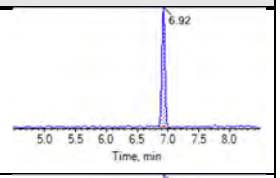
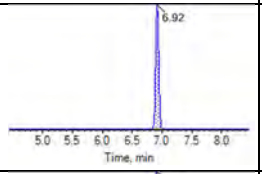
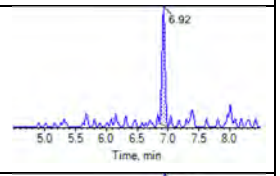
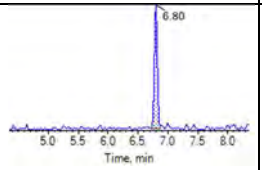
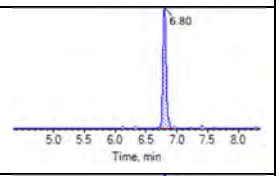
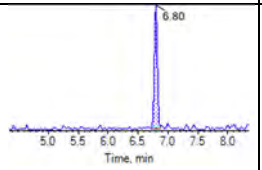
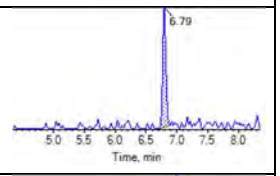
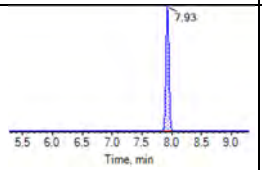
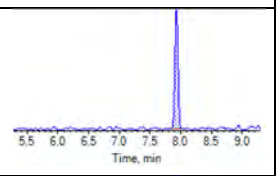
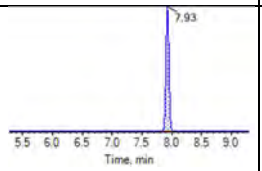
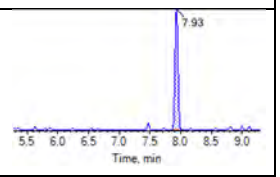
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	127300	13C5_PFHxA	331600	100.0	101.2	101.2	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	8116	13C5_PFHxA	331600	100.0	91.2	91.2	0.06/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	19700	13C2_4:2 FTS	37890	93.5	86.8	92.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	11290	13C2_4:2 FTS	37890	93.5	69.3	74.1	0.57/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	102500	13C4_PFHpA	261300	100.0	93.8	93.8	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	29820	13C4_PFHpA	261300	100.0	104.4	104.4	0.29/ 0.26		

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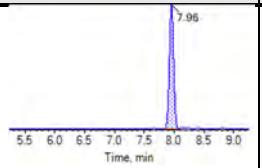
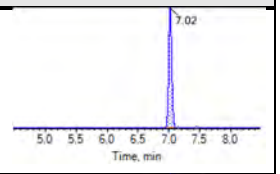
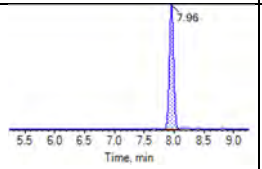
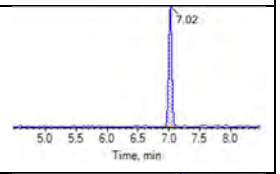
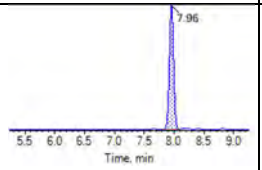
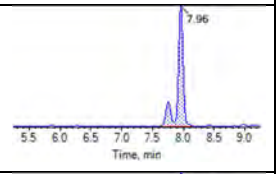
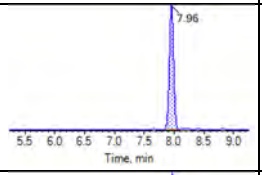
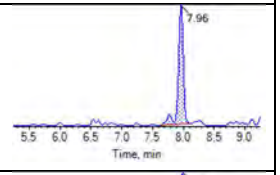
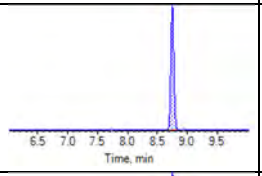
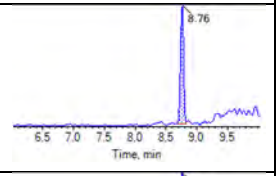
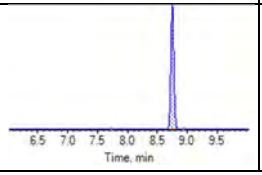
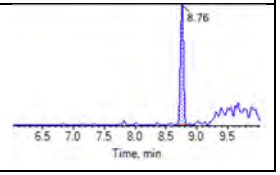
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	157400	13C3_PFHxS	94830	94.0	79.3	84.4	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	52340	13C3_PFHxS	94830	94.0	75.5	80.3	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	126300	13C3_PFHxS	94830	91.2	69.1	75.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31640	13C3_PFHxS	94830	91.2	68.5	75.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	115600	13C8_PFOA	254000	100.0	107.9	107.9	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	47060	13C8_PFOA	254000	100.0	117.7	117.7	0.41/ 0.37		

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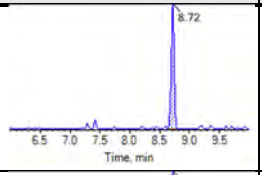
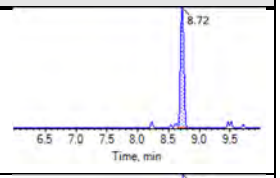
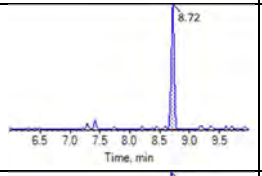
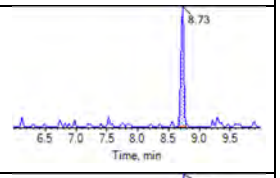
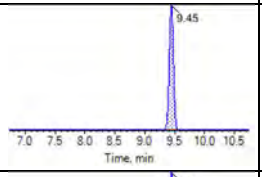
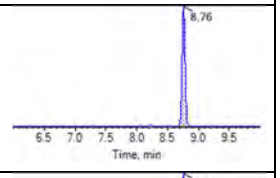
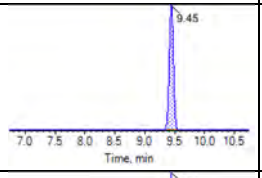
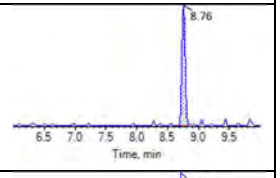
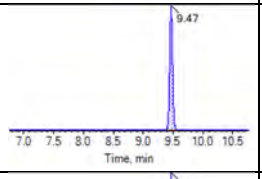
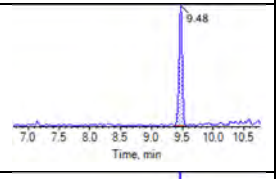
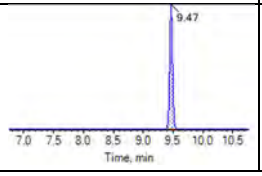
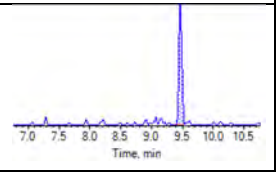
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	19520	13C2_6:2 FTS	37260	95.0	99.3	104.6	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	15470	13C2_6:2 FTS	37260	95.0	87.7	92.3	0.79/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	135900	13C8_PFOS	74460	95.0	93.6	98.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	25560	13C8_PFOS	74460	95.0	87.5	92.1	0.19/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	79250	13C9_PFNA	291600	100.0	80.9	80.9	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	19530	13C9_PFNA	291600	100.0	82.6	82.6	0.25/ 0.24		

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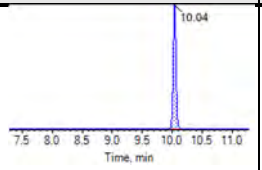
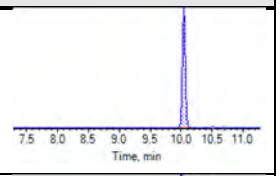
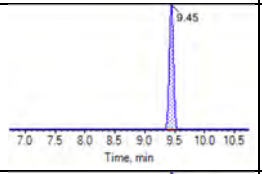
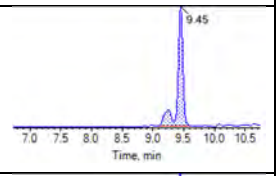
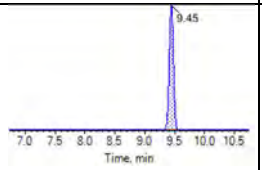
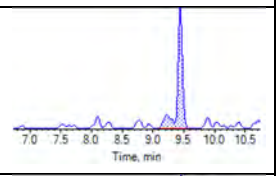
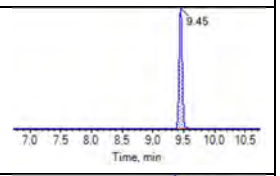
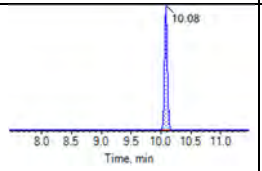
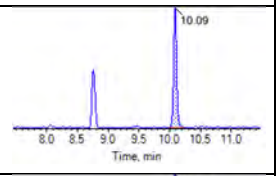
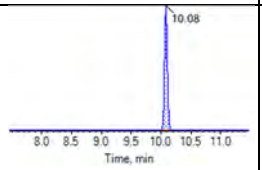
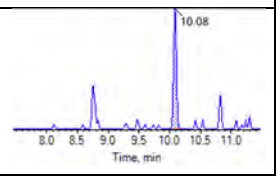
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	189800	13C8_PFOSA	617800	92.6	82.1	88.7	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	118100	13C8_PFOS	74460	100.0	97.6	97.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	17170	13C8_PFOS	74460	100.0	96.1	96.1	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1729000	N/A	N/A	1000.0	1030.7	103.1	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	71260	13C6_PFDA	158400	100.0	87.3	87.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	11790	13C6_PFDA	158400	100.0	115.3	115.3	0.17/ 0.13		

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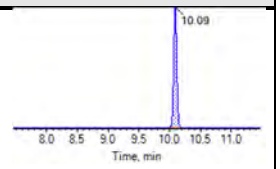
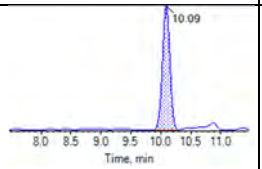
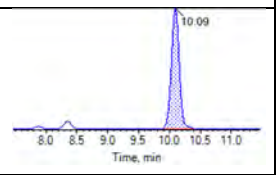
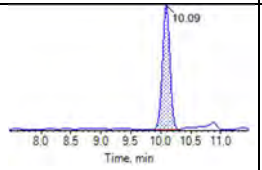
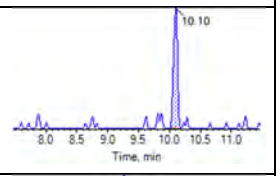
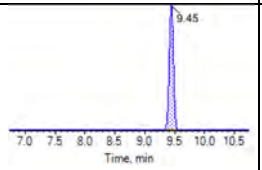
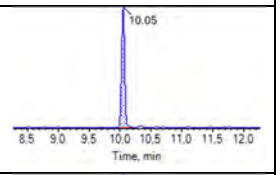
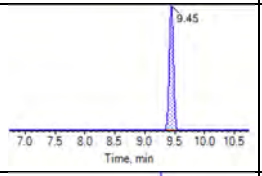
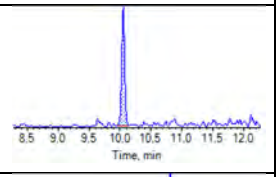
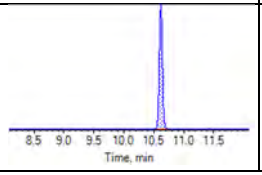
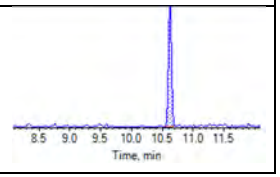
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1270000	N/A	N/A	1000.0	1101.2	110.1	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	13780	13C2_8:2 FTS	24490	96.0	109.2	113.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	12570	13C2_8:2 FTS	24490	96.0	102.8	107.1	0.91/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	106300	13C8_PFOS	74460	96.0	90.4	94.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	20110	13C8_PFOS	74460	96.0	93.9	97.8	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	68590	13C7_PFUdA	223700	100.0	86.1	86.1	1.00/ 1.00		

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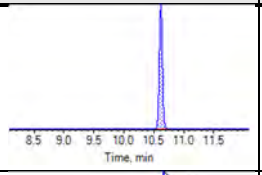
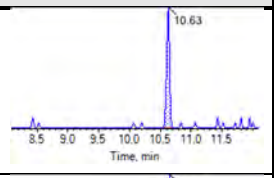
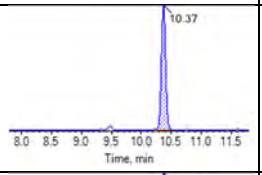
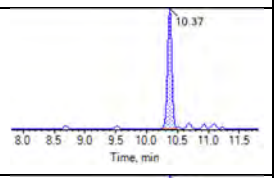
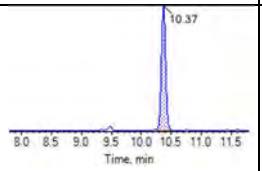
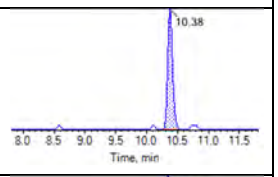
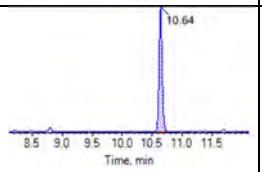
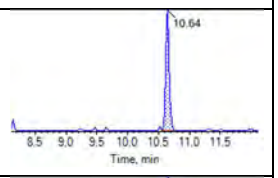
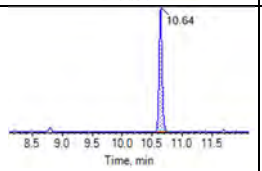
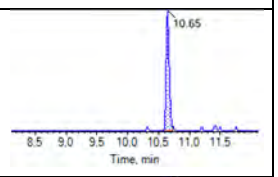
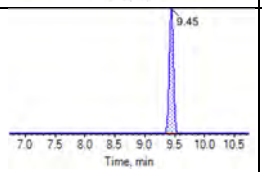
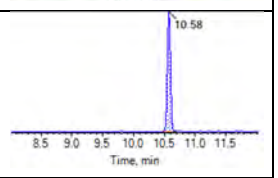
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	8116	13C7_PFUdA	223700	100.0	85.5	85.5	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	21180	d3-N-MeFOSAA	56550	100.0	94.4	94.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	10440	d3-N-MeFOSAA	56550	100.0	94.5	94.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	25630	d5-N-EtFOSAA	56960	100.0	110.8	110.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	10400	d5-N-EtFOSAA	56960	100.0	94.6	94.6	0.41/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	144300	13C8_PFOS	74460	96.5	100.7	104.3	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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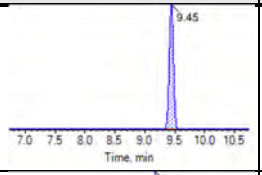
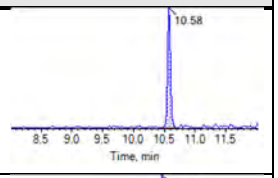
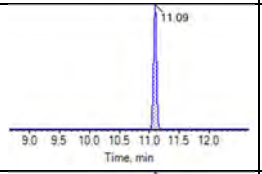
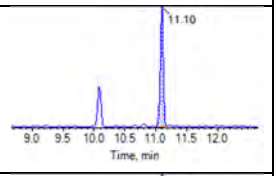
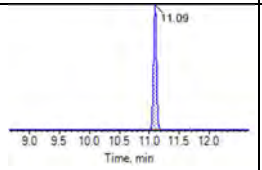
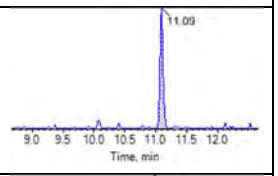
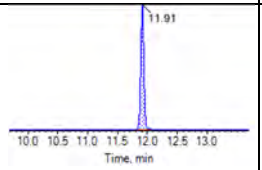
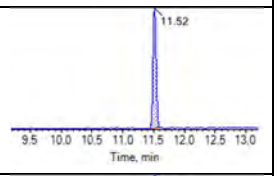
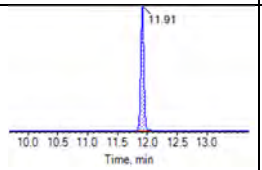
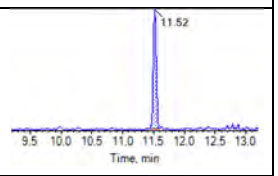
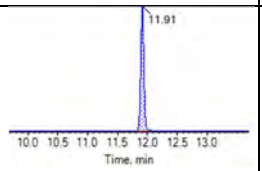
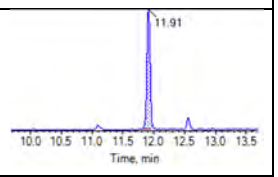
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	41420	13C8_PFOS	74460	96.5	108.4	112.4	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	68090	13C2_PFDoA	180000	100.0	100.4	100.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.09 (11.09)	11510	13C2_PFDoA	180000	100.0	103.9	103.9	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	71160	13C2_PFTeDA	146600	100.0	98.7	98.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	14800	13C2_PFTeDA	146600	100.0	92.8	92.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.91 (11.91)	51600	13C2_PFTeDA	146600	100.0	97.7	97.7	1.00/ 1.00		

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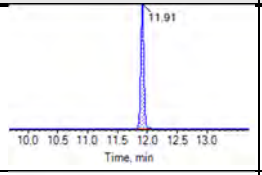
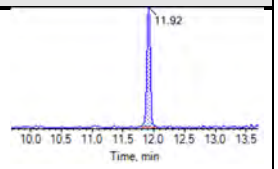
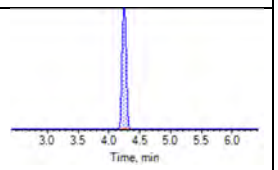
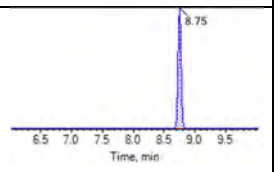
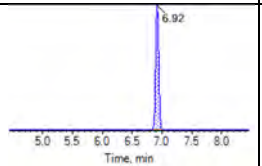
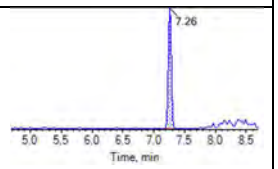
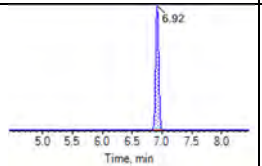
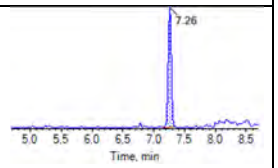
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	11210	13C2_PFTeDA	146600	100.0	96.4	96.4	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1840000	N/A	N/A	1000.0	1063.4	106.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1318000	N/A	N/A	1000.0	1071.3	107.1	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	77590	13C5_PFHxA	331600	100.0	94.1	94.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	60170	13C5_PFHxA	331600	100.0	97.0	97.0	0.78/ 0.75		

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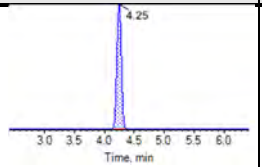
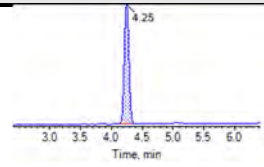
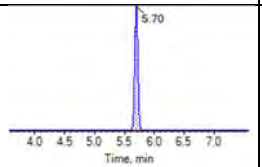
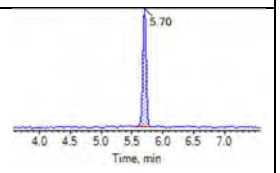
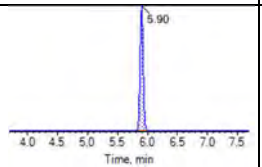
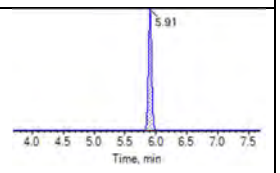
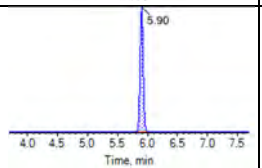
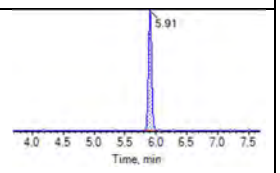
PFC103117004.wiff			
Sample Name	WPF171018-02	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117004.wiff
Acquisition Date	10/31/2017 17:17:20	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117004.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	229100	13C4_PFBA	156000	200.0	208.4	104.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	206400	13C5_PFPeA	238500	200.0	201.1	100.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	273300	13C3_PFBS	150600	177.0	184.1	104.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	113100	13C3_PFBS	150600	177.0	169.7	95.9	0.41/ 0.45		

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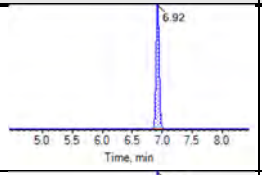
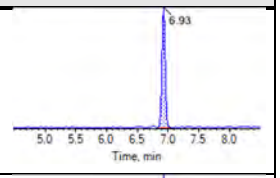
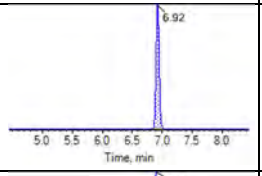
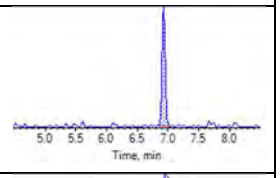
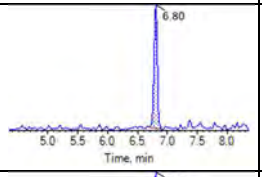
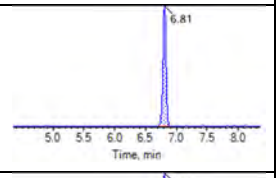
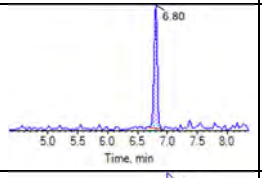
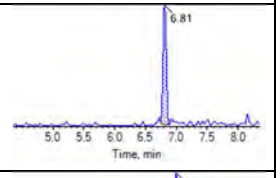
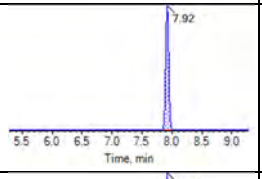
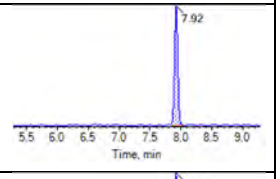
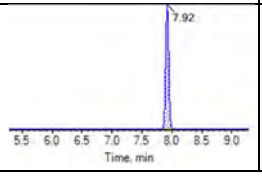
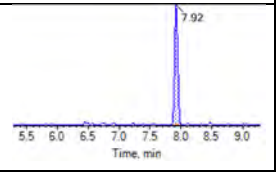
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	248400	13C5_PFHxA	303300	200.0	215.7	107.8	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	19570	13C5_PFHxA	303300	200.0	240.4	120.2	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	34440	13C2_4:2 FTS	31560	187.0	182.3	97.5	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	25070	13C2_4:2 FTS	31560	187.0	184.7	98.8	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	218700	13C4_PFHpA	237600	200.0	220.1	110.1	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	51990	13C4_PFHpA	237600	200.0	200.1	100.1	0.24/ 0.26		

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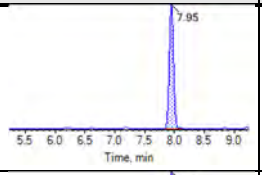
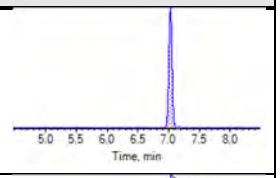
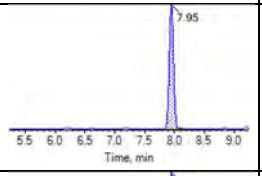
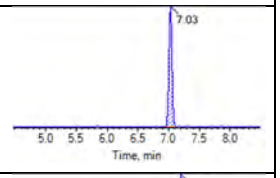
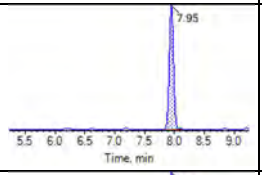
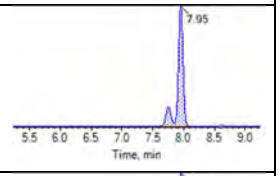
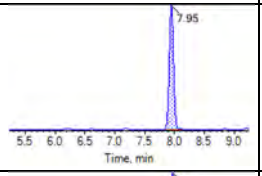
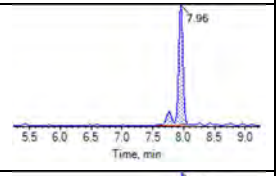
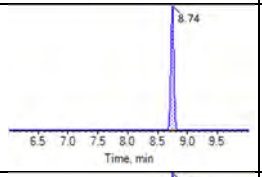
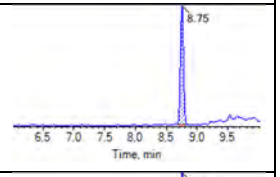
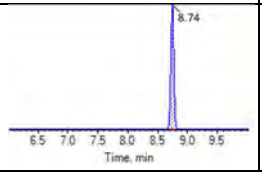
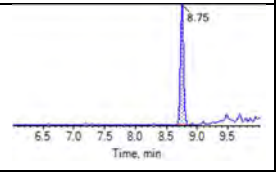
PFC103117004.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	292900	13C3_PFHxS	74500	188.0	187.8	99.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	105900	13C3_PFHxS	74500	188.0	194.3	103.4	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	271800	13C3_PFHxS	74500	182.4	189.2	103.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	63450	13C3_PFHxS	74500	182.4	174.9	95.9	0.23/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	214900	13C8_PFOA	273800	200.0	186.0	93.0	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	87000	13C8_PFOA	273800	200.0	201.8	100.9	0.40/ 0.37		

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LCMSMS#6

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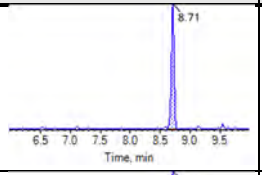
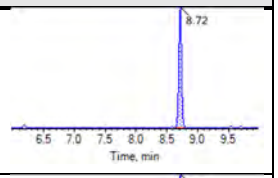
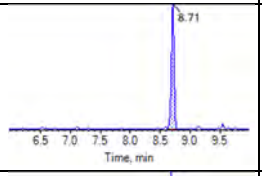
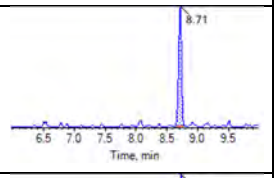
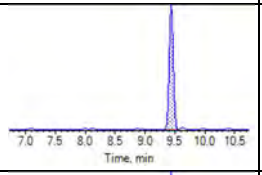
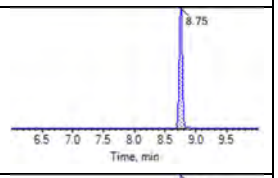
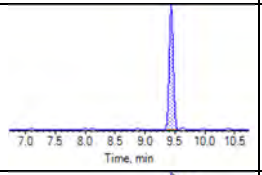
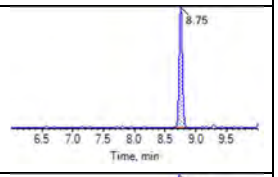
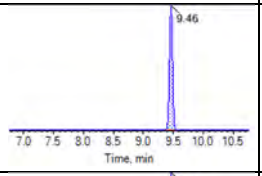
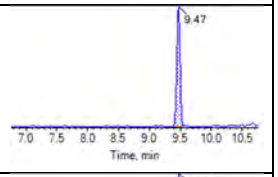
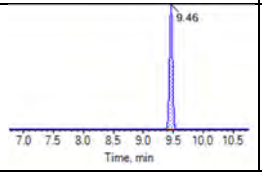
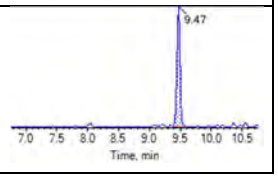
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	27950	13C2_6:2 FTS	35810	190.0	148.0	77.9	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	29860	13C2_6:2 FTS	35810	190.0	176.0	92.7	1.07/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	254800	13C8_PFOS	70880	190.0	184.4	97.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	54480	13C8_PFOS	70880	190.0	195.8	103.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	164900	13C9_PFNA	233000	200.0	210.6	105.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	41490	13C9_PFNA	233000	200.0	219.8	109.9	0.25/ 0.24		

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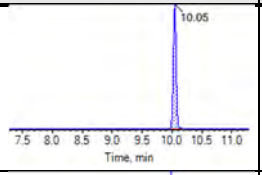
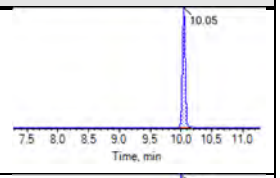
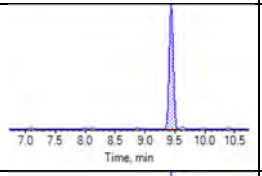
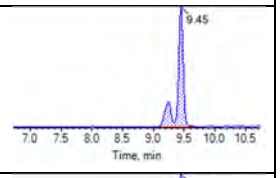
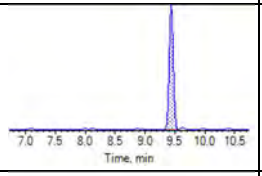
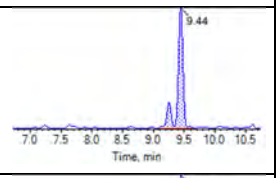
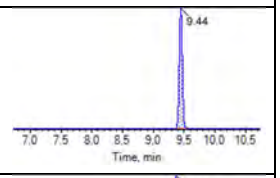
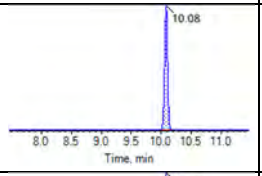
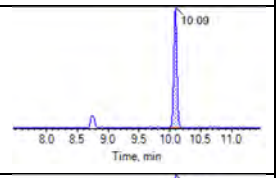
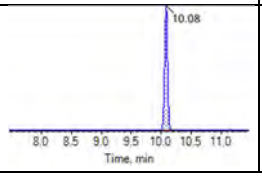
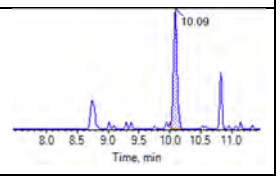
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.05 (10.04)	388900	13C8_PFOSA	522200	185.1	199.1	107.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	236300	13C8_PFOS	70880	200.0	205.2	102.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	38210	13C8_PFOS	70880	200.0	224.7	112.3	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1643000	N/A	N/A	1000.0	979.7	98.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	165900	13C6_PFDA	153100	200.0	210.3	105.1	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.09 (10.08)	18010	13C6_PFDA	153100	200.0	182.3	91.1	0.11/ 0.13		

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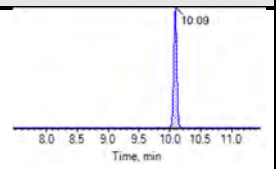
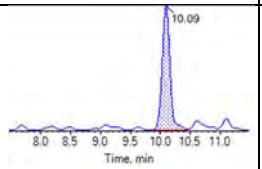
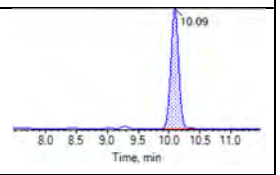
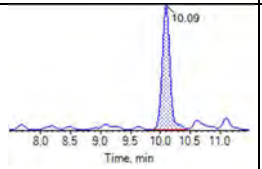
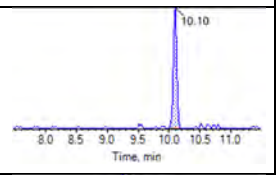
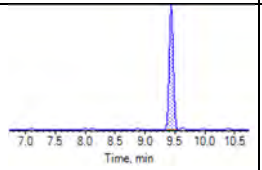
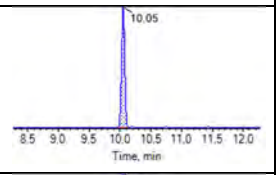
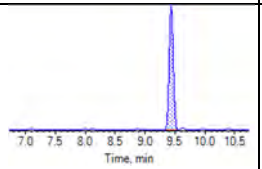
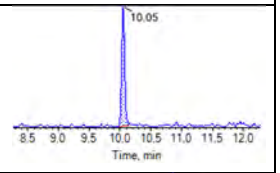
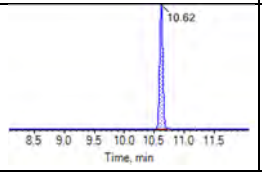
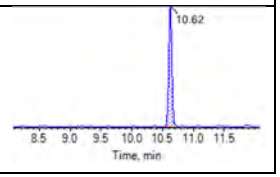
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1161000	N/A	N/A	1000.0	1006.7	100.7	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	25710	13C2_8:2 FTS	22510	192.0	221.7	115.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	30560	13C2_8:2 FTS	22510	192.0	271.8	141.6	1.19/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	214700	13C8_PFOS	70880	192.0	191.9	99.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	34980	13C8_PFOS	70880	192.0	171.7	89.4	0.16/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	166300	13C7_PFUdA	192800	200.0	242.3	121.1	1.00/ 1.00		

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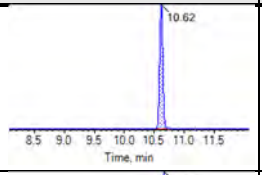
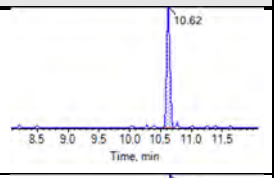
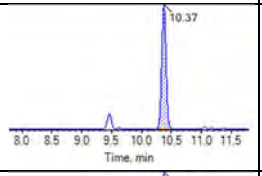
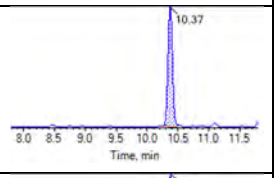
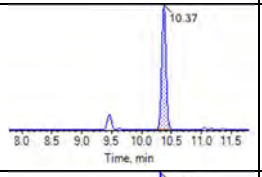
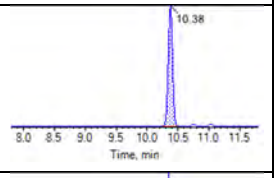
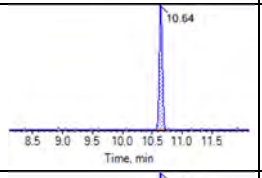
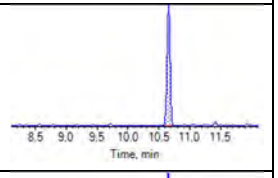
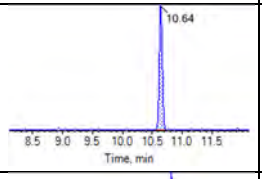
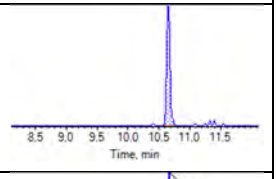
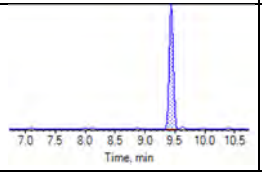
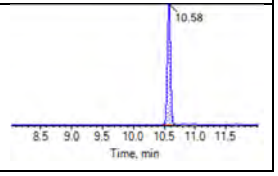
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.62 (10.62)	17550	13C7_PFUdA	192800	200.0	214.5	107.2	0.11/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	32410	d3-N-MeFOSAA	44720	200.0	182.8	91.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	15800	d3-N-MeFOSAA	44720	200.0	180.9	90.4	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	38960	d5-N-EtFOSAA	50990	200.0	188.2	94.1	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	18410	d5-N-EtFOSAA	50990	200.0	187.2	93.6	0.47/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	259000	13C8_PFOS	70880	193.0	189.8	98.3	1.00/ 1.00		

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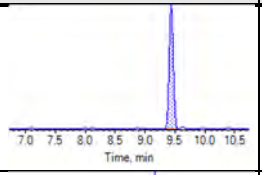
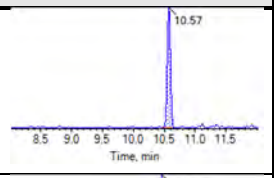
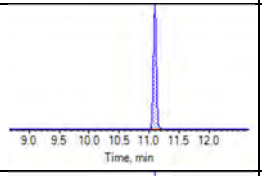
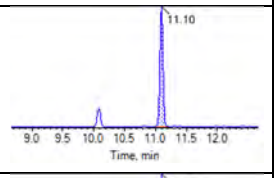
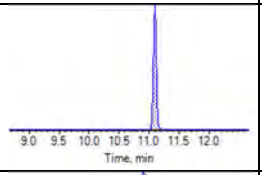
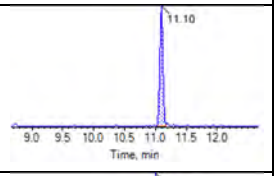
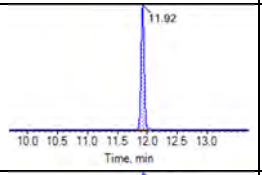
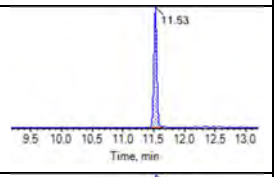
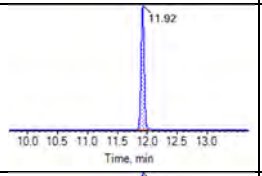
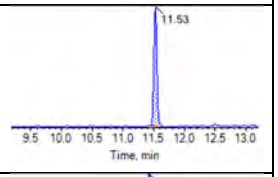
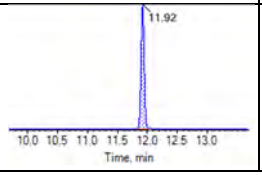
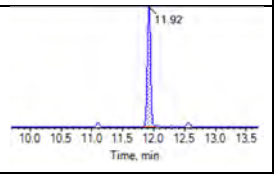
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.57 (10.93)	66390	13C8_PFOS	70880	193.0	182.6	94.6	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	133700	13C2_PFDoA	180800	200.0	196.3	98.2	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	21990	13C2_PFDoA	180800	200.0	197.6	98.8	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	133800	13C2_PFTeDA	131300	200.0	207.4	103.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	29530	13C2_PFTeDA	131300	200.0	206.9	103.5	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	93260	13C2_PFTeDA	131300	200.0	197.2	98.6	1.00/ 1.00		

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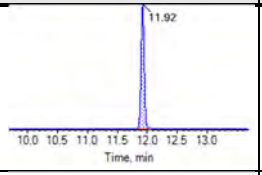
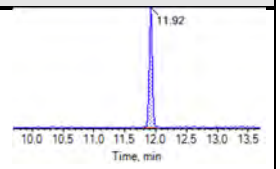
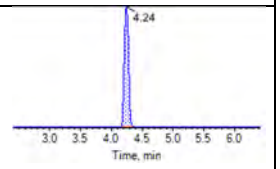
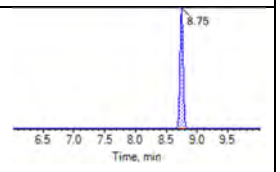
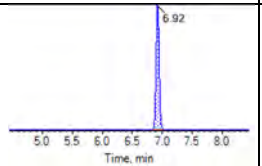
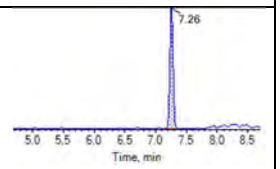
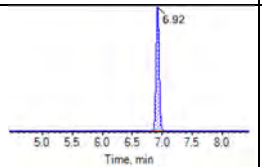
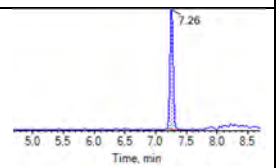
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21590	13C2_PFTeDA	131300	200.0	207.3	103.7	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1799000	N/A	N/A	1000.0	1040.0	104.0	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1164000	N/A	N/A	1000.0	946.1	94.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	150400	13C5_PFHxA	303300	200.0	199.3	99.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	109100	13C5_PFHxA	303300	200.0	192.1	96.1	0.73/ 0.75		

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LCMSMS#6

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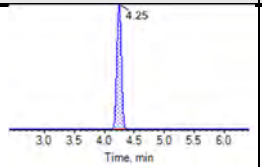
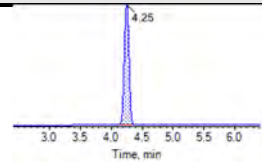
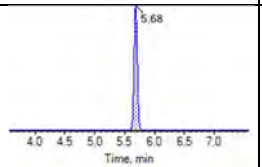
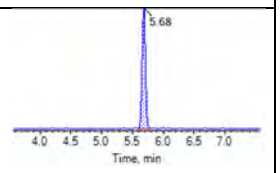
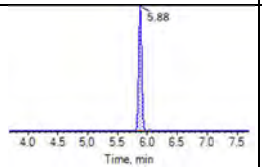
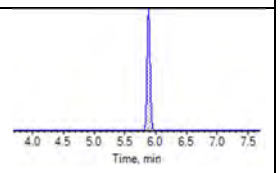
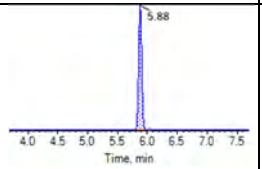
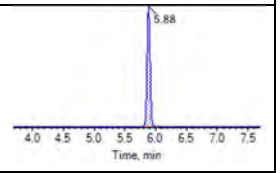
PFC103117005.wiff			
Sample Name	WPF171018-03	**Injection Vial**	4
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117005.wiff
Acquisition Date	10/31/2017 17:38:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117005.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	517100	13C4_PFBA	143800	500.0	510.3	102.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.68 (5.69)	489000	13C5_PFPeA	225300	500.0	504.5	100.9	1.00/ 1.00		
PFBS	298.9 / 80.0	5.88 (5.89)	682500	13C3_PFBS	157400	442.5	440.0	99.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.88 (5.89)	318900	13C3_PFBS	157400	442.5	457.9	103.5	0.47/ 0.45		

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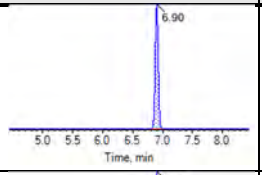
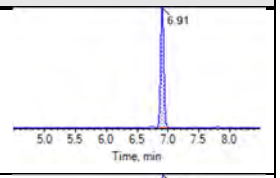
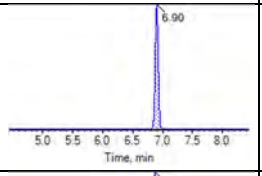
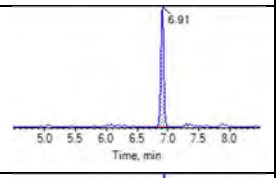
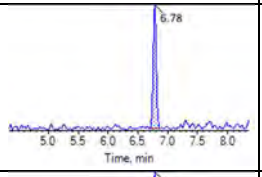
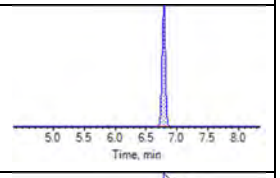
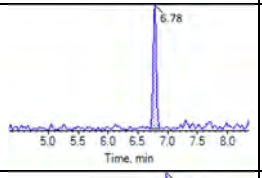
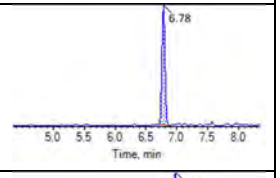
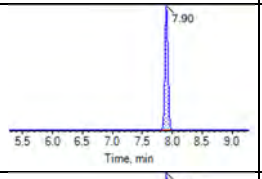
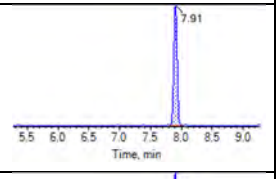
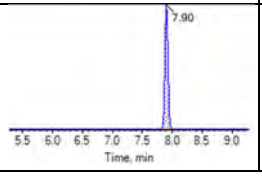
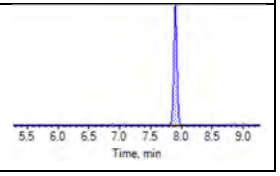
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.91 (6.92)	559700	13C5_PFHxA	280900	500.0	524.8	105.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.91 (6.92)	37040	13C5_PFHxA	280900	500.0	491.3	98.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	84330	13C2_4:2 FTS	31670	467.5	444.8	95.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	59010	13C2_4:2 FTS	31670	467.5	433.2	92.7	0.70/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	488100	13C4_PFHpA	228000	500.0	511.8	102.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.90 (7.93)	137800	13C4_PFHpA	228000	500.0	552.5	110.5	0.28/ 0.26		

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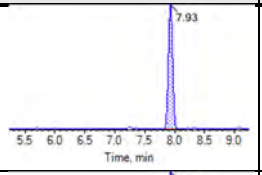
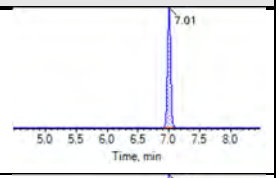
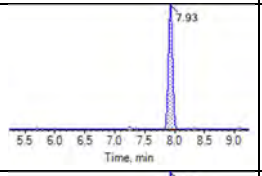
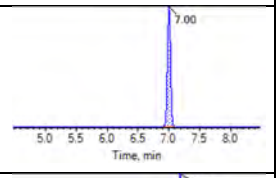
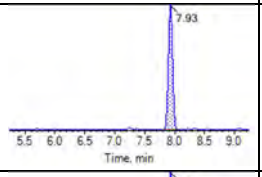
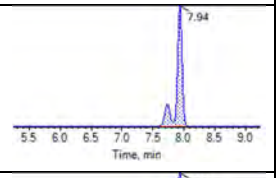
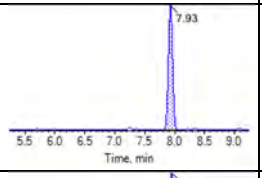
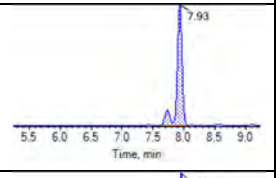
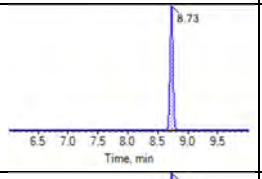
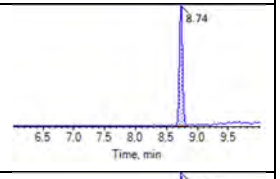
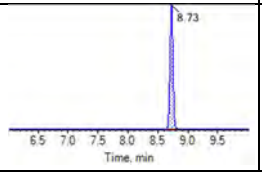
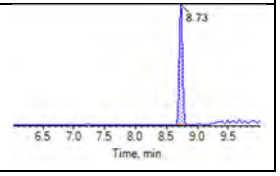
PFPeS	349.0 / 80.0	7.01 (7.02)	762400	13C3_PFHxS	65190	470.0	558.6	118.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.00 (7.02)	249200	13C3_PFHxS	65190	470.0	522.5	111.2	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.94 (7.96)	665500	13C3_PFHxS	65190	456.0	529.3	116.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.93 (7.96)	192500	13C3_PFHxS	65190	456.0	606.1	132.9	0.29/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	522800	13C8_PFOA	235000	500.0	527.2	105.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.73 (8.75)	192700	13C8_PFOA	235000	500.0	520.9	104.2	0.37/ 0.37		

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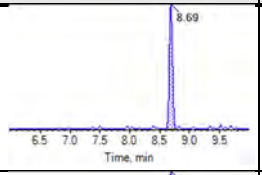
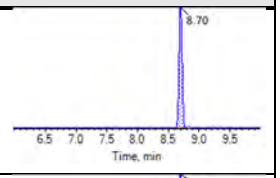
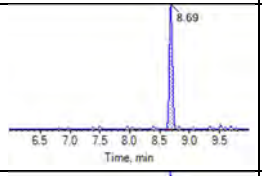
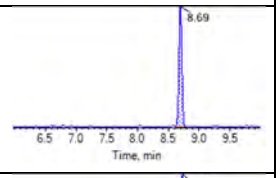
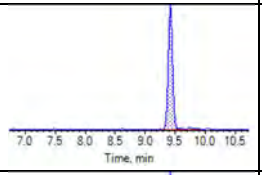
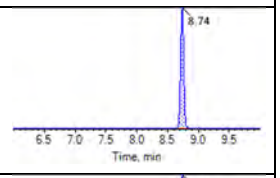
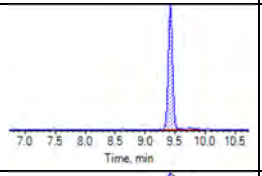
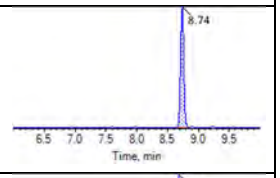
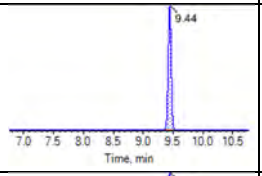
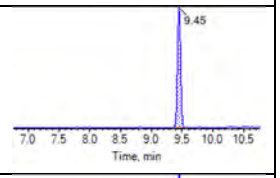
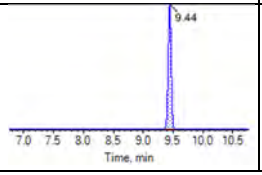
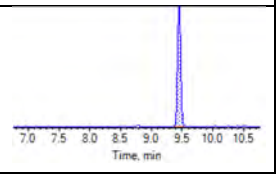
6:2 FTS	427.0 / 407.0	8.70 (8.72)	80140	13C2_6:2 FTS	36320	475.0	418.4	88.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.69 (8.72)	75960	13C2_6:2 FTS	36320	475.0	441.6	93.0	0.95/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	615300	13C8_PFOS	69320	475.0	455.3	95.9	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	120100	13C8_PFOS	69320	475.0	441.5	92.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	378800	13C9_PFNA	234300	500.0	481.0	96.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	102000	13C9_PFNA	234300	500.0	537.3	107.5	0.27/ 0.24		

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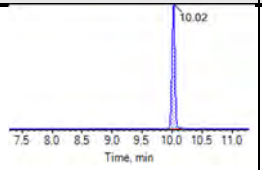
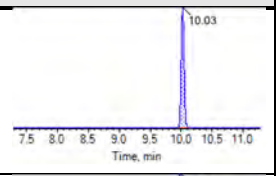
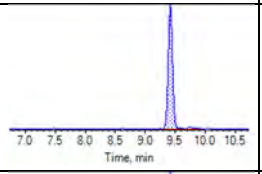
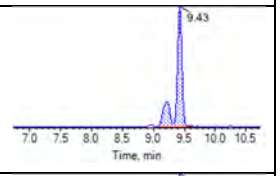
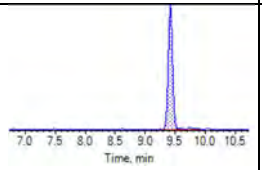
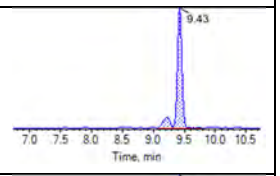
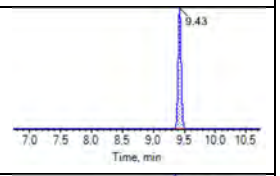
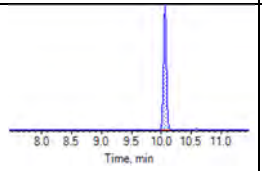
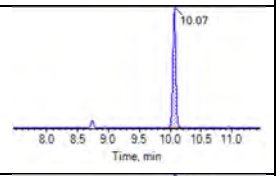
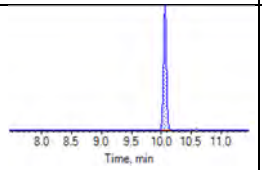
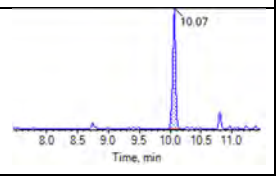
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	984500	13C8_PFOSA	504200	462.8	521.9	112.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	538600	13C8_PFOS	69320	500.0	478.2	95.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	84470	13C8_PFOS	69320	500.0	507.8	101.6	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1636000	N/A	N/A	1000.0	975.7	97.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	364700	13C6_PFDA	141800	500.0	499.0	99.8	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	47340	13C6_PFDA	141800	500.0	517.1	103.4	0.13/ 0.13		

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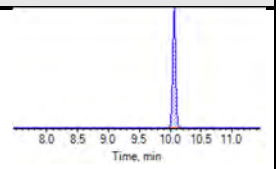
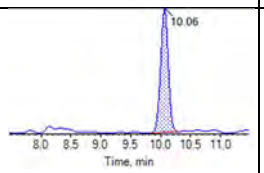
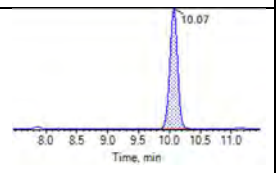
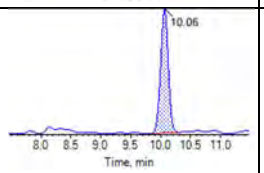
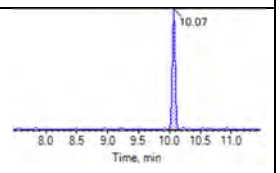
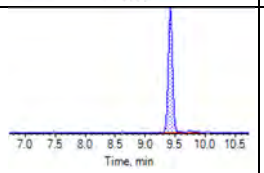
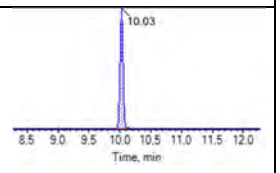
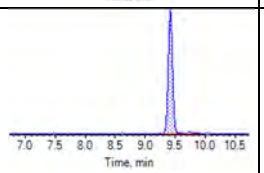
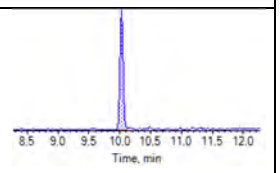
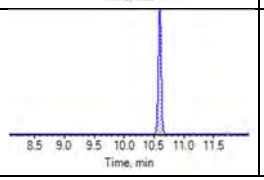
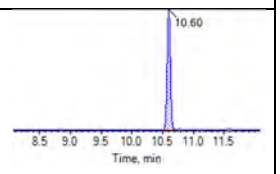
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1171000	N/A	N/A	1000.0	1015.5	101.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	64800	13C2_8:2 FTS	27340	480.0	459.8	95.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	57650	13C2_8:2 FTS	27340	480.0	422.1	87.9	0.89/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	488200	13C8_PFOS	69320	480.0	446.2	93.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	93410	13C8_PFOS	69320	480.0	468.7	97.6	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	358700	13C7_PFUdA	201900	500.0	498.9	99.8	1.00/ 1.00		

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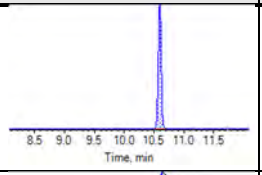
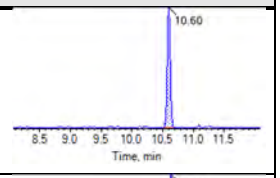
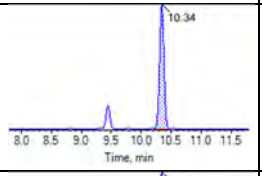
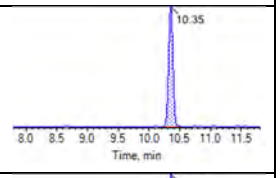
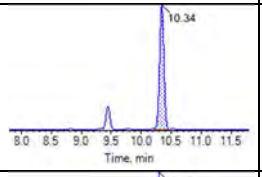
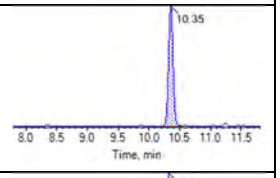
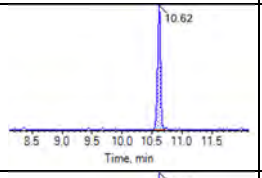
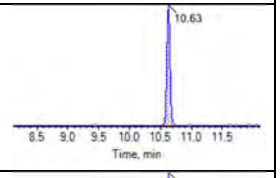
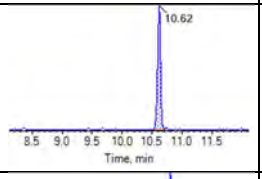
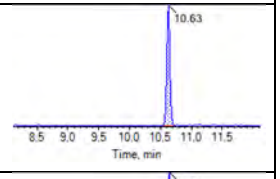
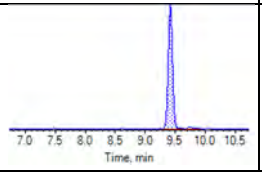
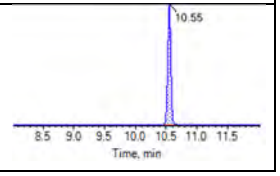
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	42550	13C7_PFUdA	201900	500.0	496.7	99.3	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.35 (10.37)	85690	d3-N-MeFOSAA	42130	500.0	512.9	102.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	41780	d3-N-MeFOSAA	42130	500.0	507.6	101.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	96410	d5-N-EtFOSAA	44930	500.0	528.6	105.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	48270	d5-N-EtFOSAA	44930	500.0	556.9	111.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	598200	13C8_PFOS	69320	482.5	448.2	92.9	1.00/ 1.00		

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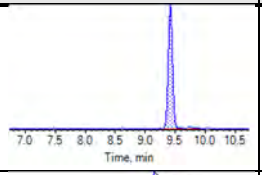
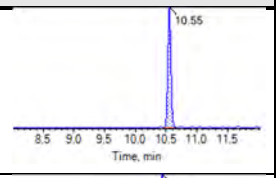
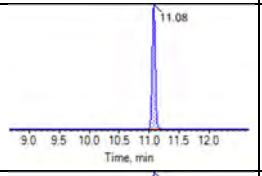
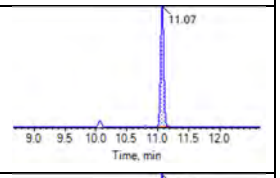
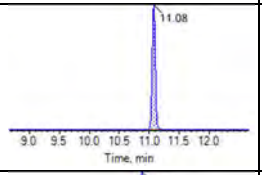
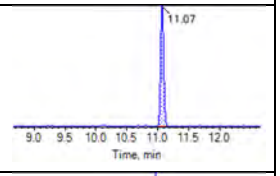
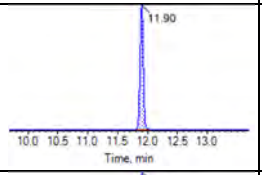
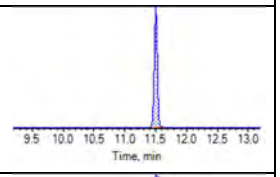
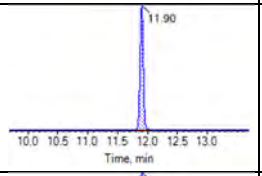
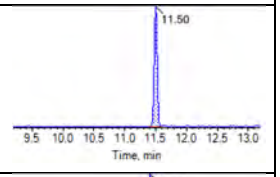
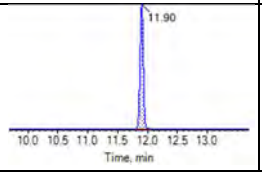
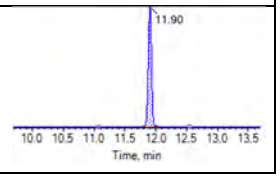
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	170800	13C8_PFOS	69320	482.5	480.4	99.6	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	342100	13C2_PFDoA	181100	500.0	501.6	100.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	58640	13C2_PFDoA	181100	500.0	526.0	105.2	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	314900	13C2_PFTeDA	125000	500.0	512.2	102.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	71040	13C2_PFTeDA	125000	500.0	522.5	104.5	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	221100	13C2_PFTeDA	125000	500.0	490.9	98.2	1.00/ 1.00		

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LCMSMS#6

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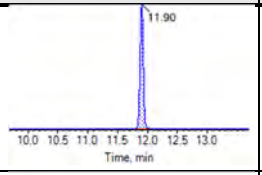
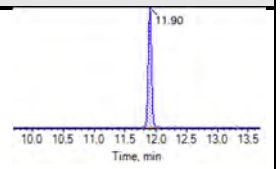
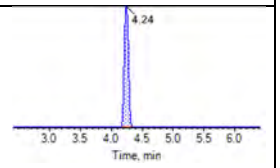
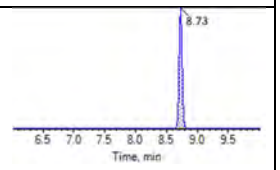
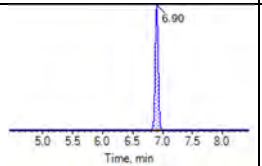
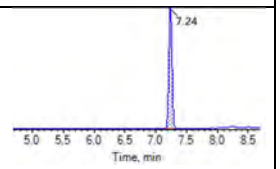
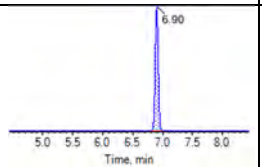
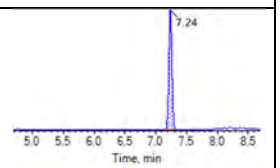
PFC103117005.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	49350	13C2_PFTeDA	125000	500.0	497.6	99.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1737000	N/A	N/A	1000.0	1003.8	100.4	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	1169000	N/A	N/A	1000.0	949.8	95.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.24 (7.26)	401200	13C5_PFHxA	280900	500.0	574.2	114.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.24 (7.26)	280000	13C5_PFHxA	280900	500.0	532.6	106.5	0.70/ 0.75		

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LCMSMS#6

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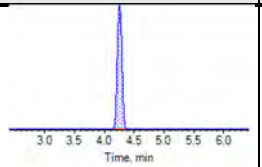
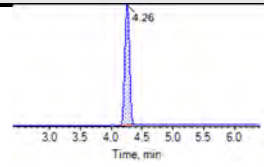
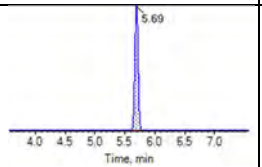
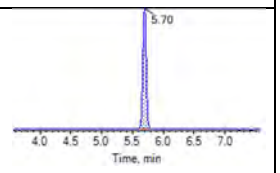
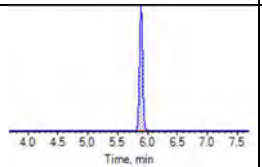
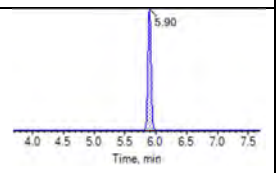
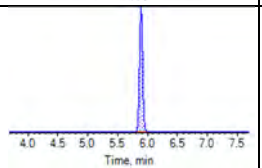
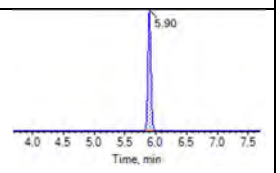
PFC103117006.wiff			
Sample Name	WPF171018-04	**Injection Vial**	5
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117006.wiff
Acquisition Date	10/31/2017 18:00:08	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117006.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	767000	13C4_PFBA	149800	750.0	726.8	96.9	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	757800	13C5_PFPeA	231500	750.0	760.8	101.4	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	989600	13C3_PFBS	156800	663.8	640.3	96.5	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	434700	13C3_PFBS	156800	663.8	626.5	94.4	0.44/ 0.45		

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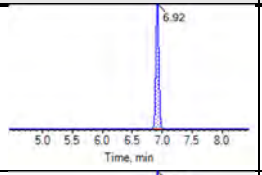
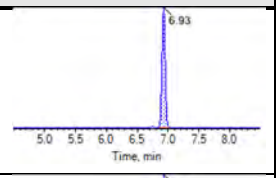
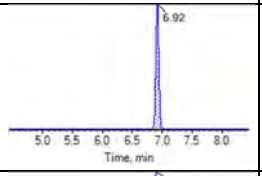
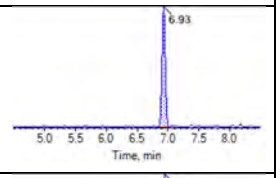
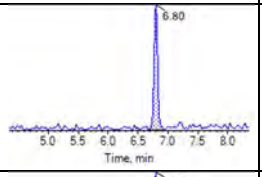
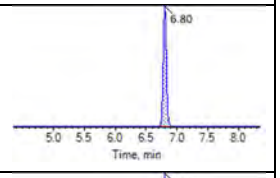
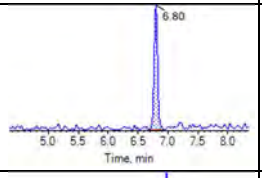
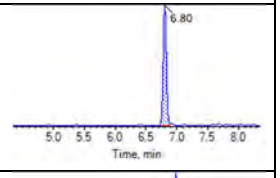
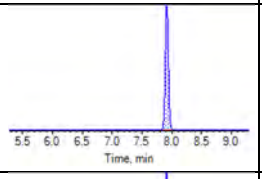
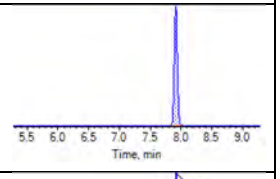
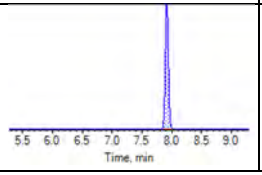
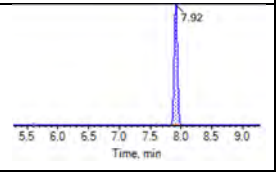
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	837400	13C5_PFHxA	309400	750.0	712.9	95.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	58640	13C5_PFHxA	309400	750.0	706.1	94.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	129900	13C2_4:2 FTS	33690	701.3	644.4	91.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	103600	13C2_4:2 FTS	33690	701.3	715.0	102.0	0.80/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	762600	13C4_PFHpA	250700	750.0	727.2	97.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	206900	13C4_PFHpA	250700	750.0	754.5	100.6	0.27/ 0.26		

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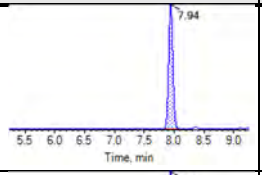
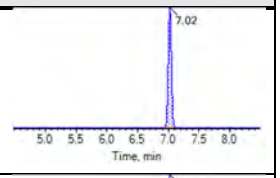
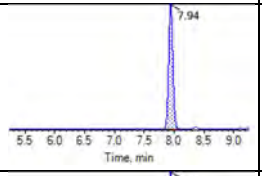
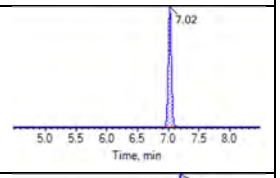
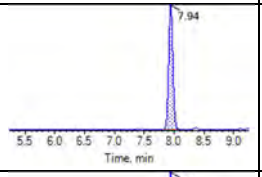
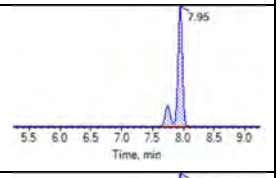
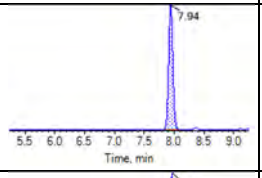
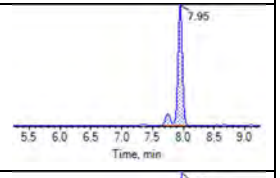
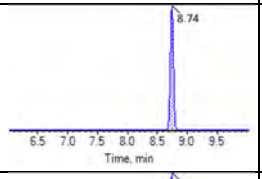
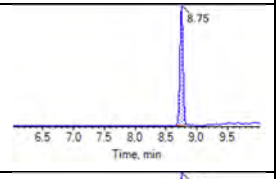
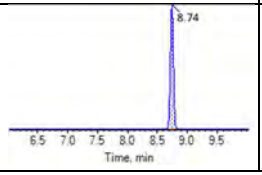
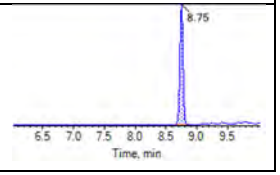
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1148000	13C3_PFHxS	74210	705.0	739.0	104.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	403600	13C3_PFHxS	74210	705.0	743.6	105.5	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1049000	13C3_PFHxS	74210	684.0	732.7	107.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	251500	13C3_PFHxS	74210	684.0	695.8	101.7	0.24/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	736000	13C8_PFOA	236300	750.0	738.3	98.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	272300	13C8_PFOA	236300	750.0	732.0	97.6	0.37/ 0.37		

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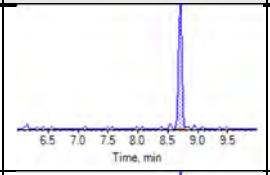
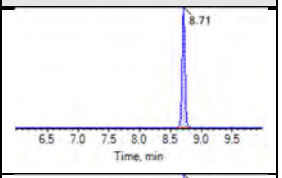
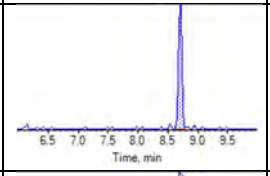
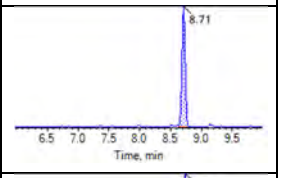
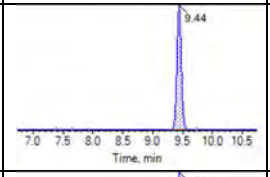
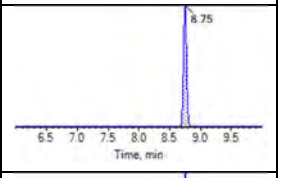
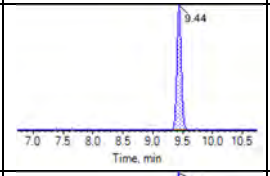
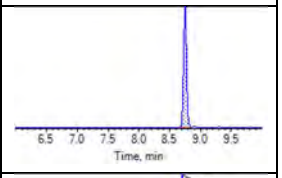
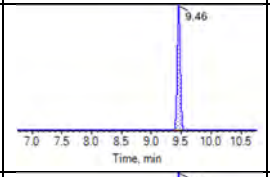
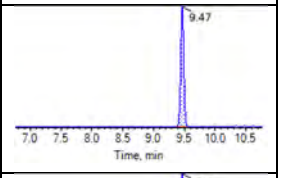
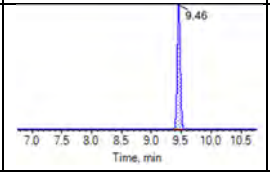
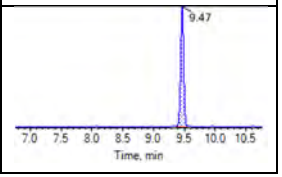
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	119000	13C2_6:2 FTS	29030	712.5	777.0	109.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	100000	13C2_6:2 FTS	29030	712.5	727.4	102.1	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	906400	13C8_PFOS	69030	712.5	673.5	94.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	189600	13C8_PFOS	69030	712.5	699.6	98.2	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	594200	13C9_PFNA	253400	750.0	697.8	93.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	147600	13C9_PFNA	253400	750.0	718.6	95.8	0.25/ 0.24		

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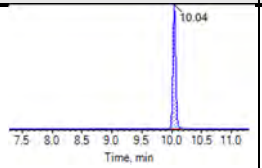
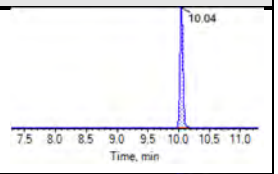
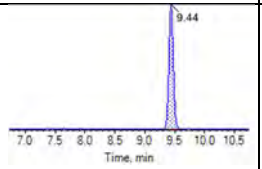
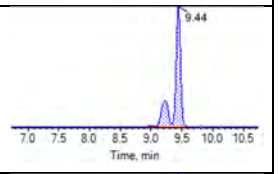
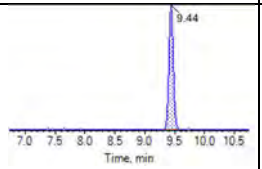
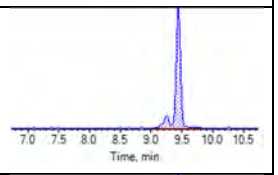
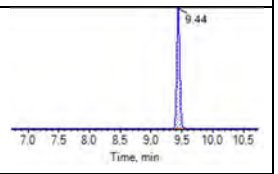
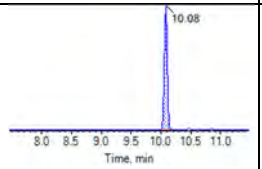
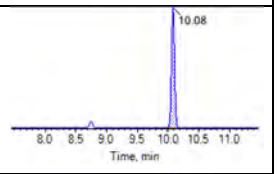
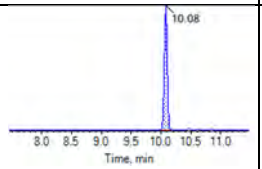
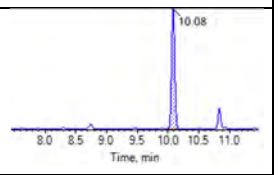
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	1416000	13C8_PFOSA	562200	694.1	673.1	97.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	798200	13C8_PFOS	69030	750.0	711.7	94.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	130300	13C8_PFOS	69030	750.0	786.7	104.9	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1731000	N/A	N/A	1000.0	1032.2	103.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	577100	13C6_PFDA	127300	750.0	879.7	117.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	66430	13C6_PFDA	127300	750.0	808.5	107.8	0.12/ 0.13		

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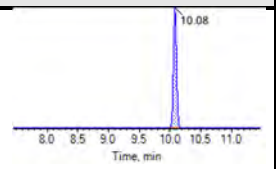
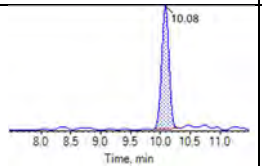
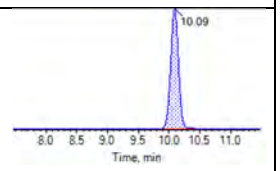
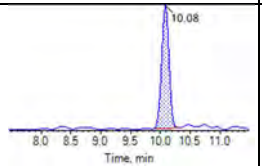
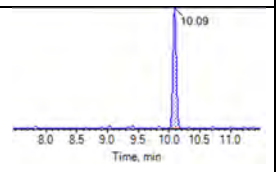
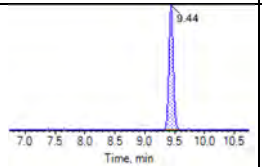
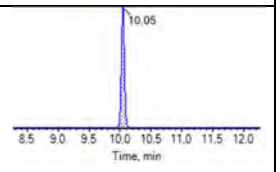
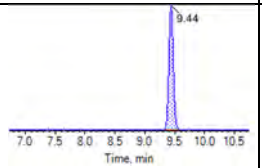
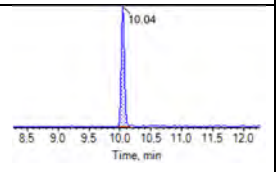
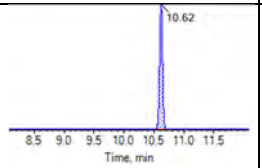
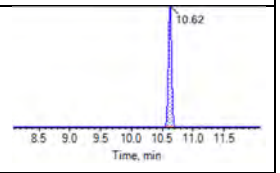
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1174000	N/A	N/A	1000.0	1017.6	101.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	82480	13C2_8:2 FTS	23650	720.0	676.8	94.0	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.09 (10.09)	76340	13C2_8:2 FTS	23650	720.0	646.3	89.8	0.93/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	822000	13C8_PFOS	69030	720.0	754.4	104.8	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	141600	13C8_PFOS	69030	720.0	713.3	99.1	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	520500	13C7_PFUdA	203300	750.0	719.0	95.9	1.00/ 1.00		

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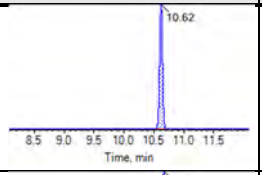
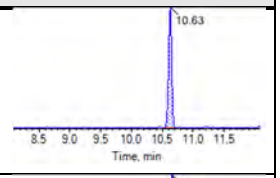
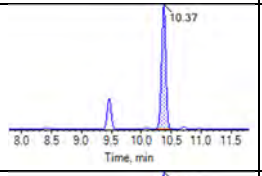
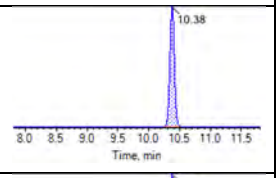
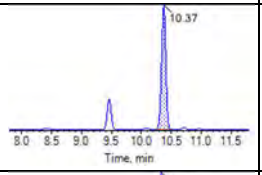
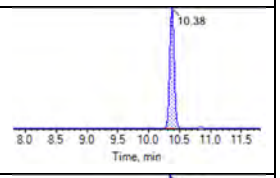
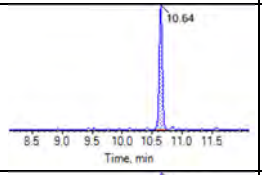
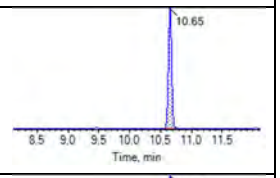
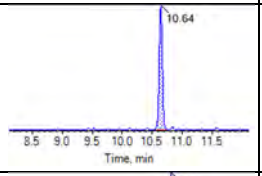
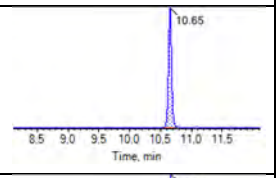
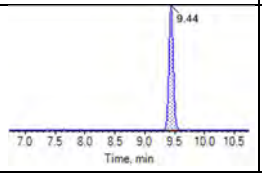
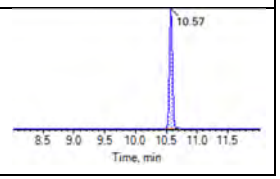
PFUdA_2	563.0 / 169.0	10.63 (10.62)	65130	13C7_PFUdA	203300	750.0	755.0	100.7	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.38 (10.37)	139900	d3-N-MeFOSAA	51150	750.0	689.6	91.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	74720	d3-N-MeFOSAA	51150	750.0	747.8	99.7	0.53/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.65 (10.64)	150600	d5-N-EtFOSAA	47640	750.0	778.8	103.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	76880	d5-N-EtFOSAA	47640	750.0	836.6	111.5	0.51/ 0.48		
PFDS	599.0 / 80.0	10.57 (10.93)	964500	13C8_PFOS	69030	723.8	725.7	100.3	1.00/ 1.00		

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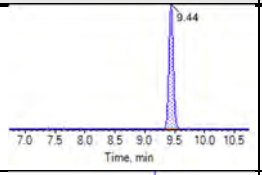
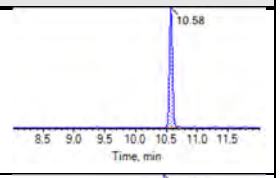
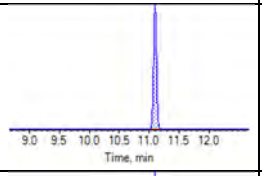
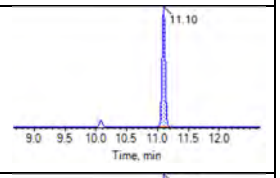
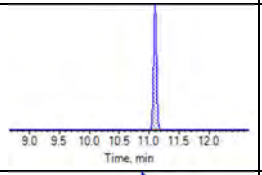
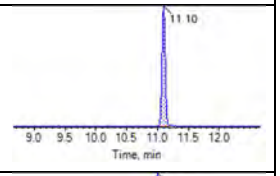
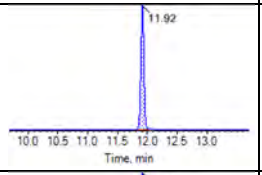
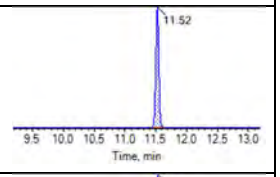
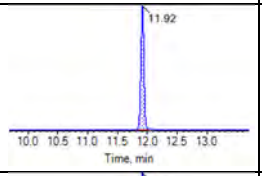
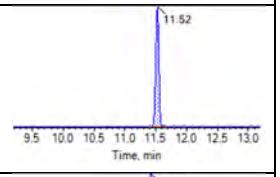
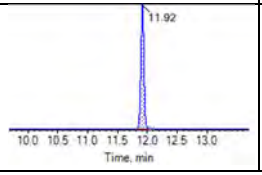
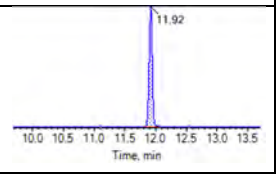
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	233800	13C8_PFOS	69030	723.8	660.5	91.3	0.24/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	520100	13C2_PFDoA	171500	750.0	805.4	107.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	79330	13C2_PFDoA	171500	750.0	751.5	100.2	0.15/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	466000	13C2_PFTeDA	124300	750.0	762.2	101.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	102400	13C2_PFTeDA	124300	750.0	757.4	101.0	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	357300	13C2_PFTeDA	124300	750.0	797.8	106.4	1.00/ 1.00		

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LCMSMS#6

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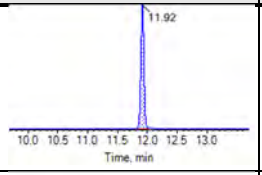
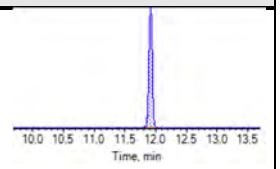
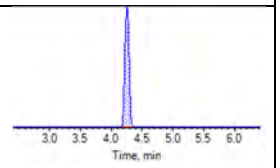
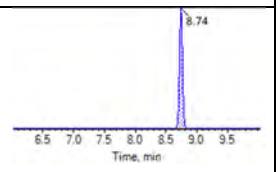
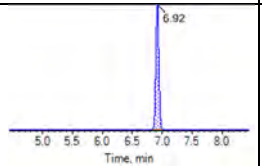
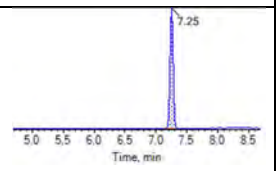
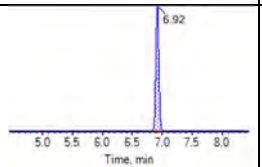
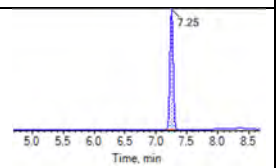
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	75610	13C2_PFTeDA	124300	750.0	766.6	102.2	0.21/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1749000	N/A	N/A	1000.0	1010.7	101.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1228000	N/A	N/A	1000.0	997.8	99.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	559800	13C5_PFHxA	309400	750.0	727.4	97.0	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	408300	13C5_PFHxA	309400	750.0	705.1	94.0	0.73/ 0.75		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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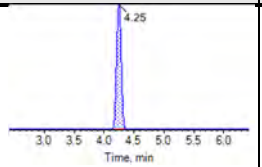
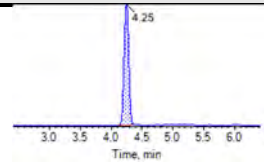
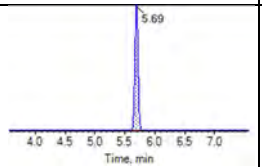
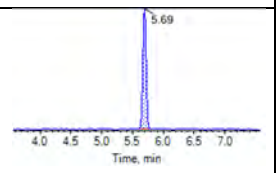
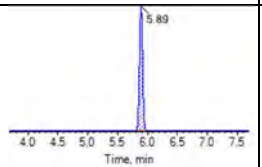
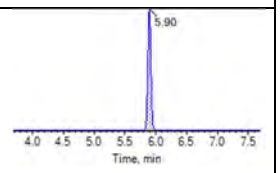
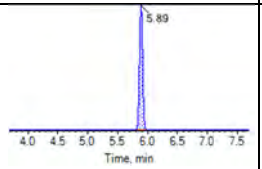
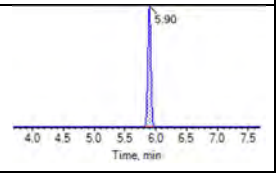
PFC103117007.wiff			
Sample Name	WPF171018-05	**Injection Vial**	6
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117007.wiff
Acquisition Date	10/31/2017 18:21:33	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117007.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1028000	13C4_PFBA	142000	1000.0	1026.7	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	999500	13C5_PFPeA	235000	1000.0	988.5	98.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1387000	13C3_PFBS	145100	885.0	969.9	109.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	649800	13C3_PFBS	145100	885.0	1012.3	114.4	0.47/ 0.45		

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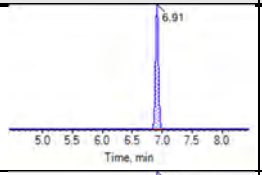
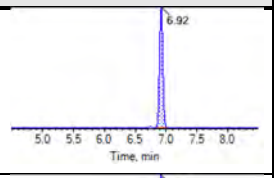
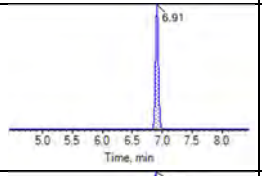
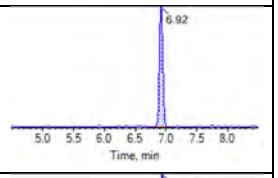
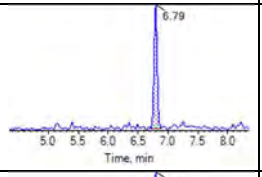
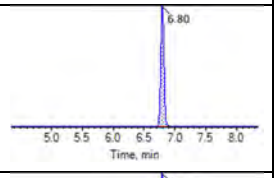
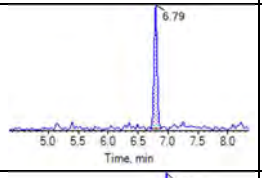
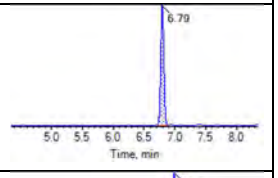
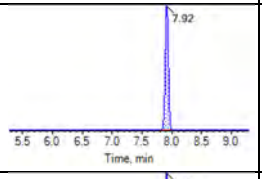
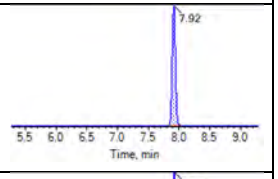
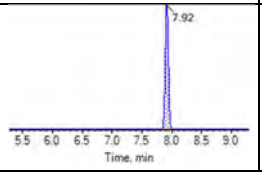
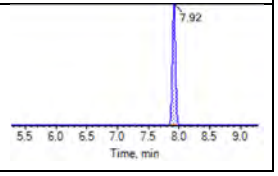
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1069000	13C5_PFHxA	287400	1000.0	980.0	98.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	78140	13C5_PFHxA	287400	1000.0	1013.1	101.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	174600	13C2_4:2 FTS	26660	935.0	1093.9	117.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	138600	13C2_4:2 FTS	26660	935.0	1208.6	129.3	0.79/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1052000	13C4_PFHpA	260000	1000.0	967.2	96.7	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	263700	13C4_PFHpA	260000	1000.0	927.4	92.7	0.25/ 0.26		

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LCMSMS#6

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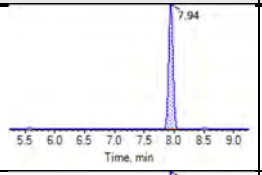
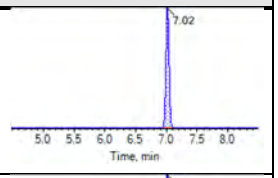
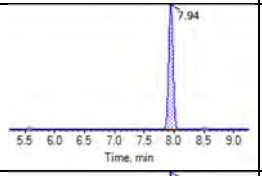
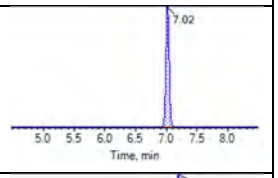
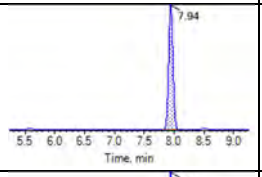
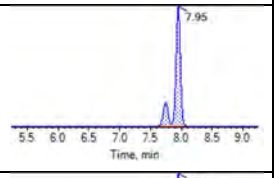
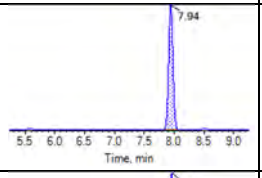
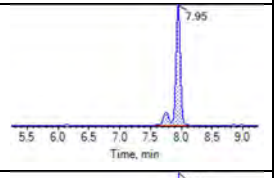
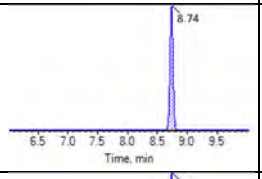
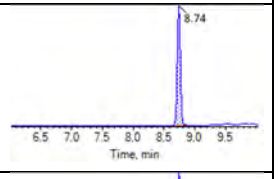
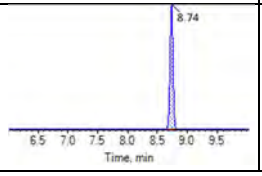
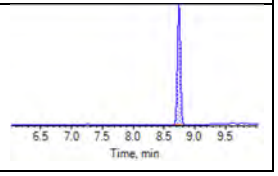
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1464000	13C3_PFHxS	82910	940.0	843.5	89.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	530700	13C3_PFHxS	82910	940.0	875.1	93.1	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1331000	13C3_PFHxS	82910	912.0	832.5	91.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	333300	13C3_PFHxS	82910	912.0	825.3	90.5	0.25/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	1037000	13C8_PFOA	237800	1000.0	1033.9	103.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.74 (8.75)	352100	13C8_PFOA	237800	1000.0	940.6	94.1	0.34/ 0.37		

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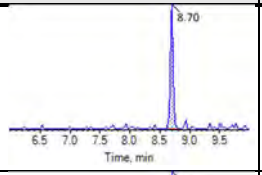
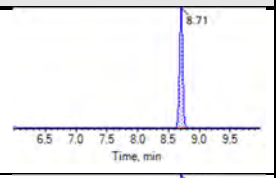
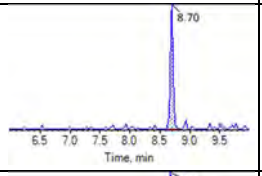
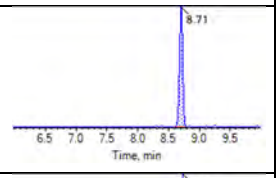
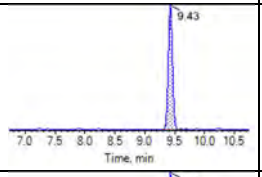
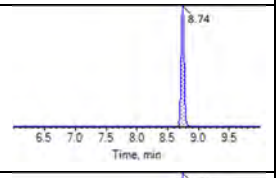
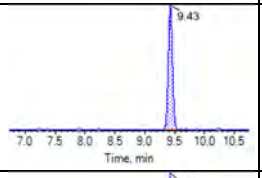
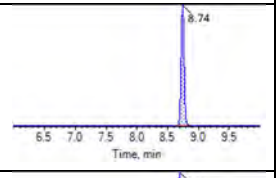
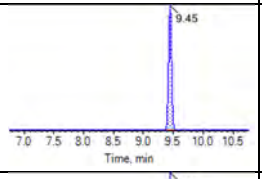
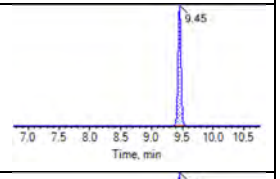
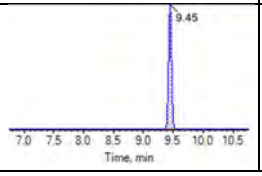
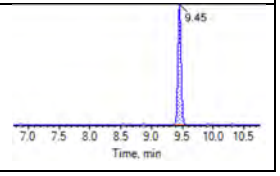
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	165700	13C2_6:2 FTS	28340	950.0	1108.9	116.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	150400	13C2_6:2 FTS	28340	950.0	1120.6	118.0	0.91/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	1332000	13C8_PFOS	60240	950.0	1133.7	119.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	275900	13C8_PFOS	60240	950.0	1166.9	122.8	0.21/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	879400	13C9_PFNA	240000	1000.0	1090.5	109.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	187700	13C9_PFNA	240000	1000.0	965.3	96.5	0.21/ 0.24		

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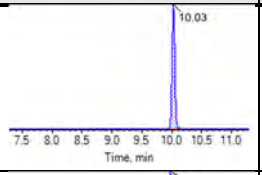
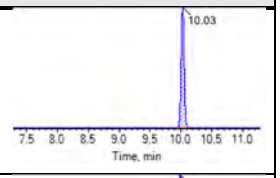
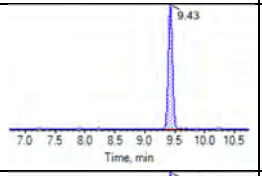
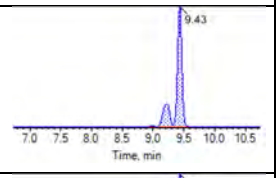
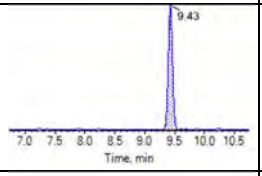
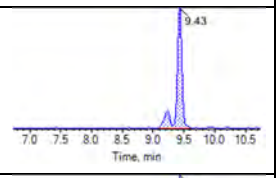
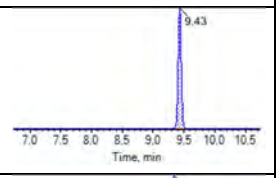
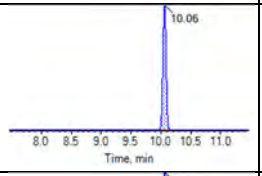
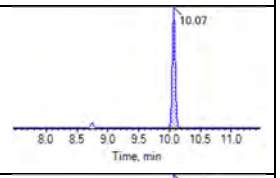
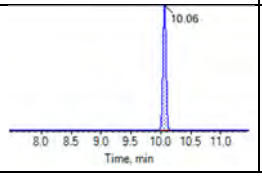
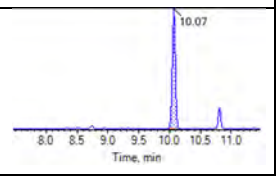
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	1847000	13C8_PFOSA	517000	925.5	955.0	103.2	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	1165000	13C8_PFOS	60240	1000.0	1190.7	119.1	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	148600	13C8_PFOS	60240	1000.0	1028.3	102.8	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1668000	N/A	N/A	1000.0	994.4	99.4	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	714500	13C6_PFDA	156800	1000.0	884.1	88.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	89470	13C6_PFDA	156800	1000.0	883.9	88.4	0.13/ 0.13		

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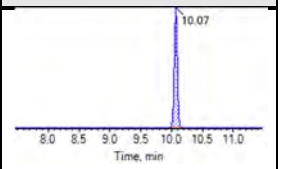
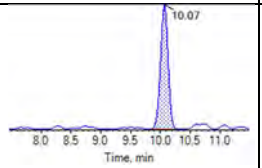
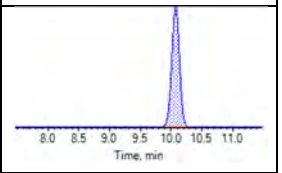
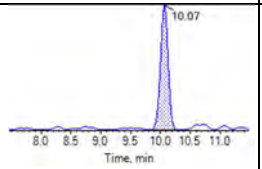
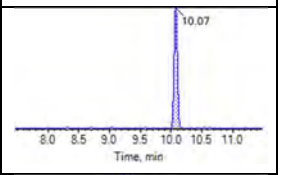
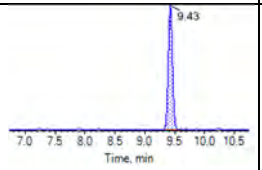
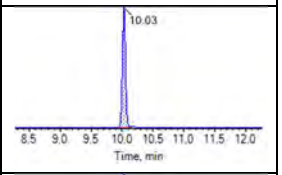
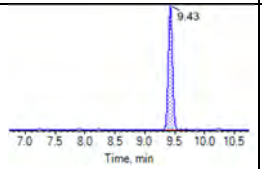
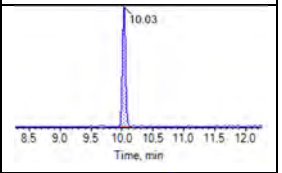
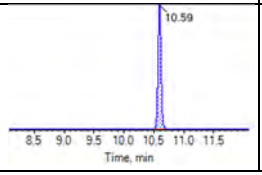
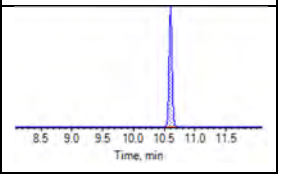
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1105000	N/A	N/A	1000.0	957.8	95.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	103100	13C2_8:2 FTS	24270	960.0	824.0	85.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	103600	13C2_8:2 FTS	24270	960.0	855.0	89.1	1.01/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1064000	13C8_PFOS	60240	960.0	1118.6	116.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	204900	13C8_PFOS	60240	960.0	1182.8	123.2	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	738100	13C7_PFUdA	198300	1000.0	1045.4	104.5	1.00/ 1.00		

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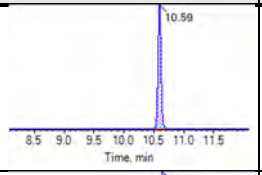
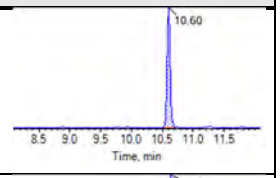
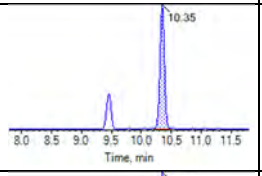
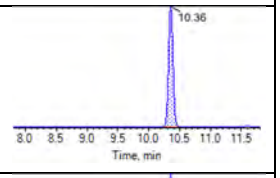
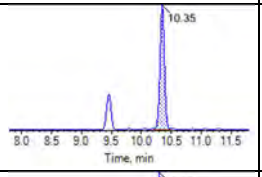
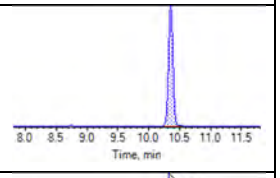
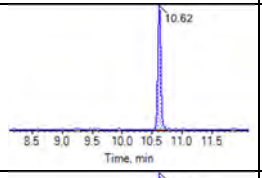
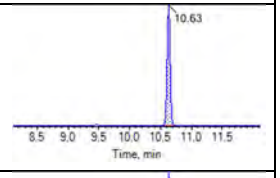
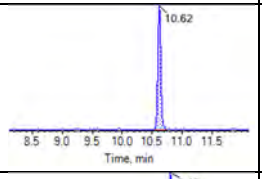
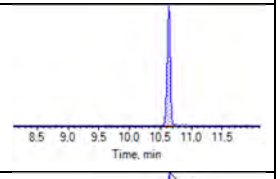
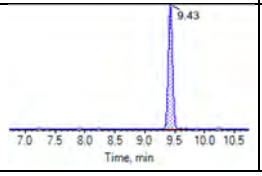
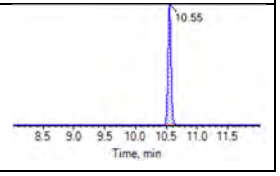
PFUdA_2	563.0 / 169.0	10.60 (10.62)	91010	13C7_PFUdA	198300	1000.0	1081.7	108.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	187000	d3-N-MeFOSAA	49860	1000.0	945.7	94.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	89990	d3-N-MeFOSAA	49860	1000.0	923.8	92.4	0.48/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	196000	d5-N-EtFOSAA	51440	1000.0	938.5	93.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	92660	d5-N-EtFOSAA	51440	1000.0	933.6	93.4	0.47/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	1311000	13C8_PFOS	60240	965.0	1129.9	117.1	1.00/ 1.00		

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LCMSMS#6

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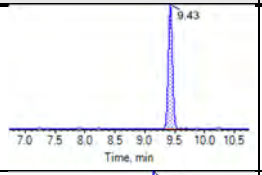
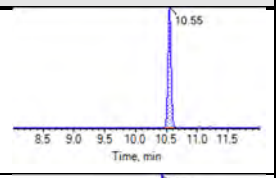
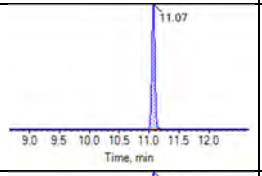
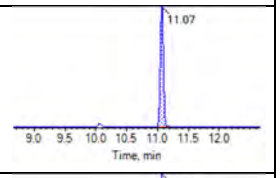
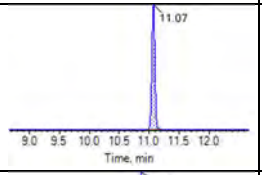
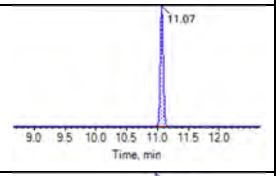
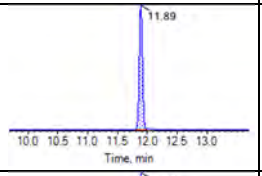
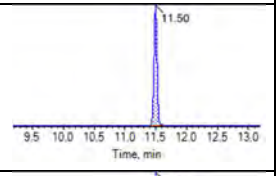
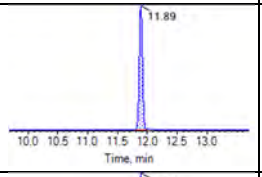
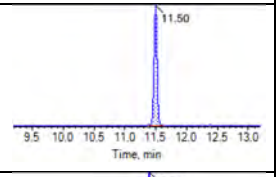
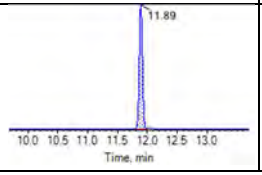
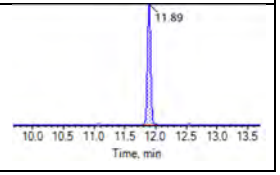
PFDS_2	599.0 / 99.0	10.55 (10.93)	339600	13C8_PFOS	60240	965.0	1099.1	113.9	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	710800	13C2_PFDoA	192600	1000.0	979.8	98.0	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	117800	13C2_PFDoA	192600	1000.0	993.5	99.3	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	628200	13C2_PFTeDA	123800	1000.0	1032.0	103.2	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	147600	13C2_PFTeDA	123800	1000.0	1096.3	109.6	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	478600	13C2_PFTeDA	123800	1000.0	1073.2	107.3	1.00/ 1.00		

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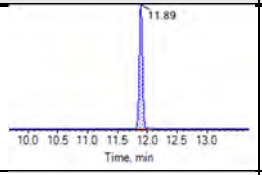
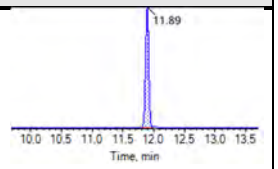
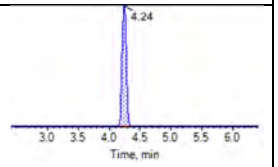
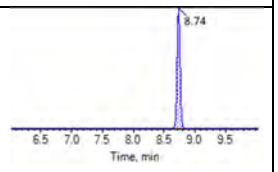
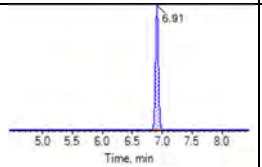
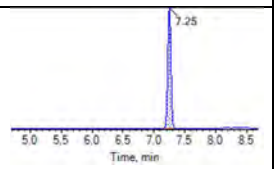
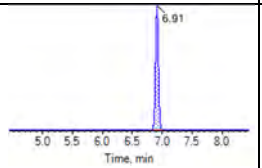
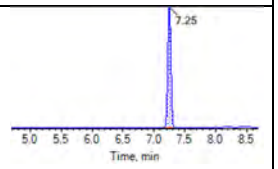
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	97510	13C2_PFTeDA	123800	1000.0	993.0	99.3	0.20/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1680000	N/A	N/A	1000.0	971.1	97.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1289000	N/A	N/A	1000.0	1047.9	104.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	735100	13C5_PFHxA	287400	1000.0	1028.5	102.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	604200	13C5_PFHxA	287400	1000.0	1123.4	112.3	0.82/ 0.75		

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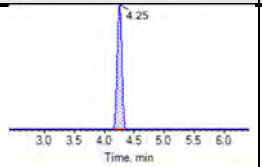
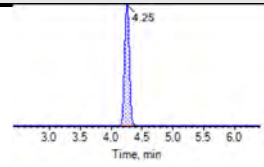
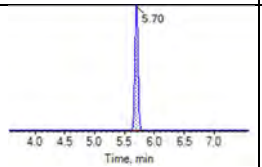
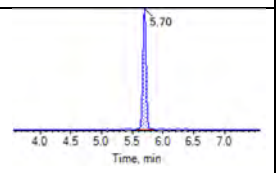
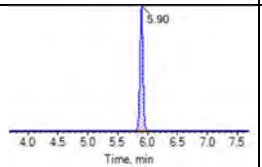
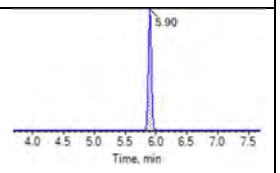
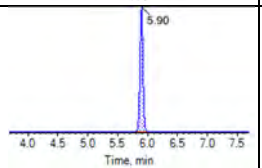
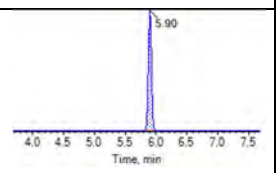
PFC103117008.wiff			
Sample Name	WPF171018-06	**Injection Vial**	7
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117008.wiff
Acquisition Date	10/31/2017 18:42:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117008.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1489000	13C4_PFBA	150400	1500.0	1405.2	93.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1422000	13C5_PFPeA	237800	1500.0	1390.0	92.7	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1939000	13C3_PFBS	153900	1327.5	1278.4	96.3	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	884500	13C3_PFBS	153900	1327.5	1298.7	97.8	0.46/ 0.45		

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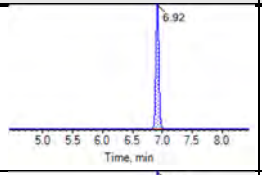
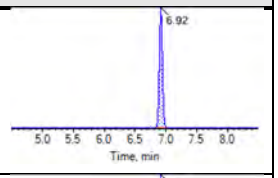
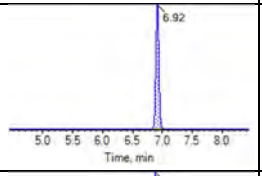
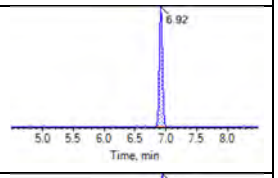
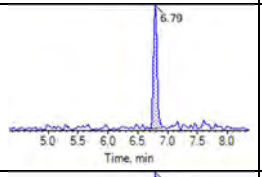
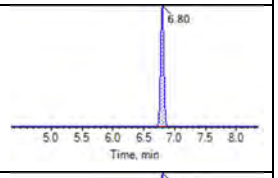
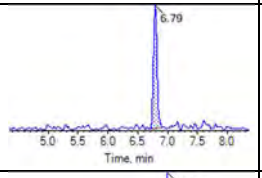
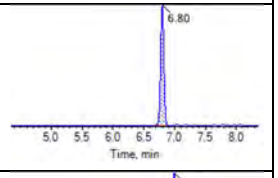
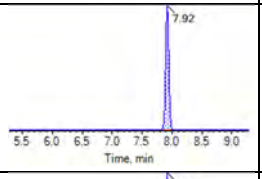
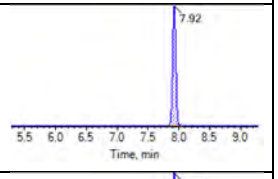
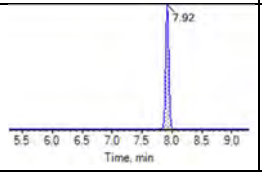
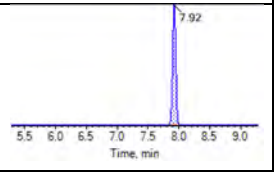
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1631000	13C5_PFHxA	304900	1500.0	1408.8	93.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	116200	13C5_PFHxA	304900	1500.0	1420.4	94.7	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	246100	13C2_4:2 FTS	33620	1402.5	1222.8	87.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	182300	13C2_4:2 FTS	33620	1402.5	1260.8	89.9	0.74/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1479000	13C4_PFHpA	237500	1500.0	1488.5	99.2	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	376400	13C4_PFHpA	237500	1500.0	1449.0	96.6	0.25/ 0.26		

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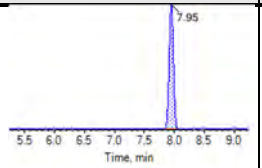
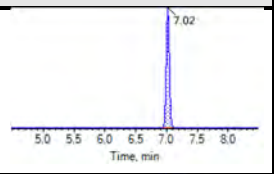
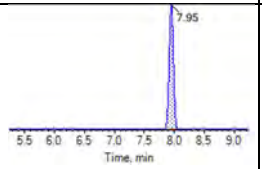
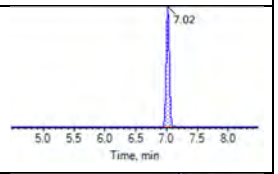
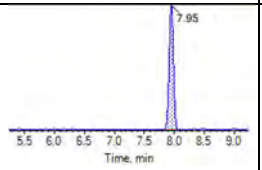
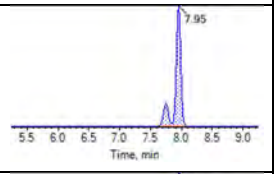
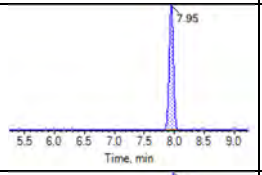
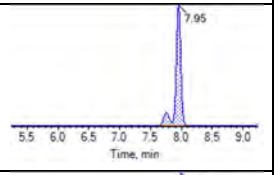
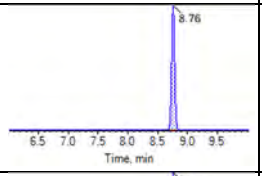
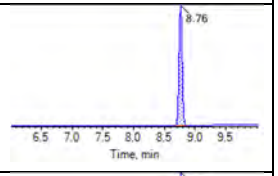
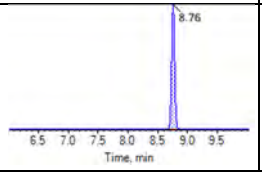
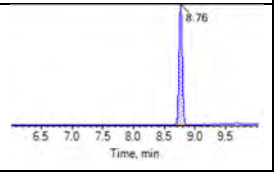
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	2099000	13C3_PFHxS	64940	1410.0	1543.5	109.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	739400	13C3_PFHxS	64940	1410.0	1556.4	110.4	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1950000	13C3_PFHxS	64940	1368.0	1556.7	113.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	488300	13C3_PFHxS	64940	1368.0	1543.6	112.8	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	1426000	13C8_PFOA	252800	1500.0	1337.0	89.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	520200	13C8_PFOA	252800	1500.0	1307.2	87.1	0.36/ 0.37		

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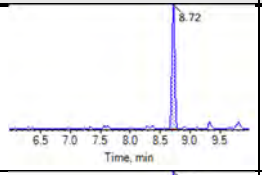
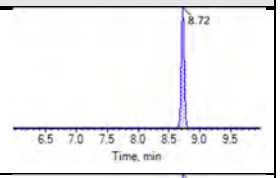
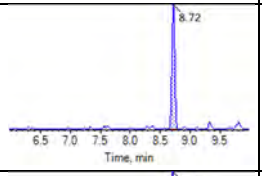
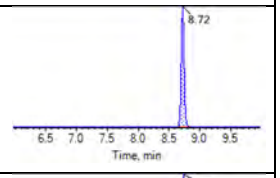
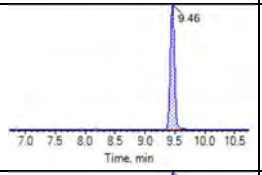
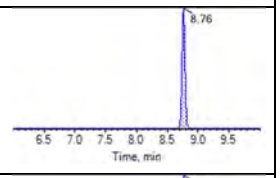
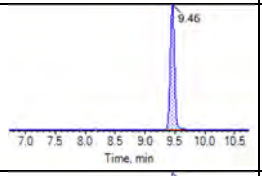
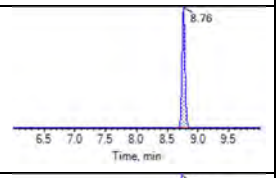
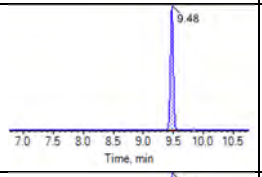
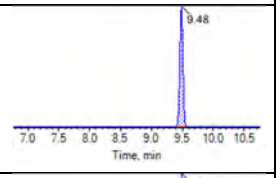
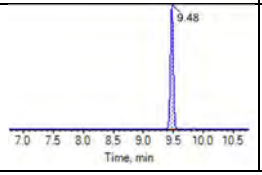
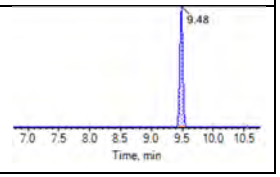
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	255200	13C2_6:2 FTS	32970	1425.0	1467.4	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	215100	13C2_6:2 FTS	32970	1425.0	1377.5	96.7	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	1807000	13C8_PFOS	71370	1425.0	1298.7	91.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	360500	13C8_PFOS	71370	1425.0	1287.1	90.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	1241000	13C9_PFNA	232700	1500.0	1586.5	105.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.48 (9.47)	300400	13C9_PFNA	232700	1500.0	1592.9	106.2	0.24/ 0.24		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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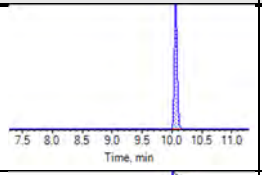
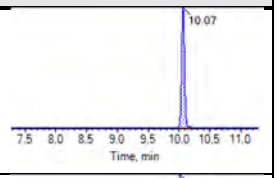
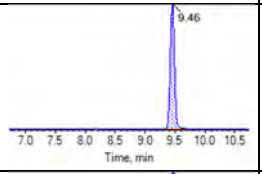
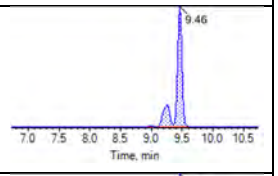
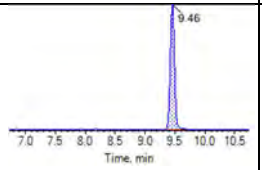
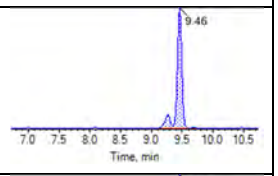
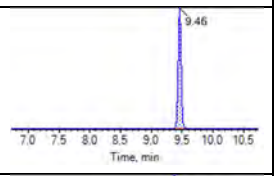
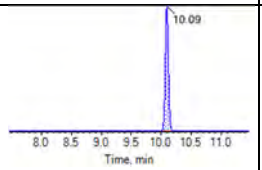
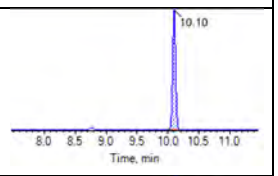
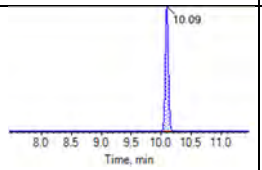
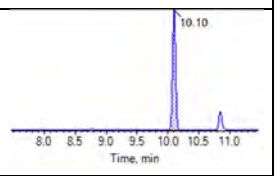
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.07 (10.04)	2835000	13C8_PFOSA	588100	1388.3	1288.5	92.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1614000	13C8_PFOS	71370	1500.0	1391.8	92.8	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	232800	13C8_PFOS	71370	1500.0	1359.6	90.6	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1663000	N/A	N/A	1000.0	991.6	99.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	1182000	13C6_PFDA	152400	1500.0	1505.0	100.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	136700	13C6_PFDA	152400	1500.0	1388.9	92.6	0.12/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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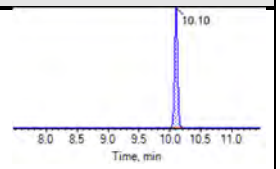
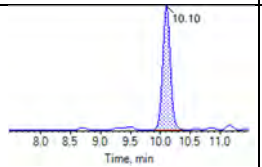
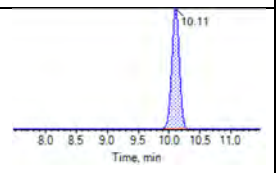
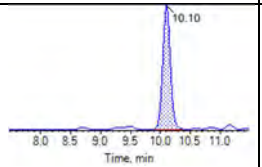
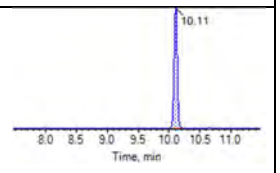
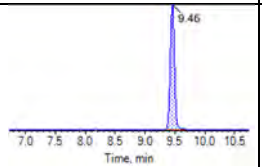
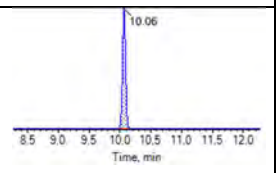
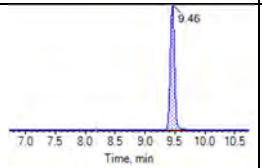
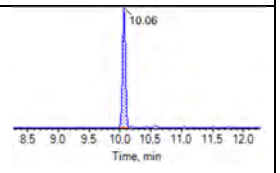
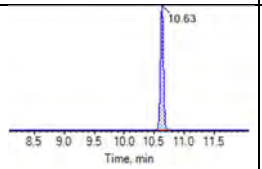
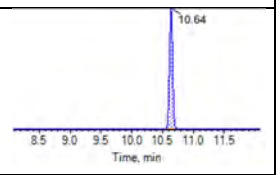
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1111000	N/A	N/A	1000.0	963.2	96.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	187700	13C2_8:2 FTS	26430	1440.0	1378.3	95.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	164700	13C2_8:2 FTS	26430	1440.0	1247.9	86.7	0.88/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1494000	13C8_PFOS	71370	1440.0	1326.4	92.1	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	268300	13C8_PFOS	71370	1440.0	1307.5	90.8	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	992100	13C7_PFUdA	189300	1500.0	1471.6	98.1	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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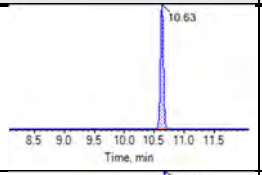
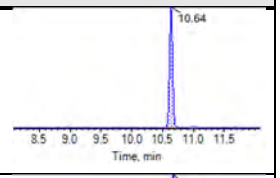
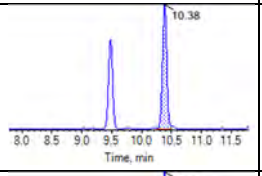
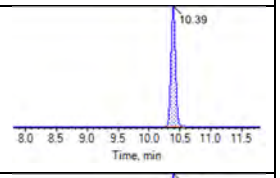
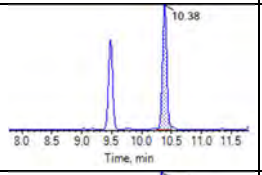
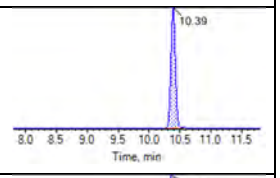
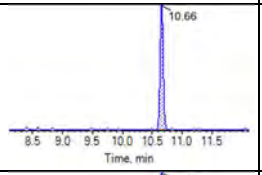
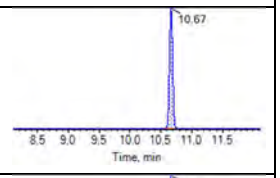
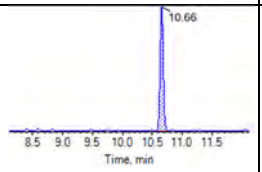
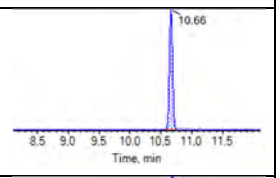
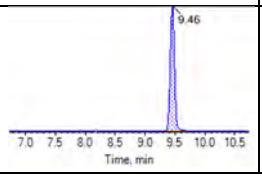
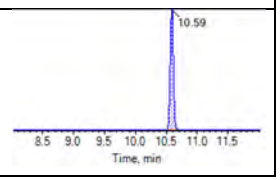
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.64 (10.62)	122800	13C7_PFUdA	189300	1500.0	1528.8	101.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	275600	d3-N-MeFOSAA	43350	1500.0	1602.9	106.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	126100	d3-N-MeFOSAA	43350	1500.0	1488.4	99.2	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	317000	d5-N-EtFOSAA	56120	1500.0	1391.5	92.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	149600	d5-N-EtFOSAA	56120	1500.0	1381.7	92.1	0.47/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	1748000	13C8_PFOS	71370	1447.5	1272.1	87.9	1.00/ 1.00		

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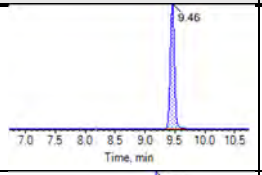
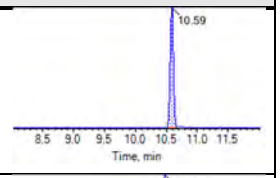
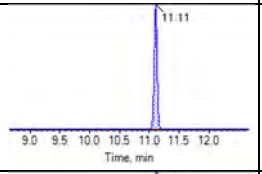
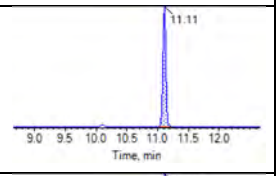
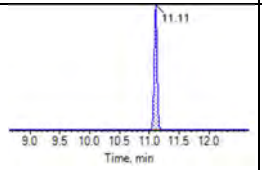
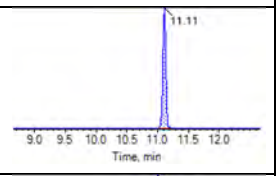
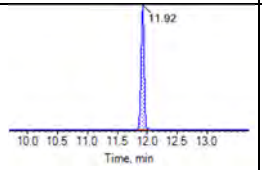
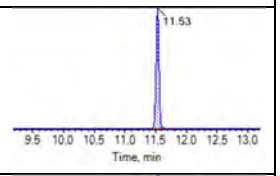
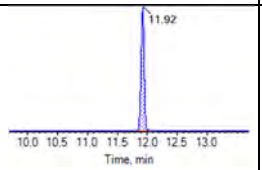
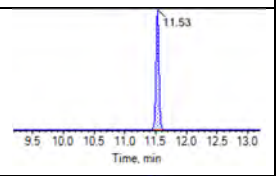
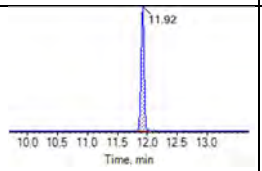
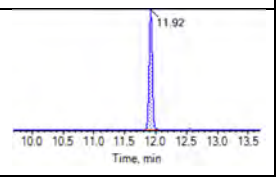
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.59 (10.93)	446100	13C8_PFOS	71370	1447.5	1218.8	84.2	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	1040000	13C2_PFDoA	185200	1500.0	1490.6	99.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	163200	13C2_PFDoA	185200	1500.0	1431.6	95.4	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	941100	13C2_PFTeDA	133400	1500.0	1434.5	95.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	199800	13C2_PFTeDA	133400	1500.0	1377.4	91.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	672900	13C2_PFTeDA	133400	1500.0	1400.3	93.4	1.00/ 1.00		

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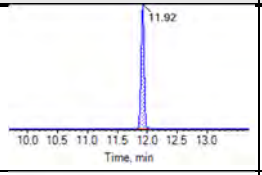
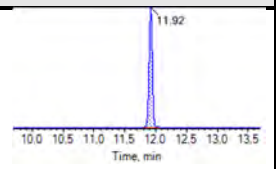
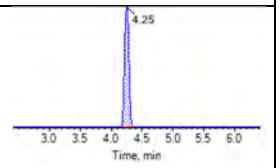
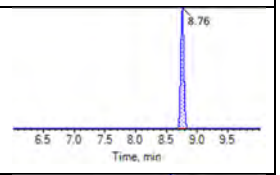
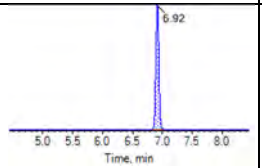
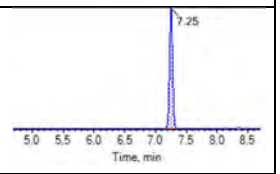
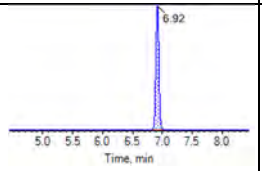
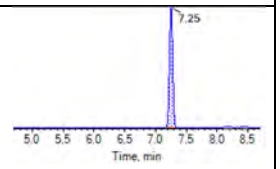
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	150000	13C2_PFTeDA	133400	1500.0	1417.9	94.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1642000	N/A	N/A	1000.0	948.9	94.9	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1265000	N/A	N/A	1000.0	1028.0	102.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1099000	13C5_PFHxA	304900	1500.0	1449.9	96.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	823200	13C5_PFHxA	304900	1500.0	1442.9	96.2	0.75/ 0.75		

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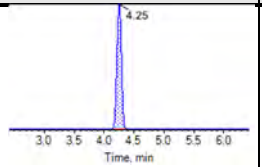
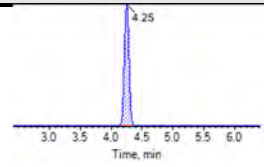
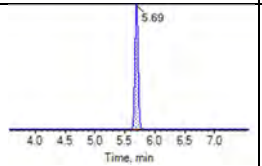
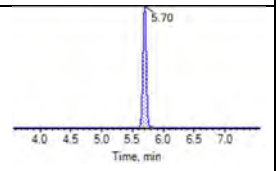
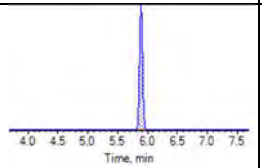
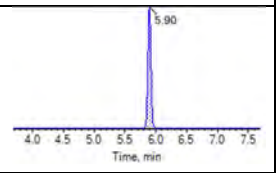
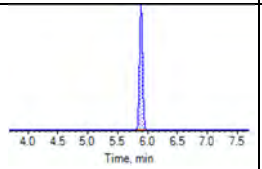
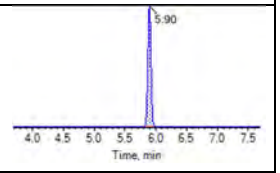
PFC103117009.wiff			
Sample Name	WPF171018-07	**Injection Vial**	8
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117009.wiff
Acquisition Date	10/31/2017 19:04:19	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117009.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	2053000	13C4_PFBA	145700	2000.0	1999.6	100.0	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1921000	13C5_PFPeA	223300	2000.0	2000.1	100.0	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	2726000	13C3_PFBS	152900	1770.0	1808.9	102.2	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	1193000	13C3_PFBS	152900	1770.0	1762.6	99.6	0.44/ 0.45		

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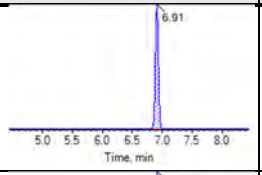
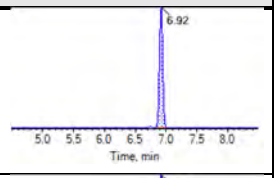
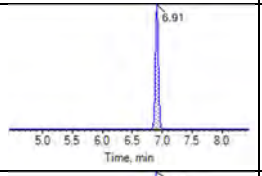
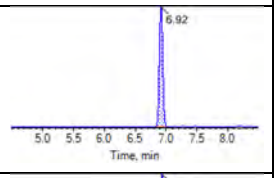
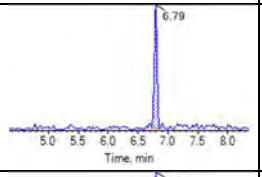
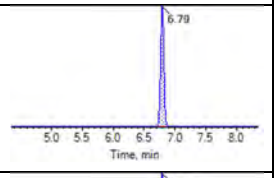
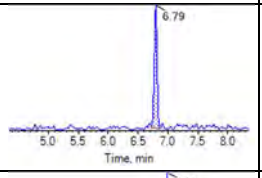
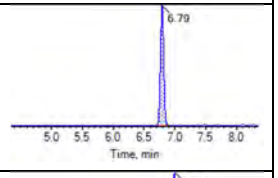
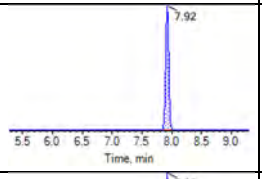
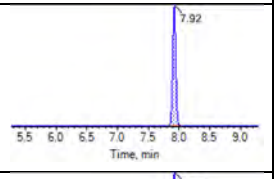
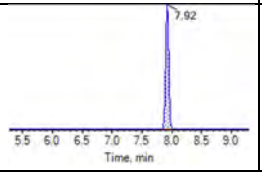
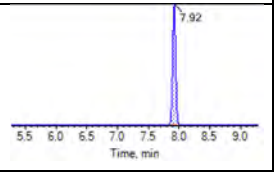
PFC103117009.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	2215000	13C5_PFHxA	294500	2000.0	1981.5	99.1	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	158400	13C5_PFHxA	294500	2000.0	2004.2	100.2	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	359900	13C2_4:2 FTS	27160	1870.0	2214.1	118.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	247600	13C2_4:2 FTS	27160	1870.0	2120.3	113.4	0.69/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	2024000	13C4_PFHpA	239900	2000.0	2017.1	100.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	499000	13C4_PFHpA	239900	2000.0	1902.1	95.1	0.25/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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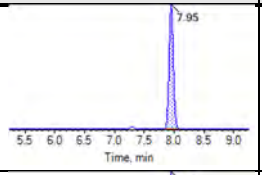
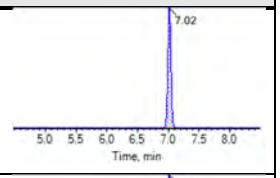
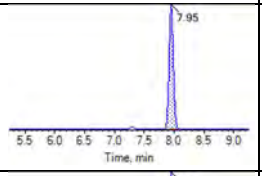
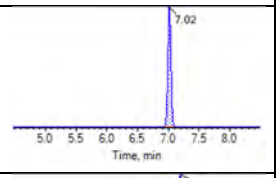
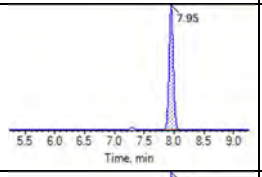
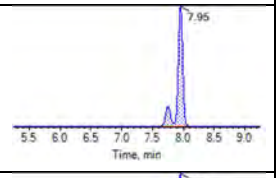
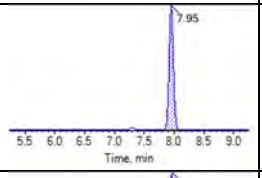
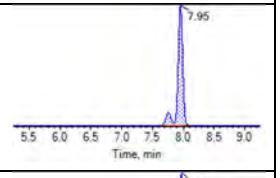
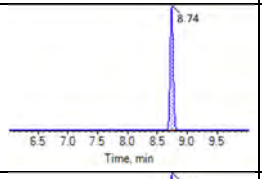
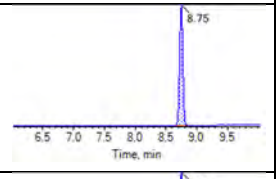
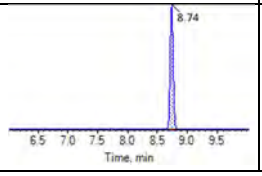
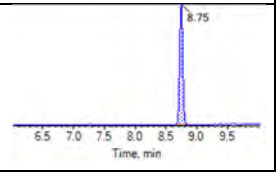
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	3042000	13C3_PFHxS	83220	1880.0	1746.1	92.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	1102000	13C3_PFHxS	83220	1880.0	1809.6	96.3	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	2701000	13C3_PFHxS	83220	1824.0	1682.8	92.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	673200	13C3_PFHxS	83220	1824.0	1660.8	91.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	1955000	13C8_PFOA	225600	2000.0	2053.8	102.7	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	699100	13C8_PFOA	225600	2000.0	1968.2	98.4	0.36/ 0.37		

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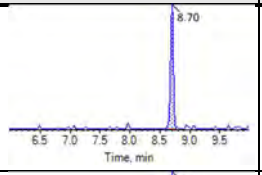
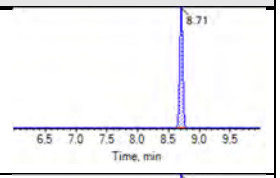
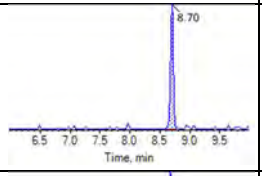
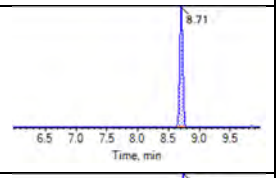
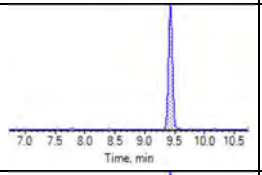
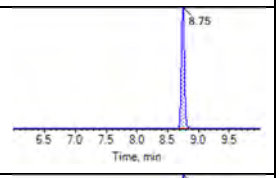
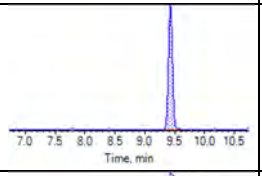
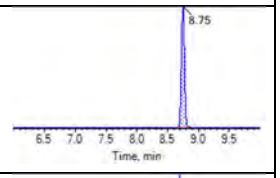
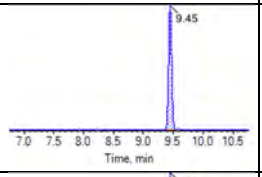
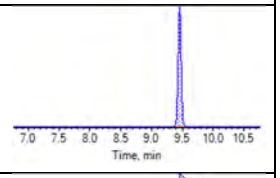
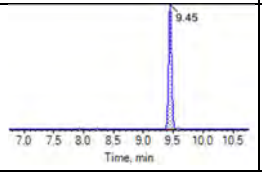
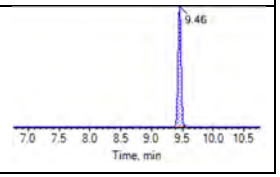
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	301500	13C2_6:2 FTS	29880	1900.0	1913.2	100.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	283300	13C2_6:2 FTS	29880	1900.0	2001.9	105.4	0.94/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	2539000	13C8_PFOS	66190	1900.0	1967.8	103.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	496500	13C8_PFOS	66190	1900.0	1911.1	100.6	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	1649000	13C9_PFNA	223400	2000.0	2195.7	109.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	367500	13C9_PFNA	223400	2000.0	2029.9	101.5	0.22/ 0.24		

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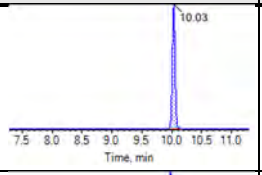
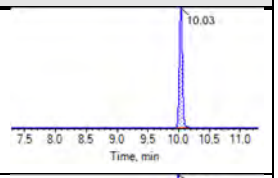
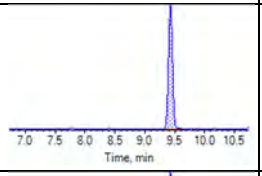
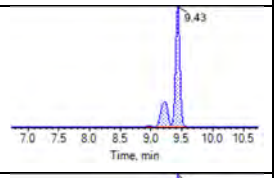
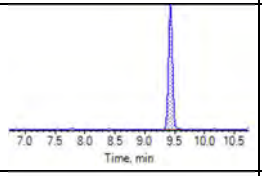
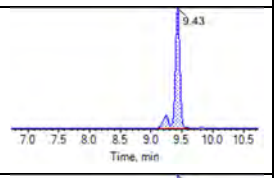
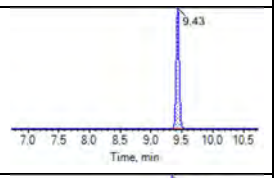
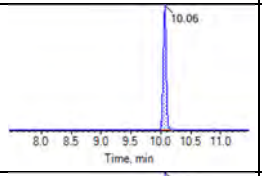
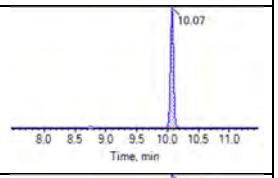
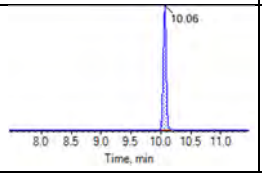
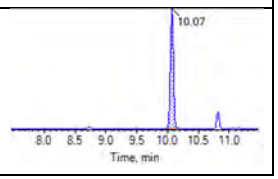
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	3524000	13C8_PFOSA	519300	1851.0	1813.9	98.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	2095000	13C8_PFOS	66190	2000.0	1948.3	97.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	291100	13C8_PFOS	66190	2000.0	1833.0	91.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1670000	N/A	N/A	1000.0	995.6	99.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	1453000	13C6_PFDA	138600	2000.0	2034.1	101.7	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	181400	13C6_PFDA	138600	2000.0	2027.1	101.4	0.12/ 0.13		

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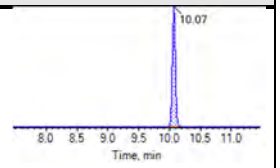
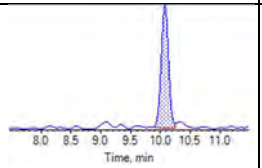
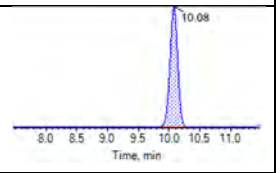
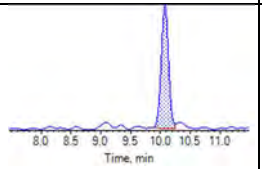
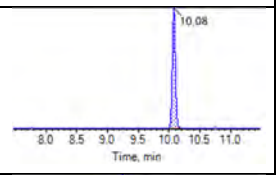
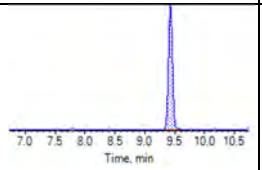
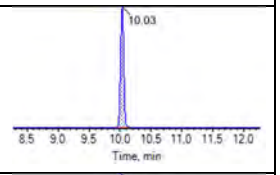
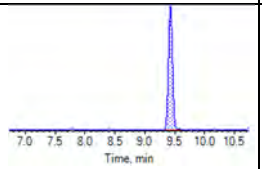
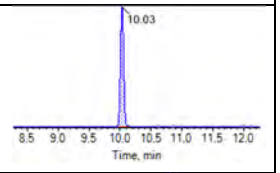
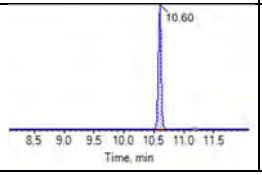
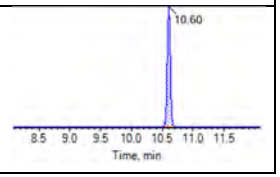
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1082000	N/A	N/A	1000.0	938.0	93.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	222200	13C2_8:2 FTS	22570	1920.0	1910.6	99.5	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	212000	13C2_8:2 FTS	22570	1920.0	1881.0	98.0	0.95/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1996000	13C8_PFOS	66190	1920.0	1910.7	99.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	372800	13C8_PFOS	66190	1920.0	1959.1	102.0	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	1448000	13C7_PFUdA	215200	2000.0	1889.7	94.5	1.00/ 1.00		

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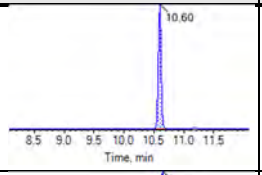
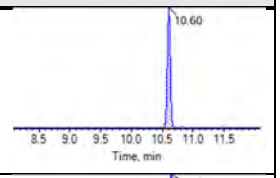
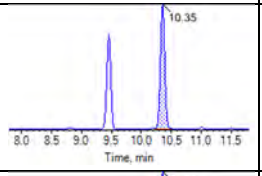
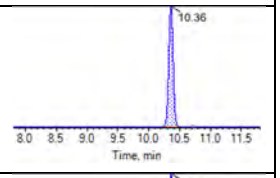
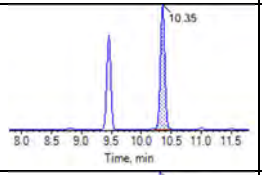
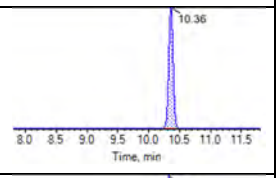
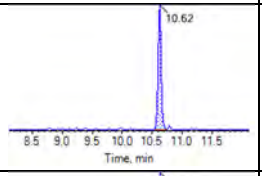
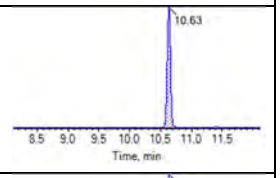
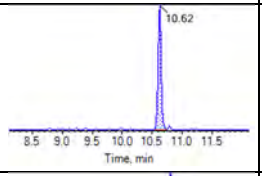
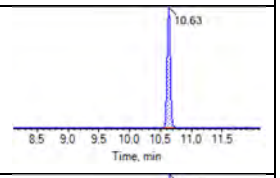
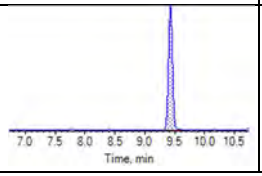
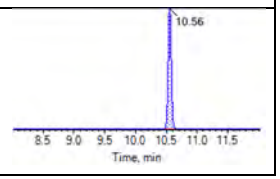
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	177500	13C7_PFUdA	215200	2000.0	1943.2	97.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	397100	d3-N-MeFOSAA	42350	2000.0	2364.4	118.2	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	202200	d3-N-MeFOSAA	42350	2000.0	2443.8	122.2	0.51/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	383000	d5-N-EtFOSAA	47710	2000.0	1977.3	98.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	190300	d5-N-EtFOSAA	47710	2000.0	2067.5	103.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	2440000	13C8_PFOS	66190	1930.0	1914.5	99.2	1.00/ 1.00		

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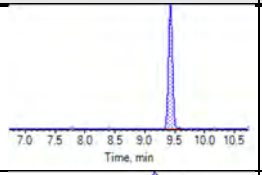
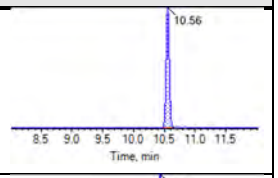
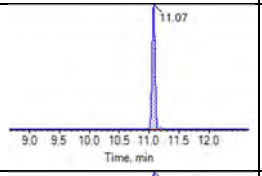
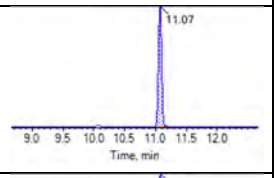
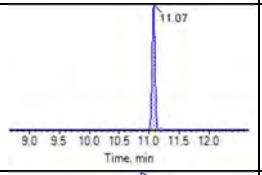
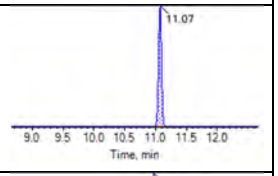
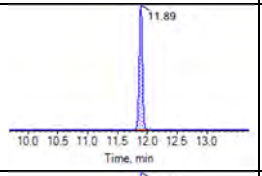
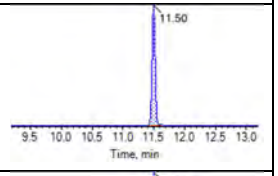
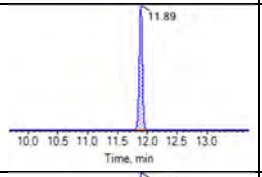
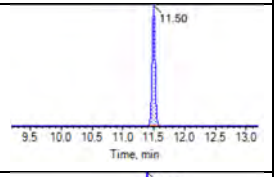
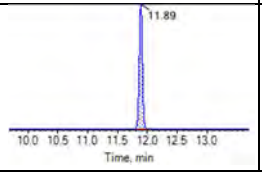
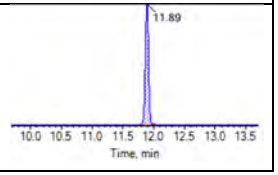
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	681800	13C8_PFOS	66190	1930.0	2008.5	104.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	1327000	13C2_PFDoA	182900	2000.0	1926.8	96.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	218800	13C2_PFDoA	182900	2000.0	1943.1	97.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	1162000	13C2_PFTeDA	124800	2000.0	1894.3	94.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	262600	13C2_PFTeDA	124800	2000.0	1935.1	96.8	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	885000	13C2_PFTeDA	124800	2000.0	1968.9	98.4	1.00/ 1.00		

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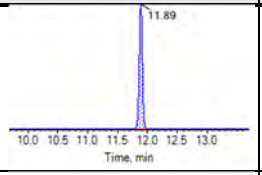
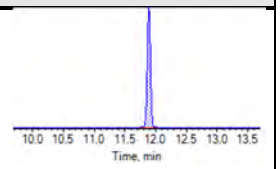
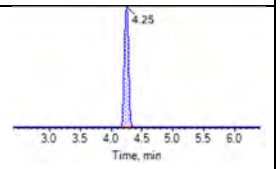
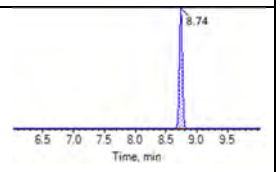
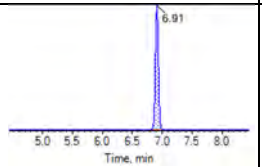
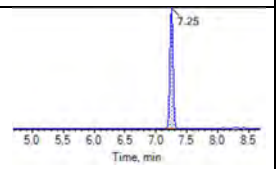
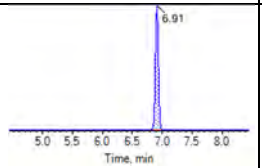
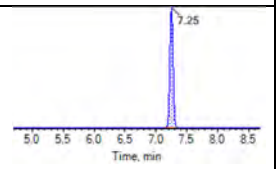
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	206700	13C2_PFTeDA	124800	2000.0	2087.7	104.4	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1664000	N/A	N/A	1000.0	962.1	96.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1180000	N/A	N/A	1000.0	959.0	95.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1391000	13C5_PFHxA	294500	2000.0	1899.0	94.9	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	1079000	13C5_PFHxA	294500	2000.0	1958.5	97.9	0.78/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:25

Data File: PFC103117010.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-08

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	100	95.734	95.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	102.683	102.7	
Perfluorotetradecanoic acid (PFTeDA)	100	97.154	97.2	
Perfluorotridecanoic acid (PFTrDA)	100	100.845	100.8	
Perfluorododecanoic acid (PFDoA)	100	99.066	99.1	
Perfluoroundecanoic acid (PFUdA)	100	106.06	106.1	
Perfluorodecanoic acid (PFDA)	100	114.979	115	
Perfluorononanoic acid (PFNA)	100	118.365	118.4	
Perfluoroheptanoic acid (PFHpA)	100	96.552	96.6	
Perfluorooctanoic acid (PFOA)	100	105.165	105.2	
Perfluorohexanoic acid (PFHxA)	100	109.036	109	
Perfluorooctanesulfonate (PFOS)	100	127.441	127.4	
Perfluorobutanesulfonate (PFBS)	88.5	80.892	91.4	
Perfluorohexanesulfonate (PFHxS)	91.2	82.93	90.9	

Recovery criteria is 70% - 130%

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11/06/2017

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LCMSMS#6

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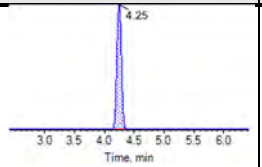
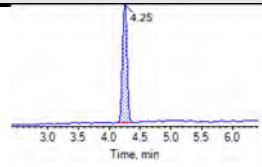
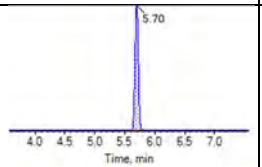
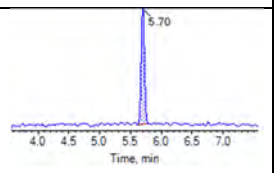
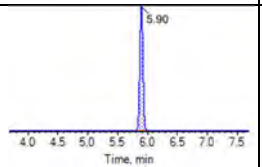
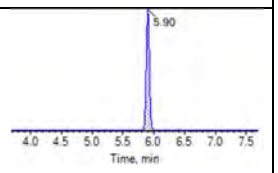
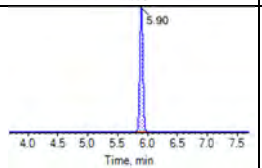
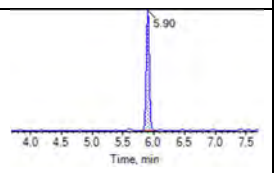
PFC103117010.wiff			
Sample Name	WPF171018-08ISC	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117010.wiff
Acquisition Date	10/31/2017 19:25:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117010.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	111100	13C4_PFBA	162400	100.0	97.1	97.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	103000	13C5_PFPeA	250800	100.0	95.5	95.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	137000	13C3_PFBS	171900	88.5	80.9	91.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	63140	13C3_PFBS	171900	88.5	83.0	93.8	0.46/ 0.45		

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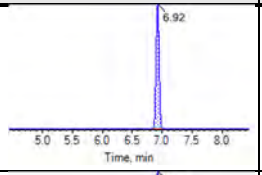
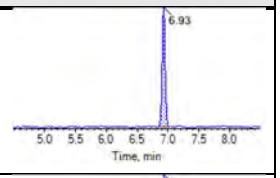
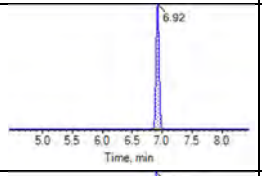
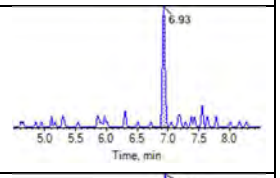
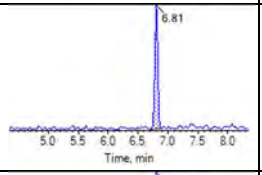
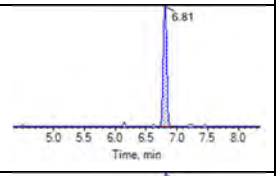
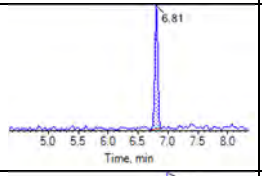
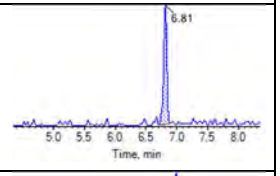
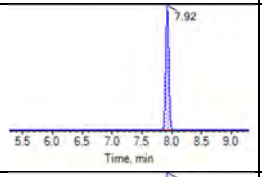
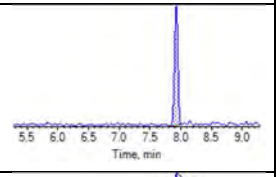
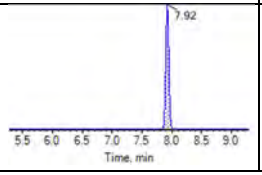
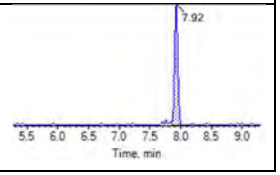
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	122100	13C5_PFHxA	294900	100.0	109.0	109.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	5888	13C5_PFHxA	294900	100.0	74.4	74.4	0.05/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	18690	13C2_4:2 FTS	34790	93.5	89.8	96.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	15480	13C2_4:2 FTS	34790	93.5	103.4	110.6	0.83/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	103100	13C4_PFHpA	255200	100.0	96.6	96.6	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	30680	13C4_PFHpA	255200	100.0	109.9	109.9	0.30/ 0.26		

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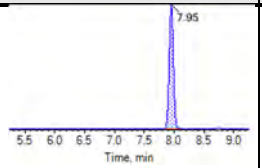
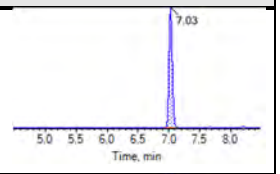
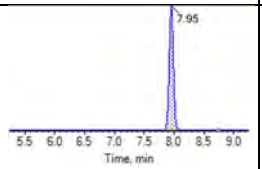
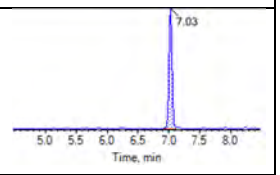
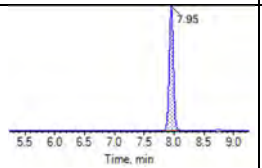
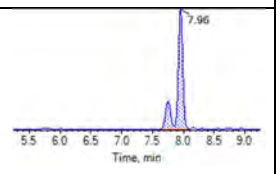
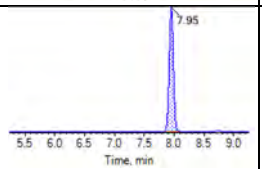
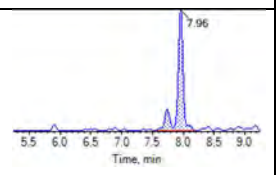
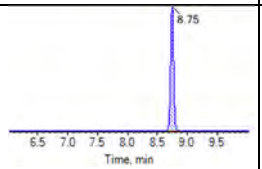
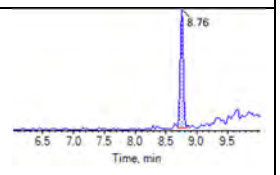
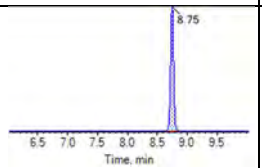
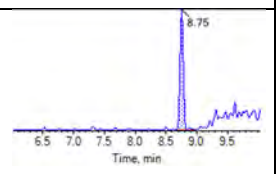
PFPeS	349.0 / 80.0	7.03 (7.02)	149300	13C3_PFHxS	86360	94.0	82.6	87.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	56890	13C3_PFHxS	86360	94.0	90.1	95.8	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	138100	13C3_PFHxS	86360	91.2	82.9	90.9	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31570	13C3_PFHxS	86360	91.2	75.1	82.3	0.23/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	111300	13C8_PFOA	250900	100.0	105.2	105.2	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	41220	13C8_PFOA	250900	100.0	104.3	104.3	0.37/ 0.37		

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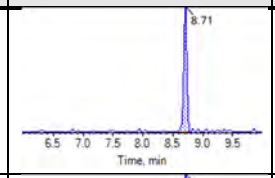
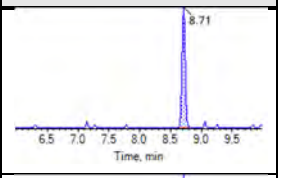
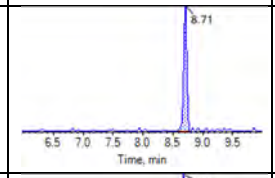
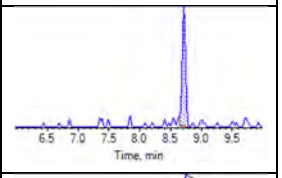
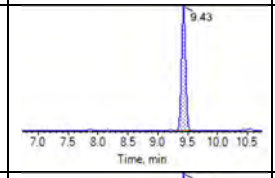
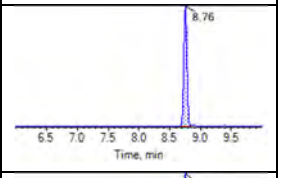
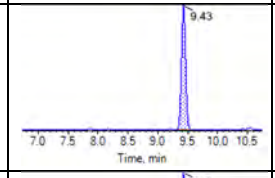
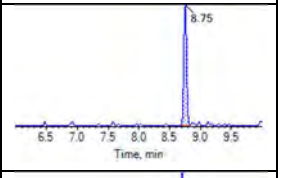
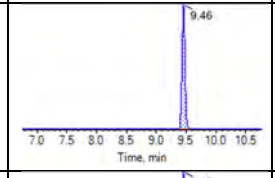
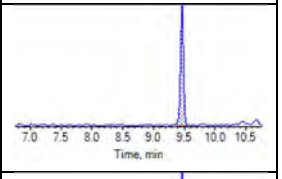
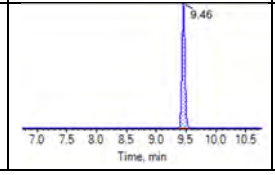
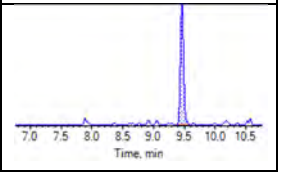
6:2 FTS	427.0 / 407.0	8.71 (8.72)	18750	13C2_6:2 FTS	36170	95.0	98.3	103.5	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	14260	13C2_6:2 FTS	36170	95.0	83.3	87.6	0.76/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	123500	13C8_PFOS	62810	95.0	100.9	106.2	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	25280	13C8_PFOS	62810	95.0	102.5	107.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	102900	13C9_PFNA	258600	100.0	118.4	118.4	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	26100	13C9_PFNA	258600	100.0	124.6	124.6	0.25/ 0.24		

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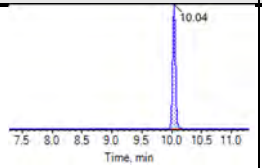
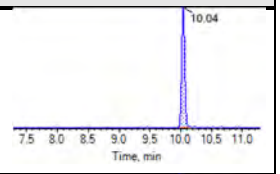
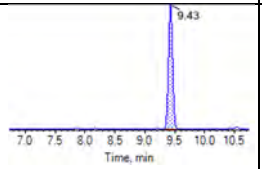
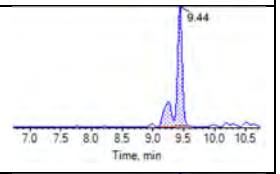
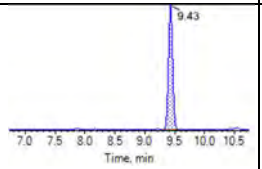
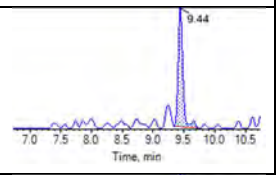
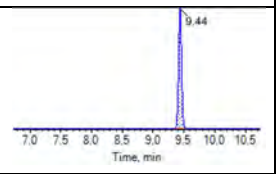
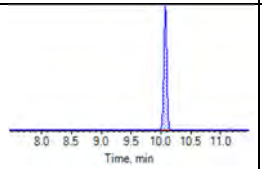
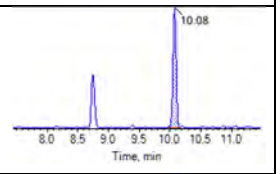
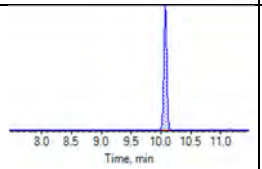
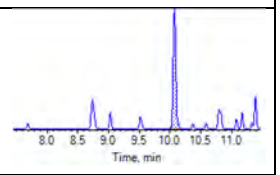
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	191800	13C8_PFOSA	619900	92.6	82.7	89.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	130000	13C8_PFOS	62810	100.0	127.4	127.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	10420	13C8_PFOS	62810	100.0	69.1	69.1	0.08/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1753000	N/A	N/A	1000.0	1045.5	104.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	85700	13C6_PFDA	144600	100.0	115.0	115.0	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	8841	13C6_PFDA	144600	100.0	94.7	94.7	0.10/ 0.13		

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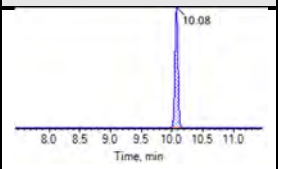
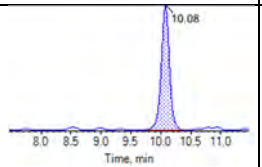
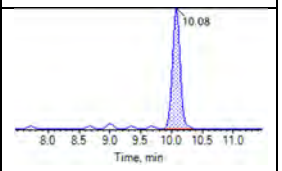
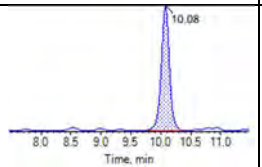
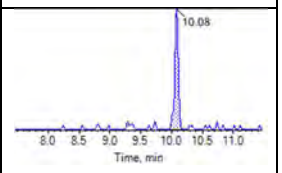
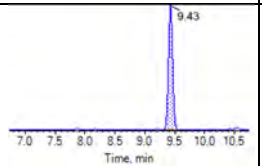
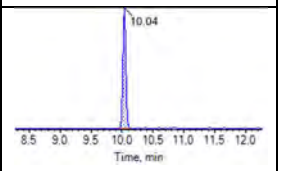
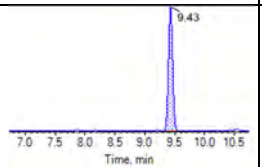
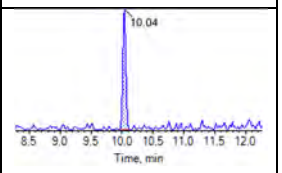
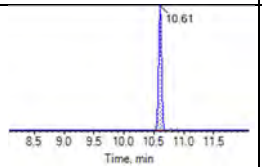
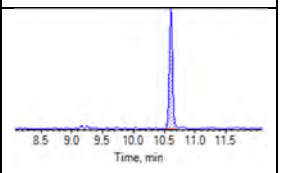
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1276000	N/A	N/A	1000.0	1105.9	110.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	13030	13C2_8:2 FTS	31060	96.0	81.4	84.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	15860	13C2_8:2 FTS	31060	96.0	102.3	106.5	1.22/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	118900	13C8_PFOS	62810	96.0	119.9	124.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	21440	13C8_PFOS	62810	96.0	118.7	123.7	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	81440	13C7_PFUdA	215600	100.0	106.1	106.1	1.00/ 1.00		

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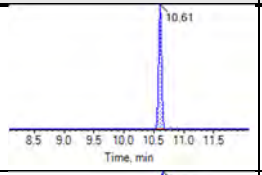
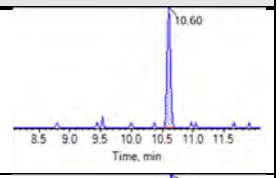
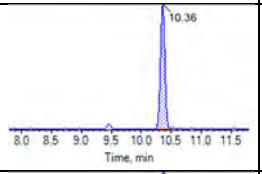
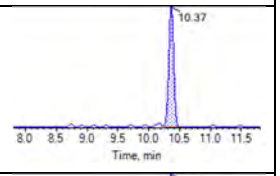
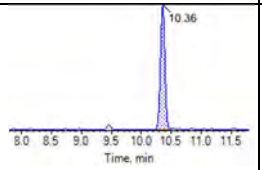
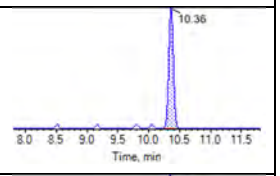
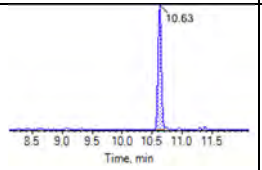
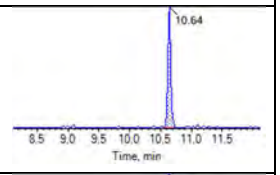
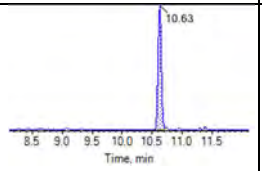
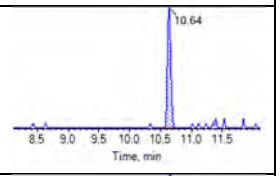
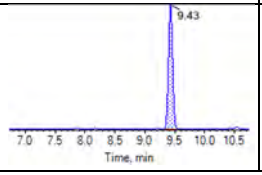
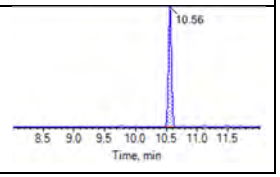
PFUdA_2	563.0 / 169.0	10.60 (10.62)	9431	13C7_PFUdA	215600	100.0	103.1	103.1	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	24450	d3-N-MeFOSAA	60050	100.0	102.7	102.7	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	10980	d3-N-MeFOSAA	60050	100.0	93.6	93.6	0.45/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	23940	d5-N-EtFOSAA	61590	100.0	95.7	95.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	10380	d5-N-EtFOSAA	61590	100.0	87.3	87.3	0.43/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	144200	13C8_PFOS	62810	96.5	119.3	123.6	1.00/ 1.00		

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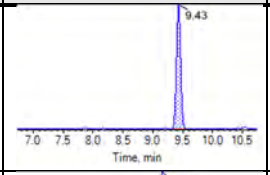
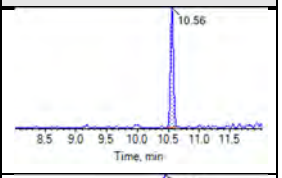
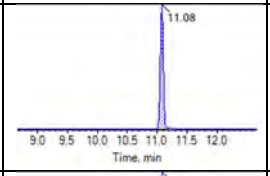
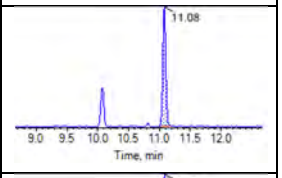
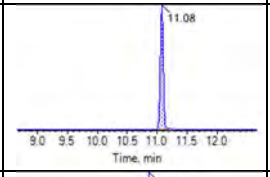
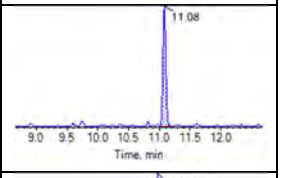
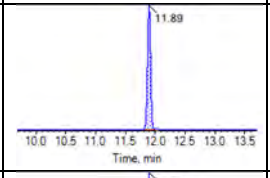
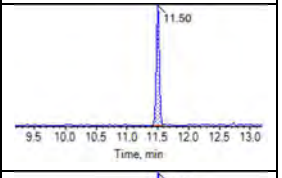
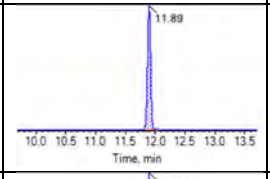
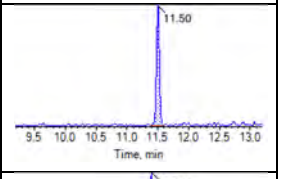
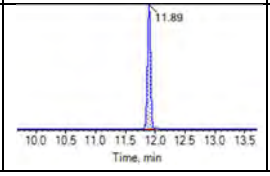
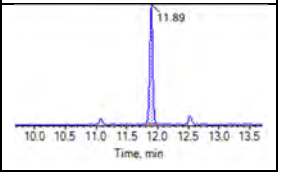
PFDS_2	599.0 / 99.0	10.56 (10.93)	38170	13C8_PFOS	62810	96.5	118.5	122.8	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	74670	13C2_PFDoA	200100	100.0	99.1	99.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	15300	13C2_PFDoA	200100	100.0	124.1	124.1	0.20/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	69300	13C2_PFTeDA	139800	100.0	100.8	100.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	17000	13C2_PFTeDA	139800	100.0	111.9	111.9	0.25/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	48900	13C2_PFTeDA	139800	100.0	97.2	97.2	1.00/ 1.00		

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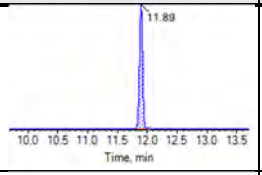
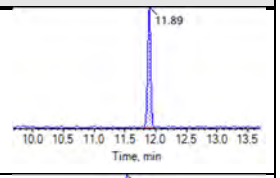
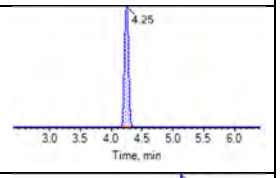
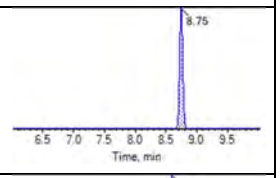
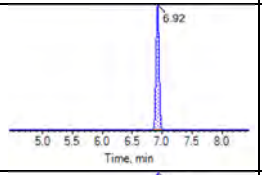
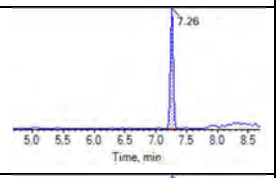
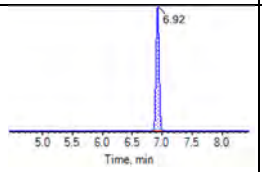
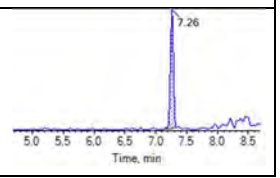
PFC103117010.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	12580	13C2_PFTeDA	139800	100.0	113.5	113.5	0.26/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1812000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1200000	N/A	N/A	1000.0	975.5	97.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	88300	13C5_PFHxA	294900	100.0	120.4	120.4	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	50190	13C5_PFHxA	294900	100.0	91.0	91.0	0.57/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:47

Data File: PFC103117011.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-11

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	200	210.524	105.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	200	260.015	130	
Perfluorotetradecanoic acid (PFTeDA)	200	187.232	93.6	
Perfluorotridecanoic acid (PFTrDA)	200	207.518	103.8	
Perfluoroundecanoic acid (PFUdA)	200	210.847	105.4	
Perfluorododecanoic acid (PFDoA)	200	203.003	101.5	
Perfluorodecanoic acid (PFDA)	200	222.376	111.2	
Perfluorononanoic acid (PFNA)	200	219.1	109.6	
Perfluoroheptanoic acid (PFHpA)	200	208.064	104	
Perfluorooctanoic acid (PFOA)	200	205.04	102.5	
Perfluorohexanoic acid (PFHxA)	200	202.832	101.4	
Perfluorooctanesulfonate (PFOS)	200	212.35	106.2	
Perfluorobutanesulfonate (PFBS)	177	178.688	101	
Perfluorohexanesulfonate (PFHxS)	182.4	171.093	93.8	

Recovery criteria is 70% - 130%

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LCMSMS#6

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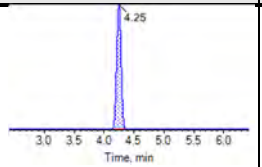
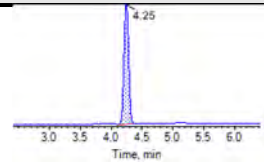
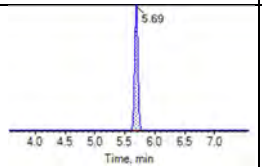
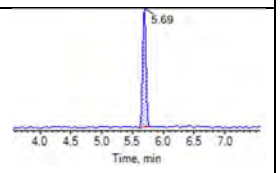
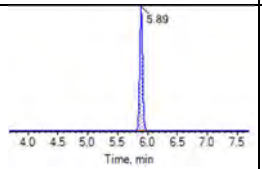
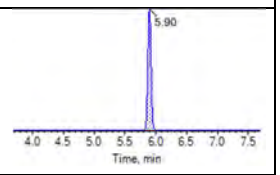
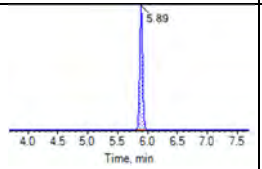
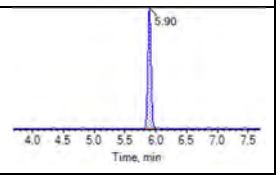
PFC103117011.wiff			
Sample Name	WPF171018-11ISC	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117011.wiff
Acquisition Date	10/31/2017 19:47:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117011.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	220600	13C4_PFBA	159400	200.0	196.4	98.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	215800	13C5_PFPeA	241700	200.0	207.5	103.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	286400	13C3_PFBS	162700	177.0	178.7	101.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	126300	13C3_PFBS	162700	177.0	175.4	99.1	0.44/ 0.45		

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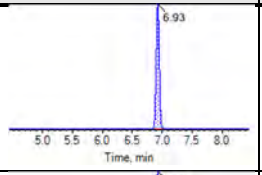
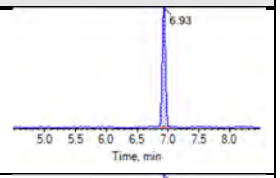
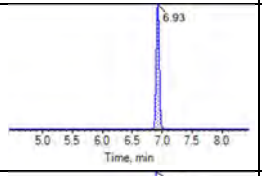
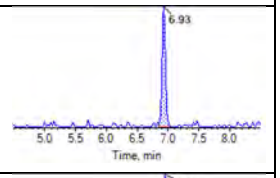
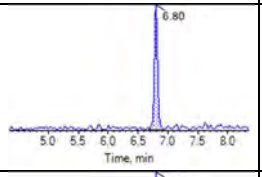
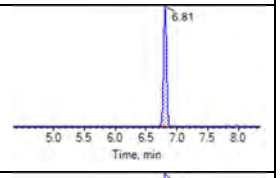
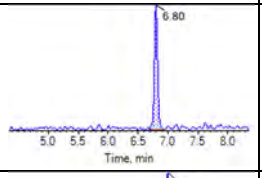
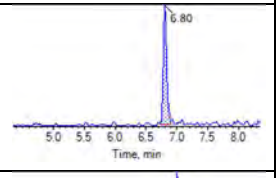
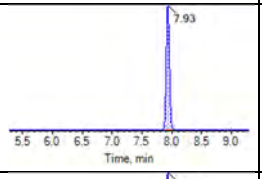
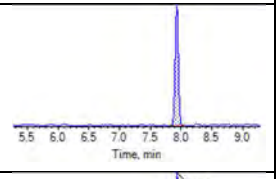
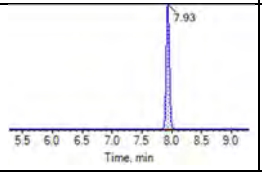
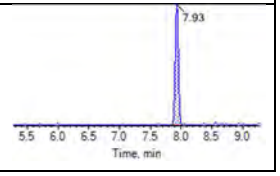
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	229400	13C5_PFHxA	297900	200.0	202.8	101.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	16640	13C5_PFHxA	297900	200.0	208.1	104.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	44190	13C2_4:2 FTS	35600	187.0	207.4	110.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	29580	13C2_4:2 FTS	35600	187.0	193.2	103.3	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	215000	13C4_PFHpA	247100	200.0	208.1	104.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	62190	13C4_PFHpA	247100	200.0	230.2	115.1	0.29/ 0.26		

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LCMSMS#6

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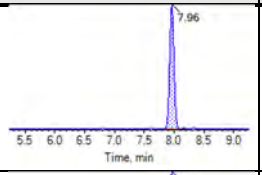
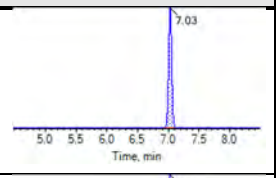
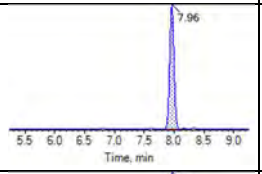
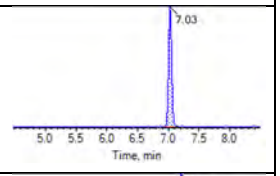
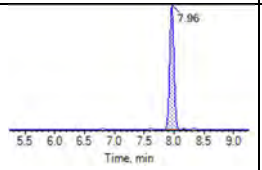
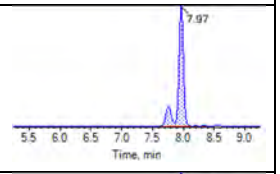
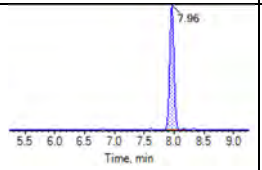
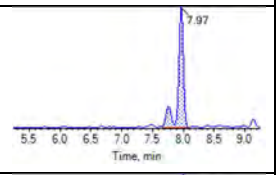
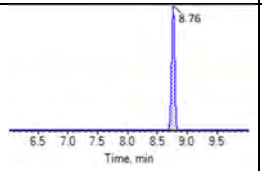
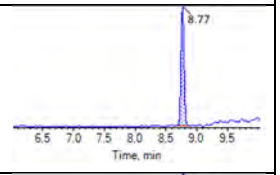
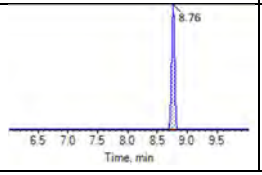
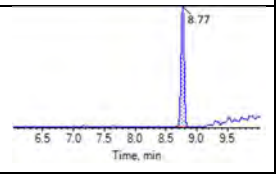
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	320600	13C3_PFHxS	93110	188.0	164.5	87.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	118800	13C3_PFHxS	93110	188.0	174.4	92.8	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	307200	13C3_PFHxS	93110	182.4	171.1	93.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	65870	13C3_PFHxS	93110	182.4	145.2	79.6	0.21/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	224600	13C8_PFOA	259600	200.0	205.0	102.5	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	81170	13C8_PFOA	259600	200.0	198.6	99.3	0.36/ 0.37		

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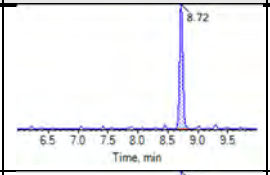
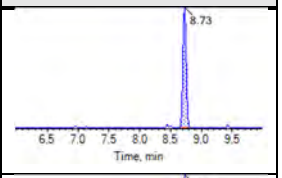
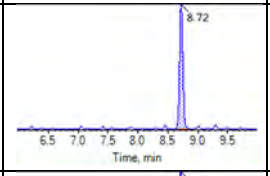
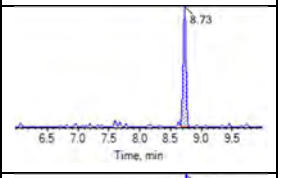
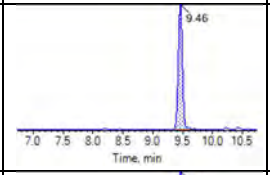
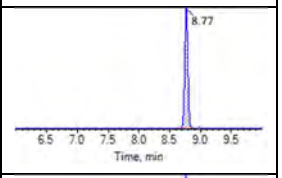
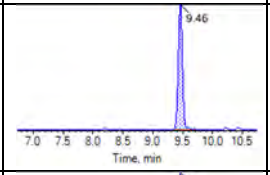
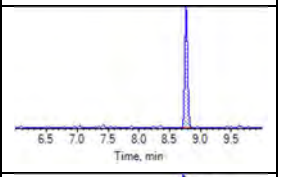
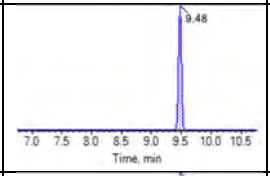
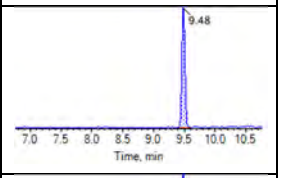
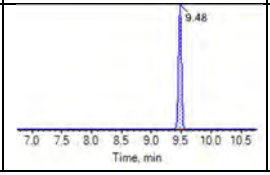
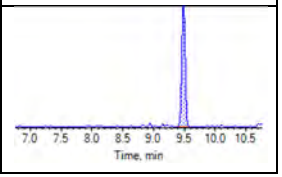
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.73 (8.72)	32710	13C2_6:2 FTS	40460	190.0	153.3	80.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	27600	13C2_6:2 FTS	40460	190.0	144.0	75.8	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.77 (8.76)	262500	13C8_PFOS	68800	190.0	195.7	103.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.77 (8.76)	59740	13C8_PFOS	68800	190.0	221.2	116.4	0.23/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	185300	13C9_PFNA	251600	200.0	219.1	109.6	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	47060	13C9_PFNA	251600	200.0	230.8	115.4	0.25/ 0.24		

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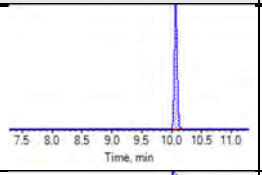
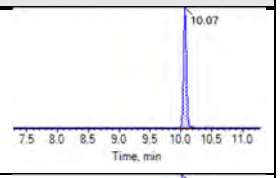
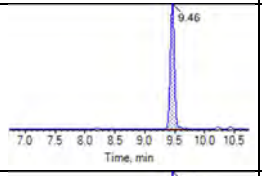
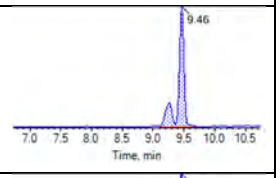
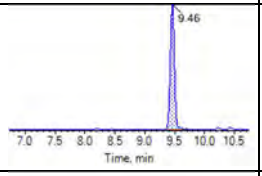
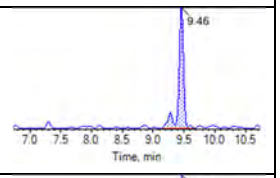
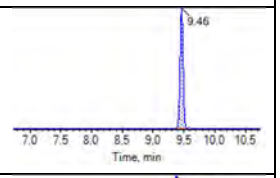
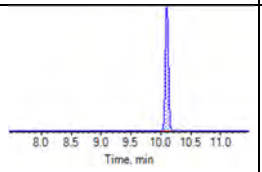
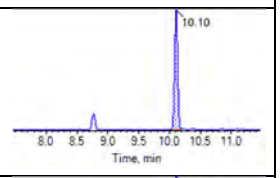
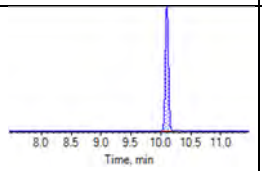
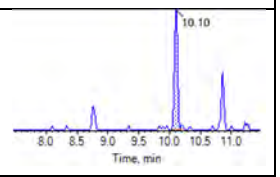
PFOSA	498.0 / 78.0	10.07 (10.04)	446300	13C8_PFOSA	613800	185.1	194.3	105.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	237400	13C8_PFOS	68800	200.0	212.4	106.2	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	29930	13C8_PFOS	68800	200.0	181.3	90.7	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1756000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	176200	13C6_PFDA	153800	200.0	222.4	111.2	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	14770	13C6_PFDA	153800	200.0	148.8	74.4	0.08/ 0.13		

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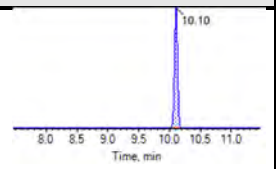
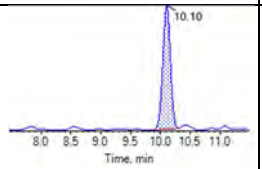
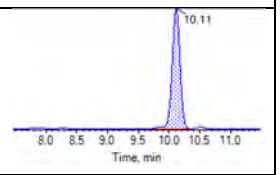
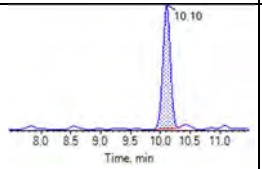
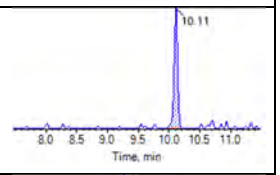
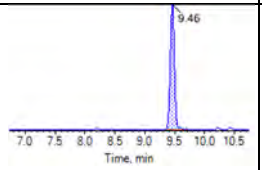
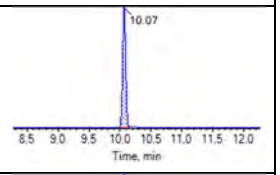
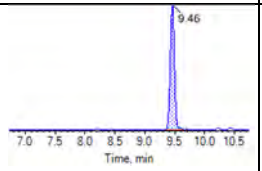
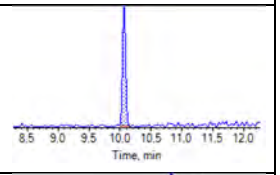
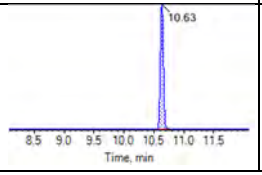
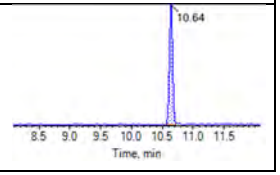
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1192000	N/A	N/A	1000.0	1032.9	103.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	31010	13C2_8:2 FTS	30920	192.0	194.6	101.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	26270	13C2_8:2 FTS	30920	192.0	170.1	88.6	0.85/ 0.96		
PFNS	549.0 / 80.0	10.07 (10.49)	225100	13C8_PFOS	68800	192.0	207.2	107.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	39250	13C8_PFOS	68800	192.0	198.4	103.3	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	149300	13C7_PFUdA	198900	200.0	210.8	105.4	1.00/ 1.00		

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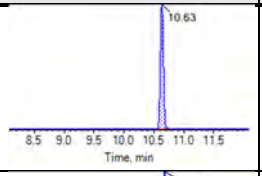
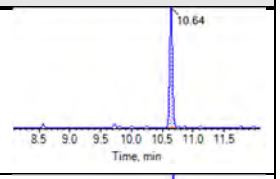
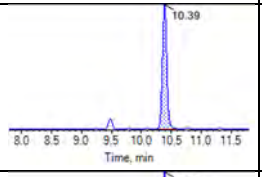
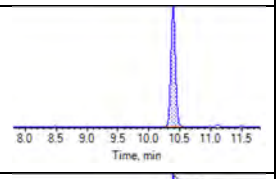
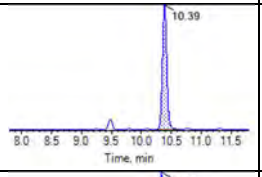
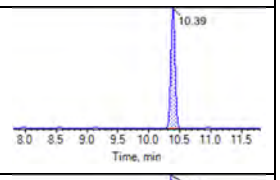
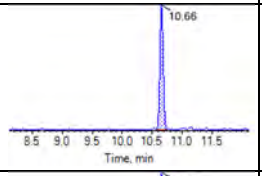
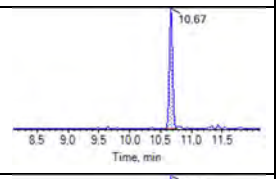
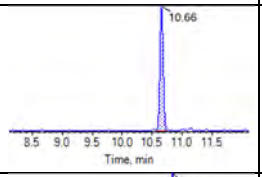
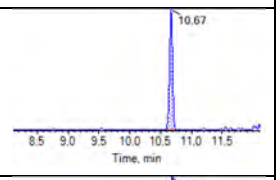
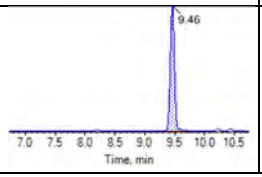
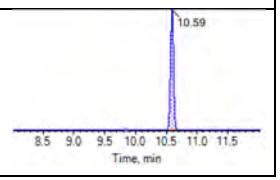
PFC103117011.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.64 (10.62)	18210	13C7_PFUdA	198900	200.0	215.8	107.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	62670	d3-N-MeFOSAA	60780	200.0	260.0	130.0	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	25170	d3-N-MeFOSAA	60780	200.0	212.0	106.0	0.40/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	41740	d5-N-EtFOSAA	48840	200.0	210.5	105.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.67 (10.64)	23500	d5-N-EtFOSAA	48840	200.0	249.4	124.7	0.56/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	279400	13C8_PFOS	68800	193.0	210.9	109.3	1.00/ 1.00		

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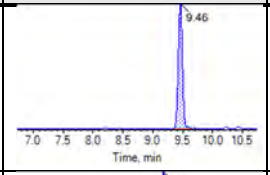
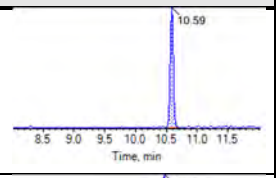
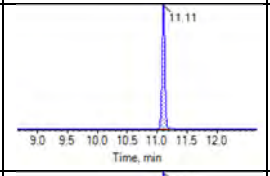
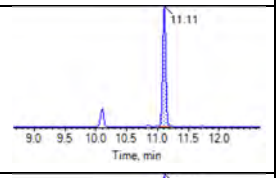
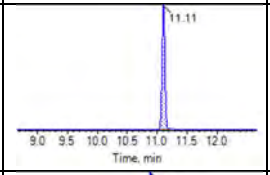
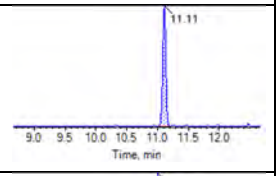
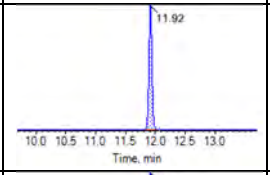
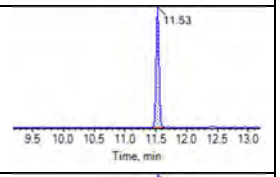
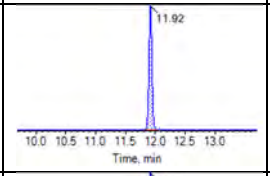
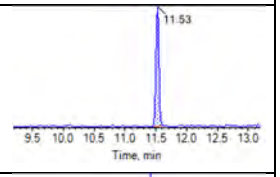
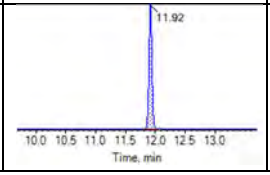
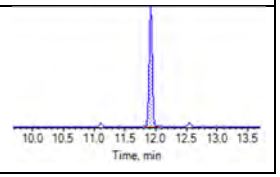
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.59 (10.93)	78890	13C8_PFOS	68800	193.0	223.5	115.8	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	155100	13C2_PFDoA	202800	200.0	203.0	101.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	29930	13C2_PFDoA	202800	200.0	239.7	119.9	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	135800	13C2_PFTeDA	133100	200.0	207.5	103.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	27550	13C2_PFTeDA	133100	200.0	190.4	95.2	0.20/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	89730	13C2_PFTeDA	133100	200.0	187.2	93.6	1.00/ 1.00		

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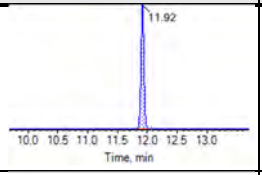
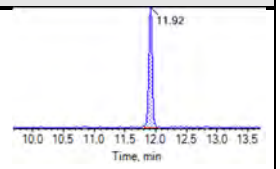
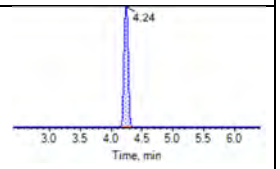
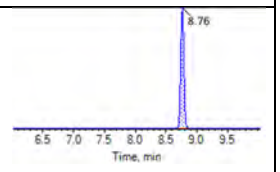
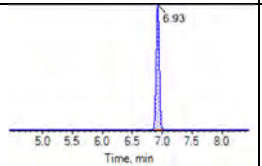
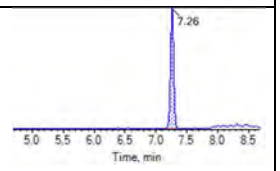
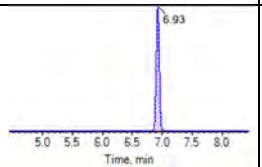
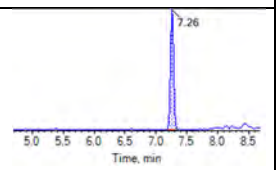
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21760	13C2_PFTeDA	133100	200.0	206.2	103.1	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1752000	N/A	N/A	1000.0	1012.5	101.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1309000	N/A	N/A	1000.0	1063.8	106.4	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	168600	13C5_PFHxA	297900	200.0	227.5	113.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	128000	13C5_PFHxA	297900	200.0	229.7	114.8	0.76/ 0.75		

Initial Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 20:08

Data File: PFC103117012.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	992.673	99.3	
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	805.223	80.5	
Perfluorotetradecanoic acid (PFTeDA)	1000	973.64	97.4	
Perfluorotridecanoic acid (PFTrDA)	1000	946.09	94.6	
Perfluorododecanoic acid (PFDoA)	1000	1136.449	113.6	
Perfluoroundecanoic acid (PFUdA)	1000	1138.359	113.8	
Perfluorononanoic acid (PFNA)	1000	1156.564	115.7	
Perfluorodecanoic acid (PFDA)	1000	1176.324	117.6	
Perfluorooctanoic acid (PFOA)	1000	992.655	99.3	
Perfluoroheptanoic acid (PFHpA)	1000	984.497	98.4	
Perfluorooctanesulfonate (PFOS)	1000	1013.94	101.4	
Perfluorohexanoic acid (PFHxA)	1000	968.909	96.9	
Perfluorohexanesulfonate (PFHxS)	912	911.712	100	
Perfluorobutanesulfonate (PFBS)	885	872.842	98.6	

Recovery criteria is 70% - 130%

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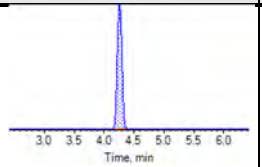
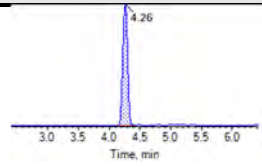
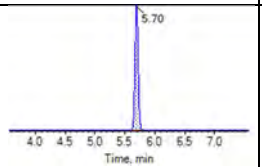
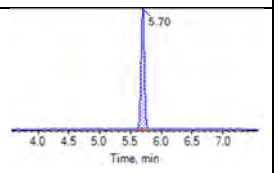
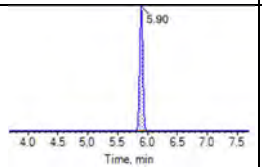
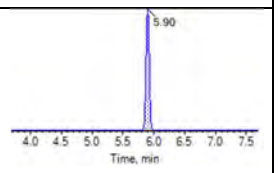
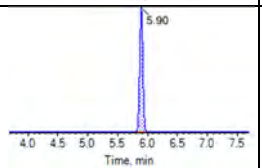
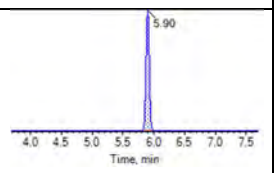
Sample Name	WPF171018-09ICV	**Injection Vial**	9
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117012.wiff
Acquisition Date	10/31/2017 20:08:29	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117012.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	1064000	13C4_PFBA	144400	1000.0	1045.3	104.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	960900	13C5_PFPeA	229700	1000.0	972.5	97.2	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1275000	13C3_PFBS	148200	885.0	872.8	98.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	574900	13C3_PFBS	148200	885.0	876.7	99.1	0.45/ 0.45		

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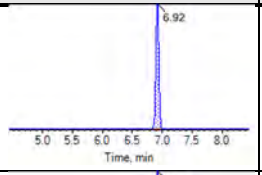
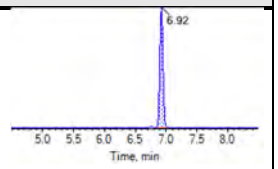
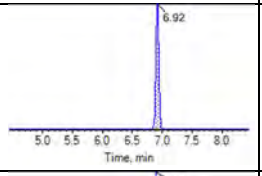
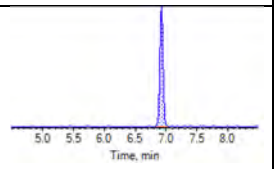
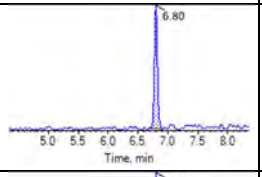
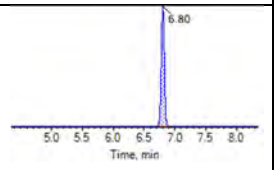
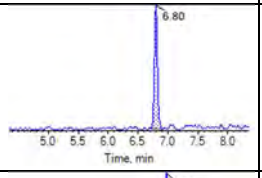
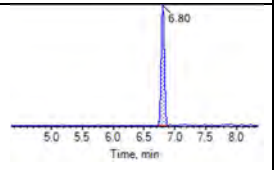
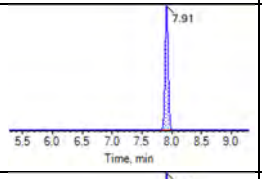
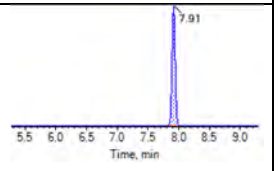
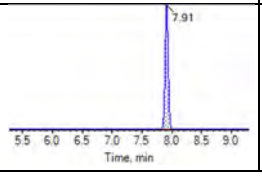
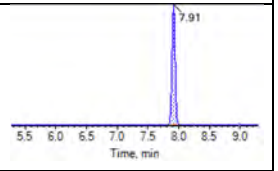
PFC103117012.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1104000	13C5_PFHxA	300000	1000.0	968.9	96.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	81250	13C5_PFHxA	300000	1000.0	1009.0	100.9	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	186700	13C2_4:2 FTS	32970	935.0	946.0	101.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	125300	13C2_4:2 FTS	32970	935.0	883.9	94.5	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	966100	13C4_PFHpA	234600	1000.0	984.5	98.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.91 (7.93)	234400	13C4_PFHpA	234600	1000.0	913.7	91.4	0.24/ 0.26		

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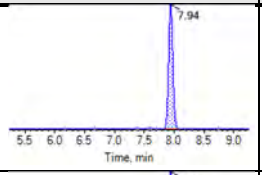
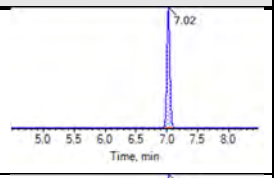
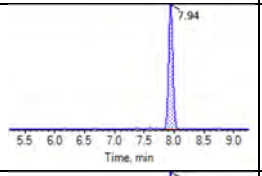
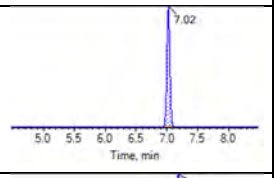
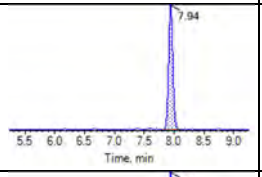
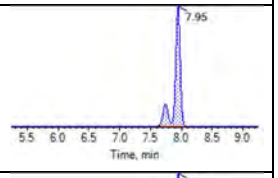
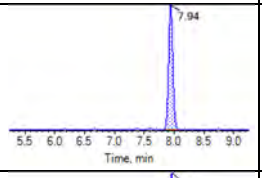
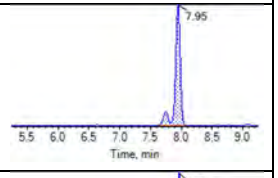
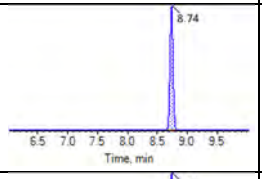
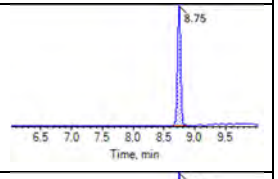
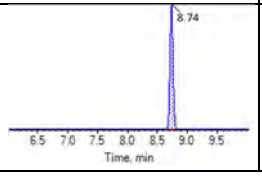
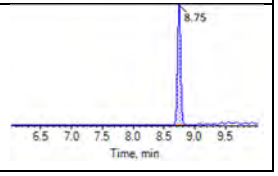
PFPeS	349.0 / 80.0	7.02 (7.02)	1553000	13C3_PFHxS	71220	940.0	1041.6	110.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	525000	13C3_PFHxS	71220	940.0	1007.7	107.2	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1252000	13C3_PFHxS	71220	912.0	911.7	100.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	315900	13C3_PFHxS	71220	912.0	910.7	99.9	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	936000	13C8_PFOA	223500	1000.0	992.7	99.3	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	324300	13C8_PFOA	223500	1000.0	921.7	92.2	0.35/ 0.37		

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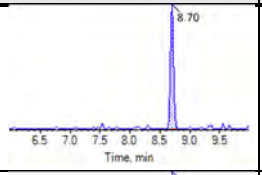
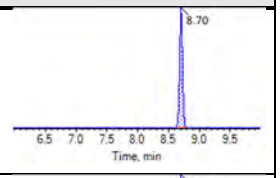
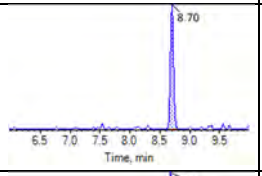
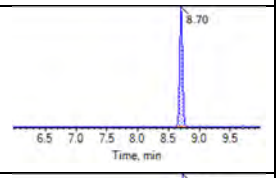
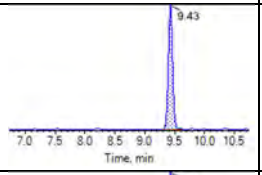
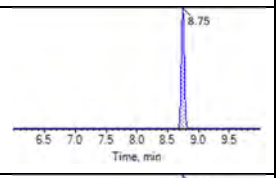
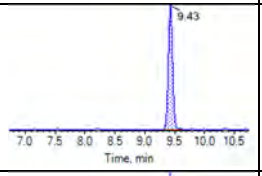
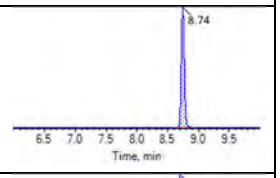
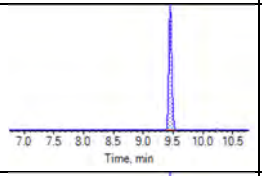
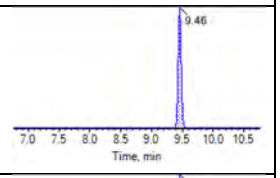
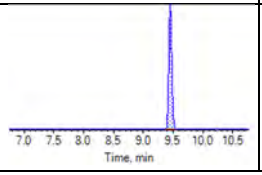
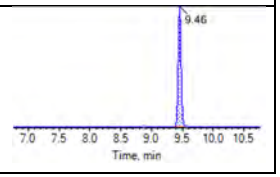
6:2 FTS	427.0 / 407.0	8.70 (8.72)	161400	13C2_6:2 FTS	31260	950.0	978.8	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.70 (8.72)	140600	13C2_6:2 FTS	31260	950.0	949.5	99.9	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	1125000	13C8_PFOS	63080	950.0	914.9	96.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	219600	13C8_PFOS	63080	950.0	886.7	93.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	838200	13C9_PFNA	215600	1000.0	1156.6	115.7	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	194900	13C9_PFNA	215600	1000.0	1115.3	111.5	0.23/ 0.24		

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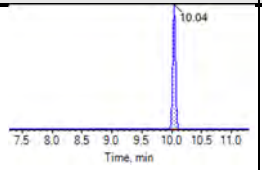
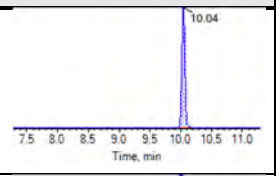
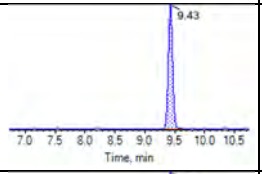
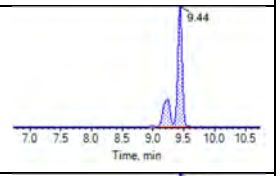
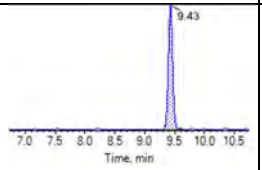
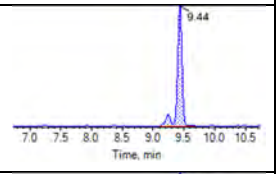
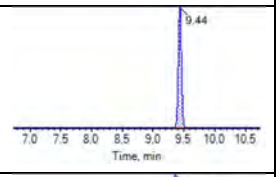
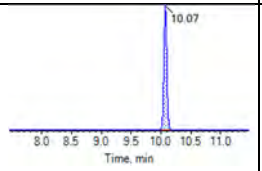
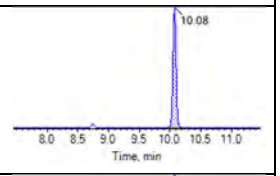
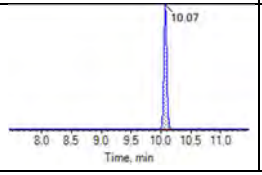
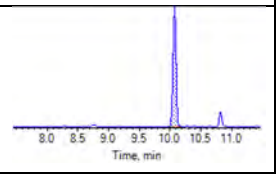
PFOSA	498.0 / 78.0	10.04 (10.04)	1956000	13C8_PFOSA	526500	925.5	992.9	107.3	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	1039000	13C8_PFOS	63080	1000.0	1013.9	101.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	146400	13C8_PFOS	63080	1000.0	967.1	96.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1509000	N/A	N/A	1000.0	900.1	90.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	852000	13C6_PFDA	140500	1000.0	1176.3	117.6	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	97830	13C6_PFDA	140500	1000.0	1078.4	107.8	0.11/ 0.13		

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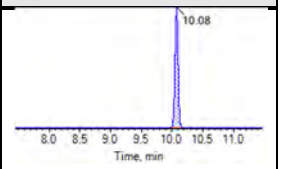
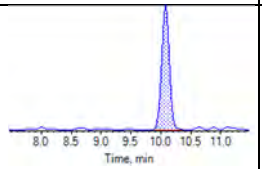
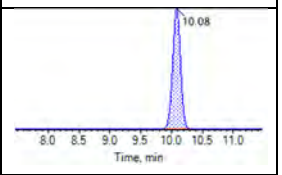
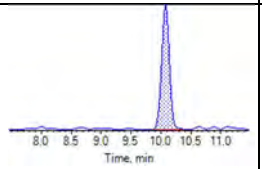
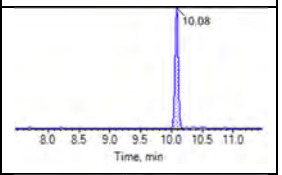
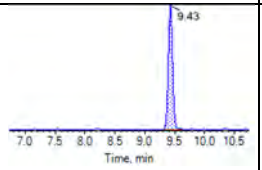
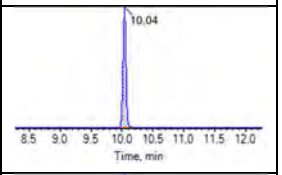
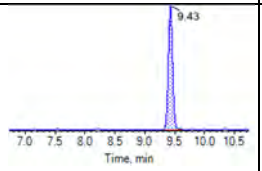
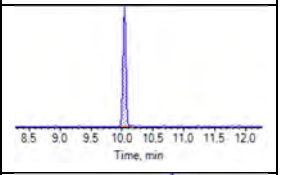
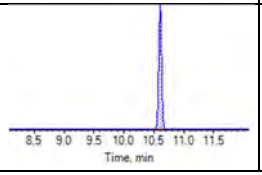
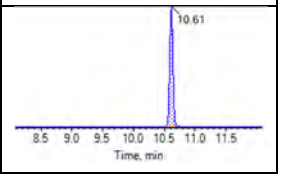
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1072000	N/A	N/A	1000.0	929.7	93.0	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	98140	13C2_8:2 FTS	25240	960.0	754.4	78.6	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	113600	13C2_8:2 FTS	25240	960.0	901.1	93.9	1.16/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	1082000	13C8_PFOS	63080	960.0	1086.4	113.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	190900	13C8_PFOS	63080	960.0	1052.3	109.6	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	691800	13C7_PFUdA	170600	1000.0	1138.4	113.8	1.00/ 1.00		

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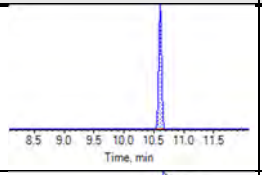
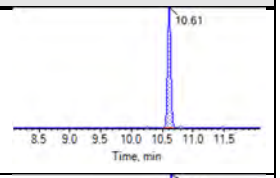
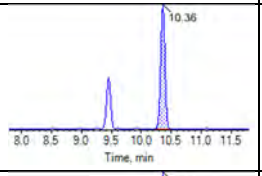
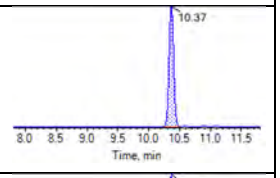
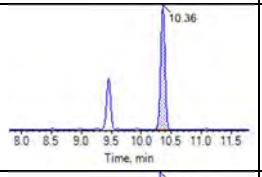
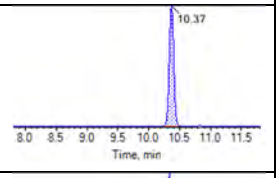
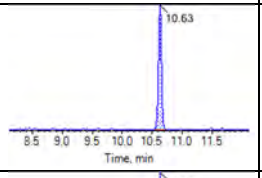
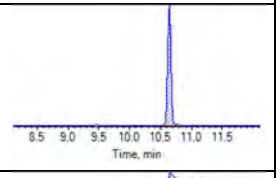
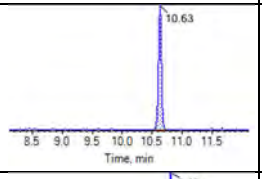
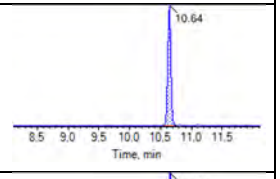
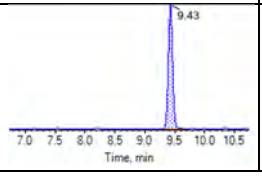
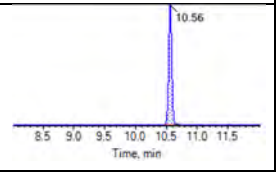
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.61 (10.62)	87290	13C7_PFUdA	170600	1000.0	1205.5	120.5	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	168700	d3-N-MeFOSAA	42860	1000.0	992.7	99.3	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.37 (10.37)	90260	d3-N-MeFOSAA	42860	1000.0	1078.2	107.8	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	173700	d5-N-EtFOSAA	53130	1000.0	805.2	80.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	97590	d5-N-EtFOSAA	53130	1000.0	952.1	95.2	0.56/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	1160000	13C8_PFOS	63080	965.0	955.2	99.0	1.00/ 1.00		

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LCMSMS#6

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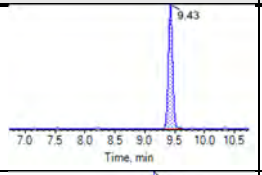
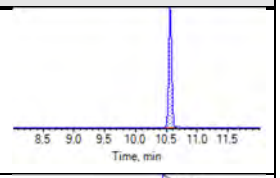
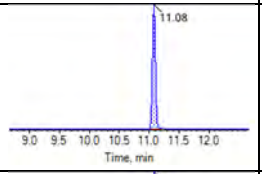
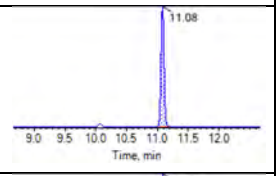
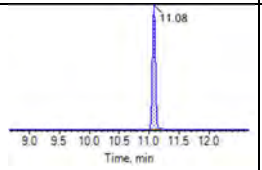
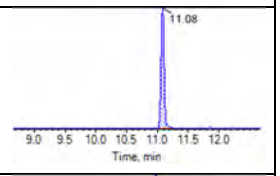
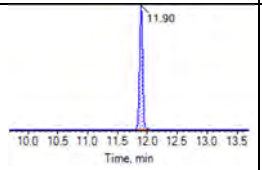
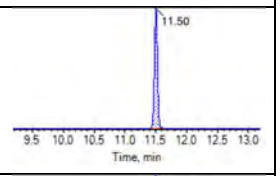
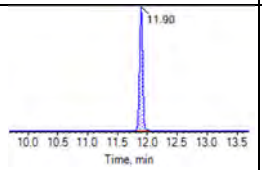
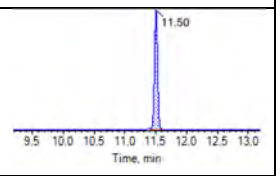
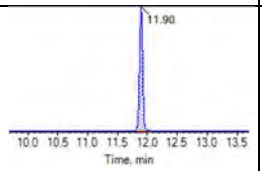
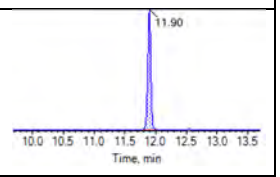
PFDS_2	599.0 / 99.0	10.56 (10.93)	321800	13C8_PFOS	63080	965.0	994.7	103.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	682300	13C2_PFDoA	159400	1000.0	1136.4	113.6	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	112000	13C2_PFDoA	159400	1000.0	1141.7	114.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	600900	13C2_PFTeDA	129200	1000.0	946.1	94.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	144300	13C2_PFTeDA	129200	1000.0	1027.3	102.7	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	453000	13C2_PFTeDA	129200	1000.0	973.6	97.4	1.00/ 1.00		

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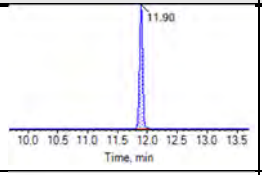
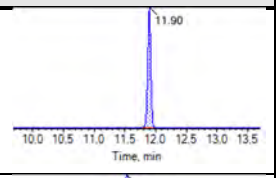
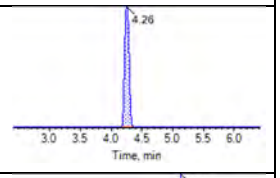
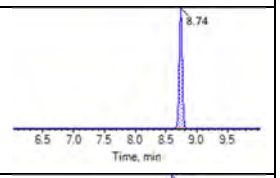
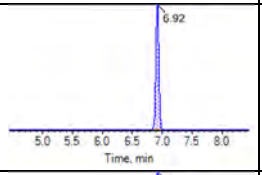
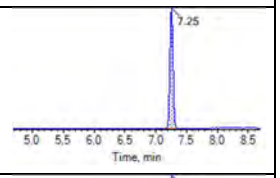
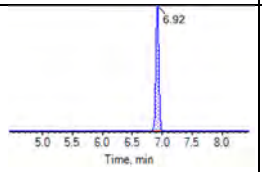
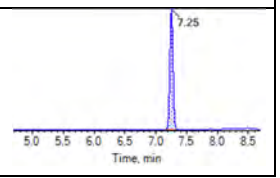
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	97390	13C2_PFTeDA	129200	1000.0	950.6	95.1	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1620000	N/A	N/A	1000.0	936.3	93.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1107000	N/A	N/A	1000.0	899.9	90.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	672200	13C5_PFHxA	300000	1000.0	900.8	90.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	515400	13C5_PFHxA	300000	1000.0	918.0	91.8	0.77/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Client SDG: 436518

Injection Date: 01-NOV-17 23:11

Data File: PFC103117086.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	897.571	89.8	
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	783.483	78.3	
Perfluorotetradecanoic acid (PFTeDA)	1000	916.993	91.7	
Perfluorododecanoic acid (PFDoA)	1000	935.239	93.5	
Perfluorotridecanoic acid (PFTrDA)	1000	1004.332	100.4	
Perfluoroundecanoic acid (PFUdA)	1000	1010.627	101.1	
Perfluorodecanoic acid (PFDA)	1000	1191.201	119.1	
Perfluorononanoic acid (PFNA)	1000	1132.686	113.3	
Perfluorooctanoic acid (PFOA)	1000	925.878	92.6	
Perfluoroheptanoic acid (PFHpA)	1000	958.951	95.9	
Perfluorohexanoic acid (PFHxA)	1000	989.929	99	
Perfluorooctanesulfonate (PFOS)	1000	1102.708	110.3	
Perfluorohexanesulfonate (PFHxS)	912	854.874	93.7	
Perfluorobutanesulfonate (PFBS)	885	855.536	96.7	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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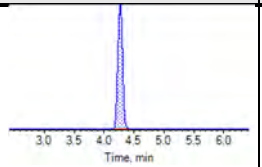
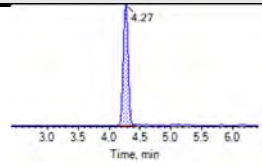
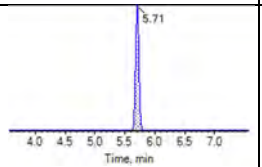
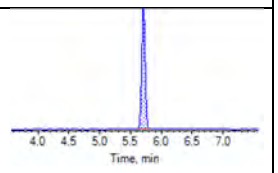
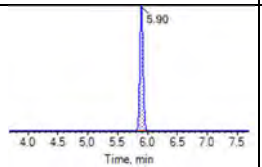
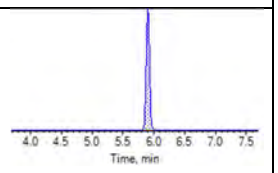
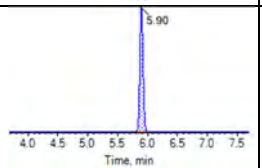
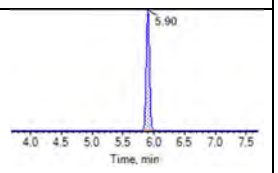
PFC103117086.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	21
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117086.wiff
Acquisition Date	11/1/2017 23:11:19	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117086.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1052000	13C4_PFBA	142600	1000.0	1046.4	104.6	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	931400	13C5_PFPeA	223800	1000.0	967.5	96.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1282000	13C3_PFBS	152100	885.0	855.5	96.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	563000	13C3_PFBS	152100	885.0	836.7	94.5	0.44/ 0.45		

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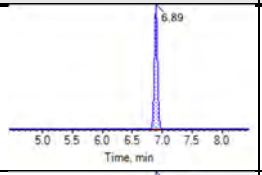
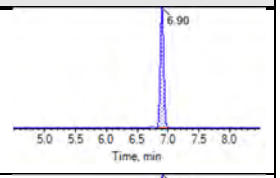
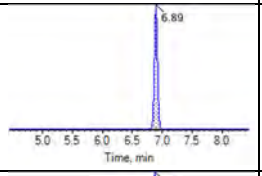
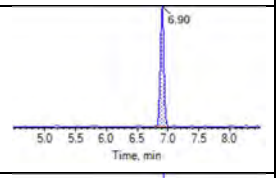
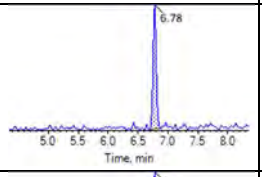
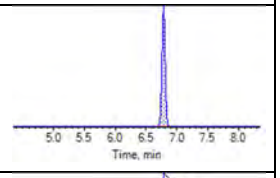
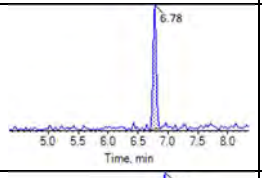
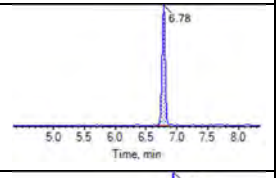
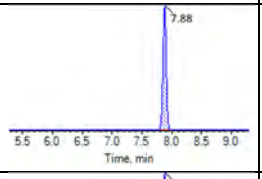
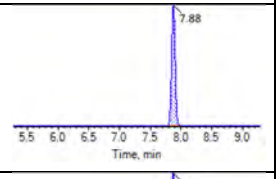
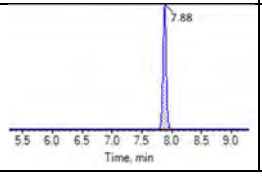
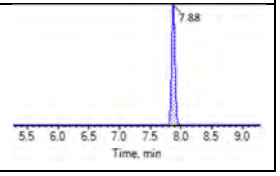
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	1022000	13C5_PFHxA	271900	1000.0	989.9	99.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.90 (6.92)	75730	13C5_PFHxA	271900	1000.0	1037.9	103.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.78 (6.80)	156100	13C2_4:2 FTS	30380	935.0	858.4	91.8	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	111700	13C2_4:2 FTS	30380	935.0	854.6	91.4	0.72/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	973800	13C4_PFHpA	242800	1000.0	959.0	95.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	244600	13C4_PFHpA	242800	1000.0	921.4	92.1	0.25/ 0.26		

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LCMSMS#6

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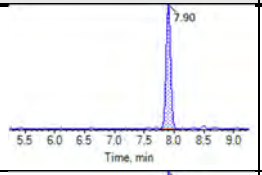
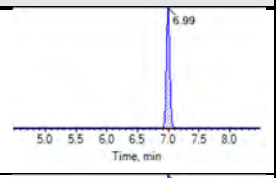
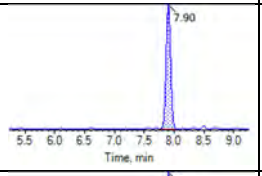
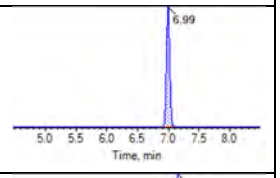
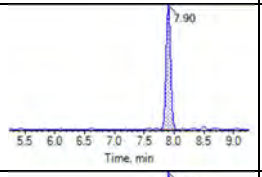
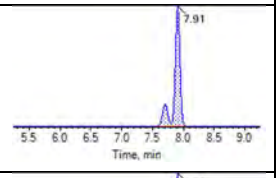
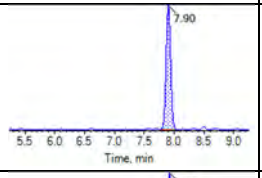
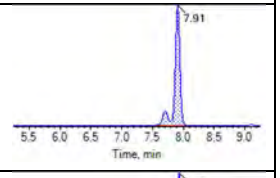
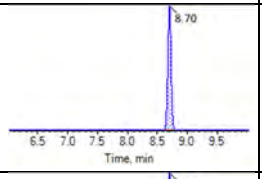
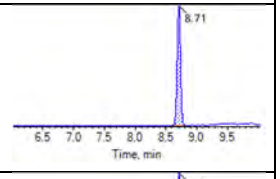
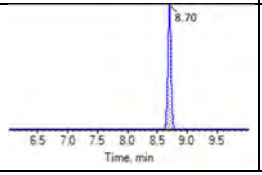
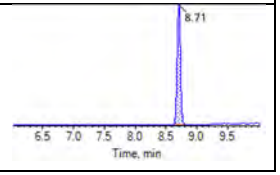
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	1569000	13C3_PFHxS	72450	940.0	1034.4	110.0	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	552900	13C3_PFHxS	72450	940.0	1043.3	111.0	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1194000	13C3_PFHxS	72450	912.0	854.9	93.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	316300	13C3_PFHxS	72450	912.0	896.3	98.3	0.26/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	917800	13C8_PFOA	234900	1000.0	925.9	92.6	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	366300	13C8_PFOA	234900	1000.0	990.4	99.0	0.40/ 0.37		

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LCMSMS#6

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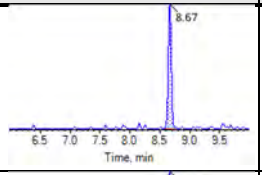
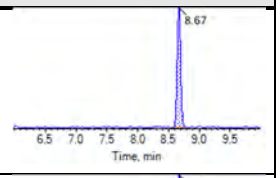
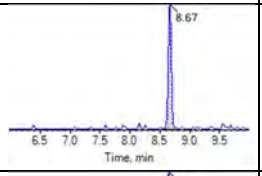
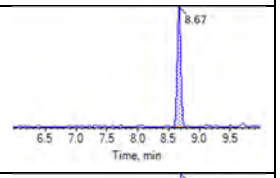
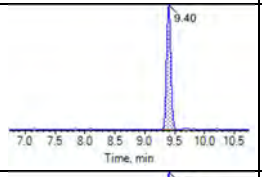
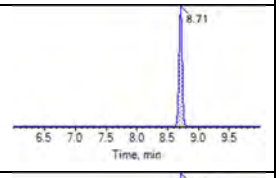
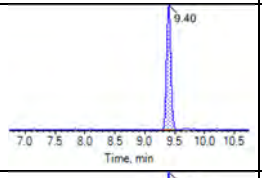
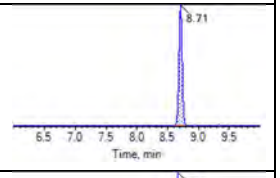
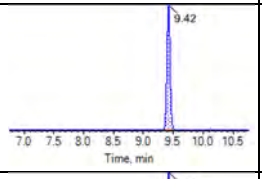
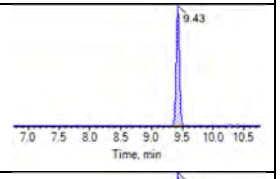
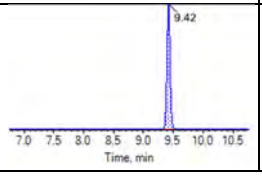
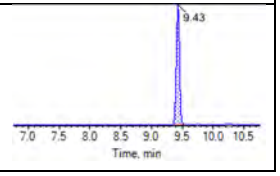
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	138800	13C2_6:2 FTS	29250	950.0	899.7	94.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	117900	13C2_6:2 FTS	29250	950.0	851.3	89.6	0.85/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1139000	13C8_PFOS	58680	950.0	995.8	104.8	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	218600	13C8_PFOS	58680	950.0	949.1	99.9	0.19/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	813900	13C9_PFNA	213800	1000.0	1132.7	113.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	171500	13C9_PFNA	213800	1000.0	989.8	99.0	0.21/ 0.24		

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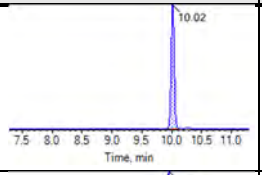
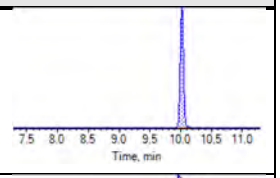
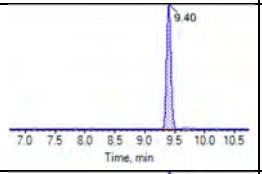
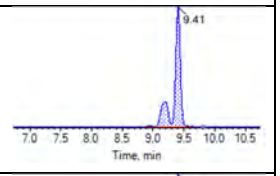
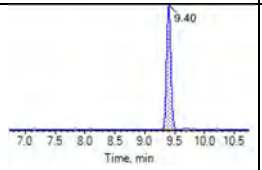
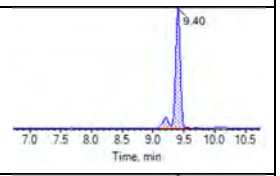
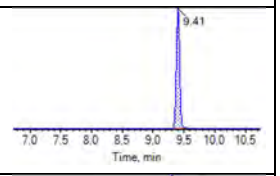
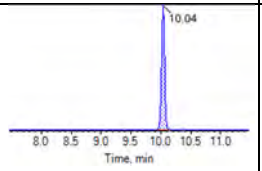
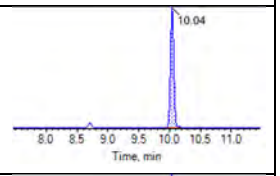
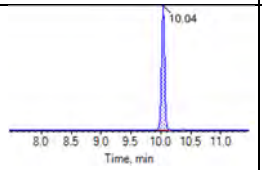
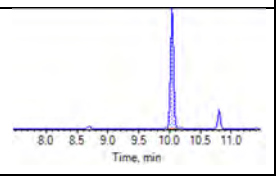
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1758000	13C8_PFOSA	532500	925.5	882.3	95.3	1.00/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	1051000	13C8_PFOS	58680	1000.0	1102.7	110.3	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.40 (9.45)	165800	13C8_PFOS	58680	1000.0	1177.5	117.8	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1591000	N/A	N/A	1000.0	949.0	94.9	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	777700	13C6_PFDA	126700	1000.0	1191.2	119.1	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	97820	13C6_PFDA	126700	1000.0	1196.3	119.6	0.13/ 0.13		

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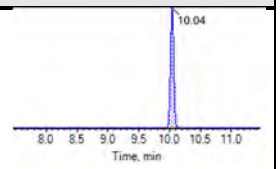
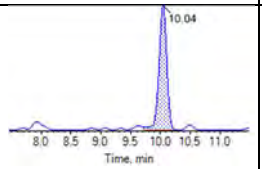
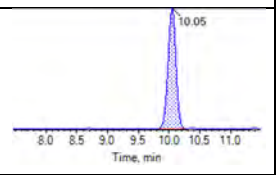
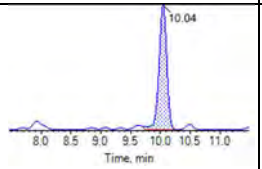
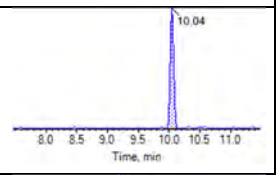
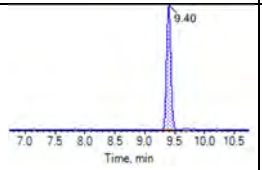
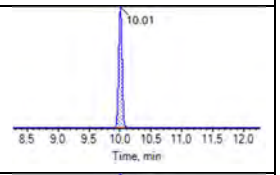
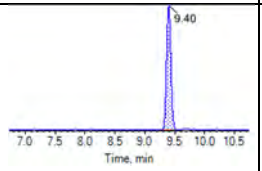
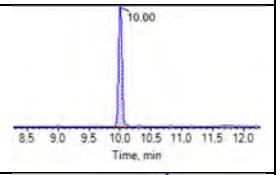
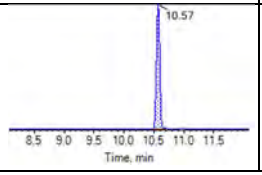
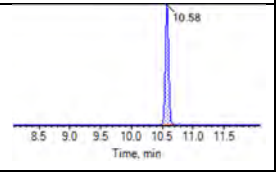
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1084000	N/A	N/A	1000.0	939.6	94.0	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	113800	13C2_8:2 FTS	20660	960.0	1068.7	111.3	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	101200	13C2_8:2 FTS	20660	960.0	980.3	102.1	0.89/ 0.96		
PFNS	549.0 / 80.0	10.01 (10.49)	1035000	13C8_PFOS	58680	960.0	1117.4	116.4	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	198600	13C8_PFOS	58680	960.0	1177.0	122.6	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	673000	13C7_PFUdA	187000	1000.0	1010.6	101.1	1.00/ 1.00		

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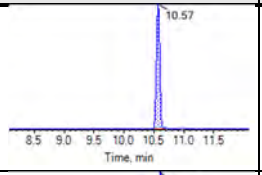
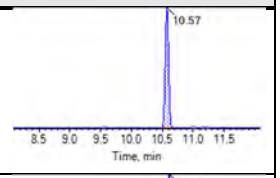
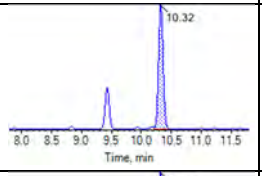
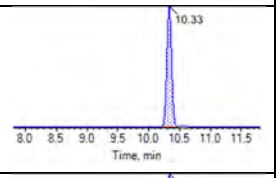
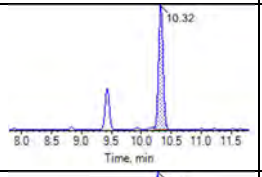
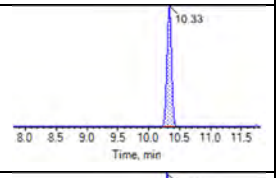
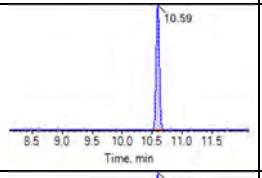
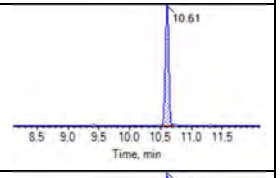
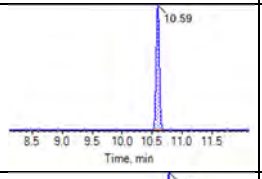
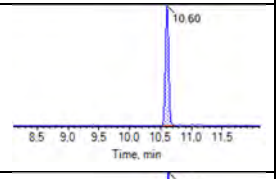
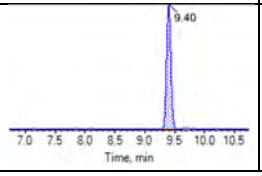
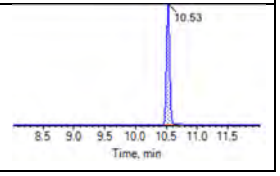
PFUdA_2	563.0 / 169.0	10.57 (10.62)	109400	13C7_PFUdA	187000	1000.0	1379.2	137.9	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	171900	d3-N-MeFOSAA	48290	1000.0	897.6	89.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	92670	d3-N-MeFOSAA	48290	1000.0	982.3	98.2	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	182500	d5-N-EtFOSAA	57390	1000.0	783.5	78.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	79200	d5-N-EtFOSAA	57390	1000.0	715.4	71.5	0.43/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1134000	13C8_PFOS	58680	965.0	1003.6	104.0	1.00/ 1.00		

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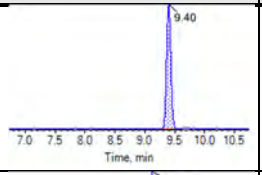
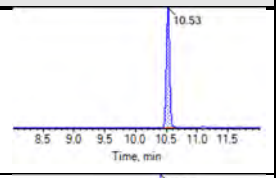
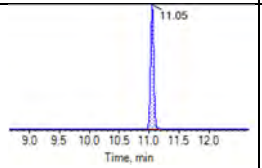
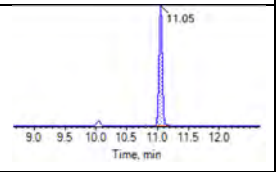
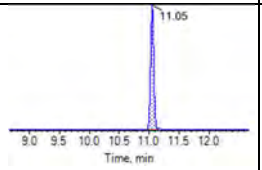
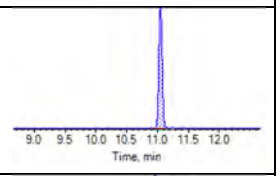
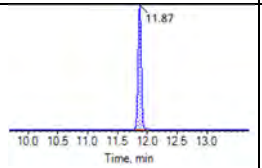
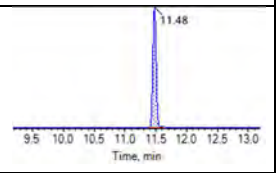
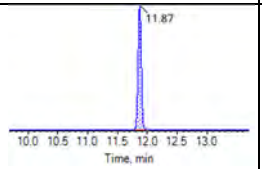
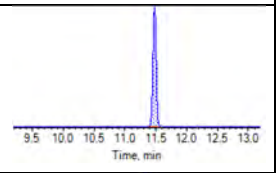
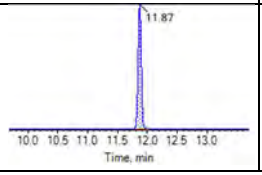
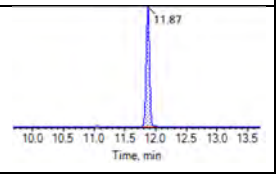
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	305800	13C8_PFOS	58680	965.0	1016.0	105.3	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	592600	13C2_PFDoA	168200	1000.0	935.2	93.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	106100	13C2_PFDoA	168200	1000.0	1024.2	102.4	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	618500	13C2_PFTeDA	125300	1000.0	1004.3	100.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	146600	13C2_PFTeDA	125300	1000.0	1076.6	107.7	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.87 (11.91)	413700	13C2_PFTeDA	125300	1000.0	917.0	91.7	1.00/ 1.00		

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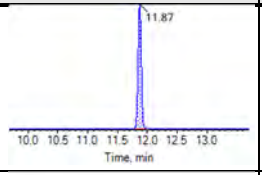
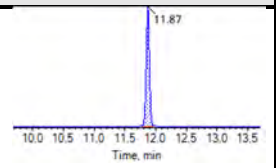
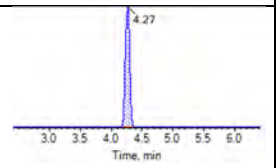
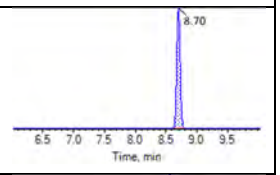
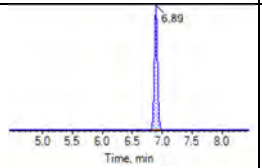
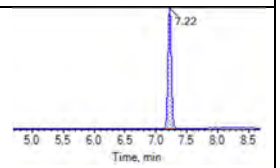
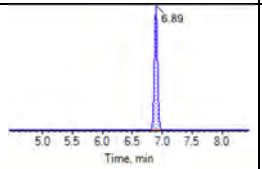
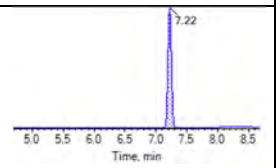
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.87 (11.91)	94280	13C2_PFTeDA	125300	1000.0	949.1	94.9	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1682000	N/A	N/A	1000.0	972.0	97.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1174000	N/A	N/A	1000.0	954.5	95.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	625900	13C5_PFHxA	271900	1000.0	925.6	92.6	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	508300	13C5_PFHxA	271900	1000.0	999.1	99.9	0.81/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 03:28

Data File: PFC103117098.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	904.511	90.5	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	968.048	96.8	
Perfluorotetradecanoic acid (PFTeDA)	1000	892.403	89.2	
Perfluorotridecanoic acid (PFTrDA)	1000	920.358	92	
Perfluorododecanoic acid (PFDoA)	1000	981.207	98.1	
Perfluoroundecanoic acid (PFUdA)	1000	905.015	90.5	
Perfluorodecanoic acid (PFDA)	1000	1027.408	102.7	
Perfluorononanoic acid (PFNA)	1000	1072.747	107.3	
Perfluoroheptanoic acid (PFHpA)	1000	866.383	86.6	
Perfluorooctanoic acid (PFOA)	1000	971.183	97.1	
Perfluorooctanesulfonate (PFOS)	1000	1138.829	113.9	
Perfluorohexanoic acid (PFHxA)	1000	1064.013	106.4	
Perfluorohexanesulfonate (PFHxS)	912	905.974	99.3	
Perfluorobutanesulfonate (PFBS)	885	933.986	105.5	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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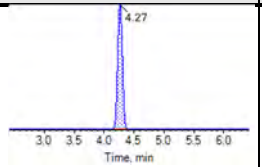
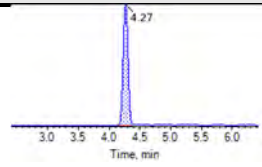
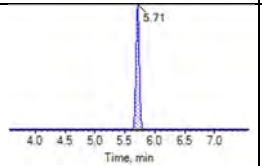
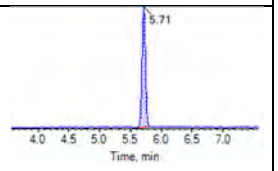
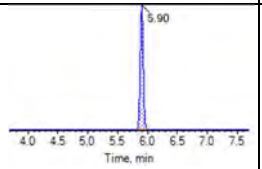
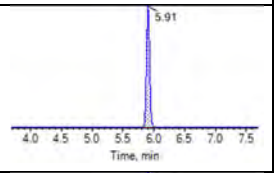
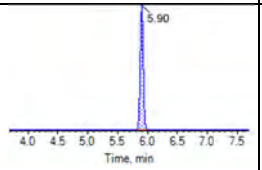
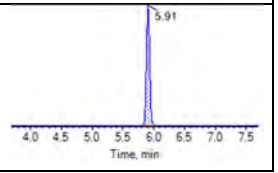
PFC103117098.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	21
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117098.wiff
Acquisition Date	11/2/2017 03:28:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117098.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1111000	13C4_PFBA	153300	1000.0	1028.1	102.8	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	1031000	13C5_PFPeA	234200	1000.0	1023.3	102.3	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	1449000	13C3_PFBS	157500	885.0	934.0	105.5	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	610400	13C3_PFBS	157500	885.0	876.0	99.0	0.42/ 0.45		

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LCMSMS#6

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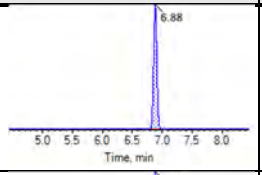
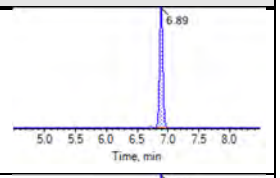
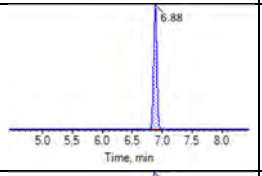
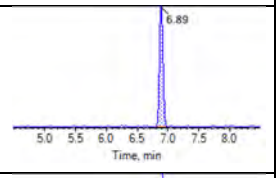
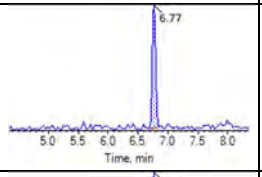
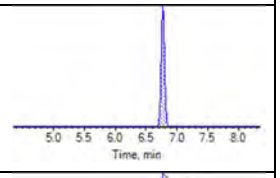
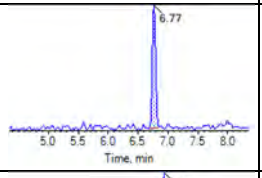
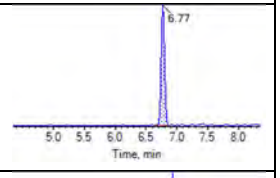
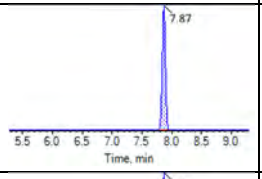
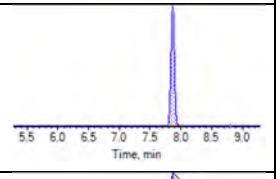
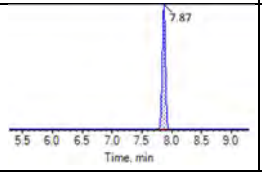
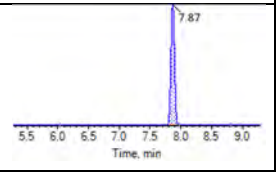
PFC103117098.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1114000	13C5_PFHxA	275700	1000.0	1064.0	106.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	83320	13C5_PFHxA	275700	1000.0	1126.1	112.6	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	148900	13C2_4:2 FTS	30880	935.0	805.6	86.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	111800	13C2_4:2 FTS	30880	935.0	841.7	90.0	0.75/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	897900	13C4_PFHpA	247800	1000.0	866.4	86.6	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	258700	13C4_PFHpA	247800	1000.0	954.6	95.5	0.29/ 0.26		

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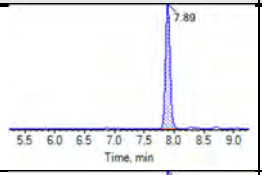
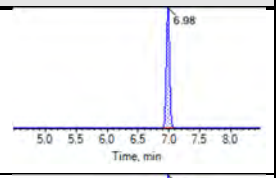
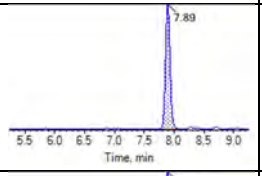
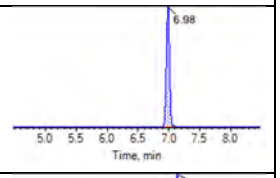
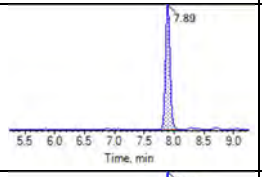
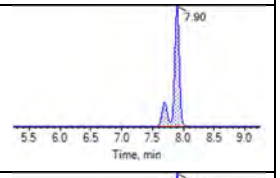
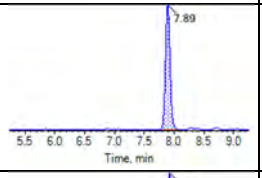
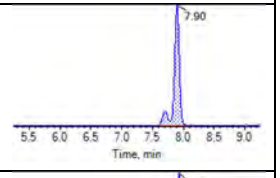
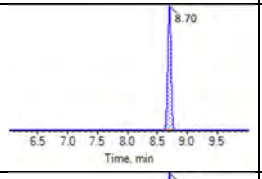
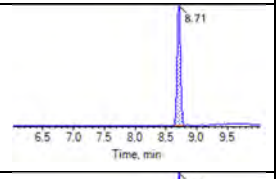
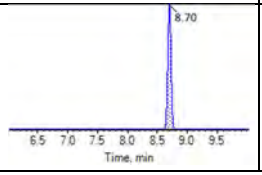
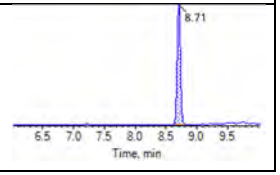
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1511000	13C3_PFHxS	71260	940.0	1012.6	107.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	562300	13C3_PFHxS	71260	940.0	1078.6	114.7	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1245000	13C3_PFHxS	71260	912.0	906.0	99.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	332100	13C3_PFHxS	71260	912.0	956.8	104.9	0.27/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	1002000	13C8_PFOA	244600	1000.0	971.2	97.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	367100	13C8_PFOA	244600	1000.0	953.4	95.3	0.37/ 0.37		

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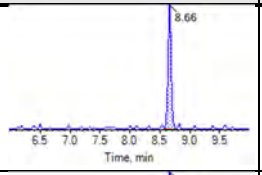
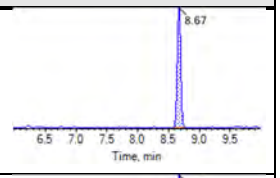
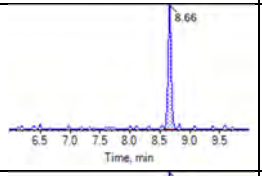
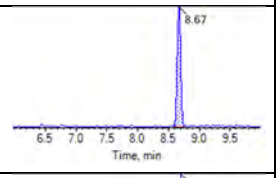
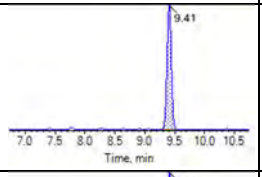
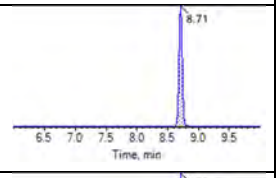
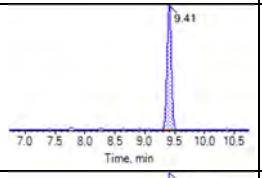
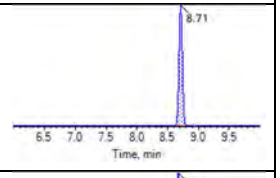
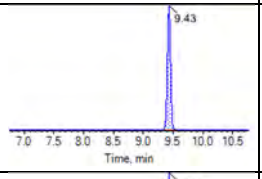
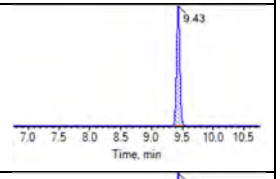
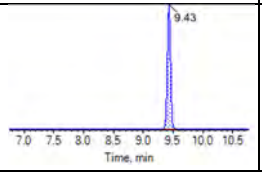
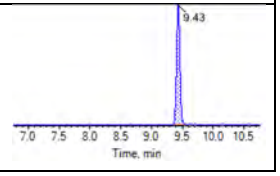
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	163600	13C2_6:2 FTS	33070	950.0	937.8	98.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	132800	13C2_6:2 FTS	33070	950.0	847.8	89.2	0.81/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1216000	13C8_PFOS	59220	950.0	1053.4	110.9	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	254500	13C8_PFOS	59220	950.0	1095.0	115.3	0.21/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	838200	13C9_PFNA	232500	1000.0	1072.7	107.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.43 (9.47)	192100	13C9_PFNA	232500	1000.0	1019.4	101.9	0.23/ 0.24		

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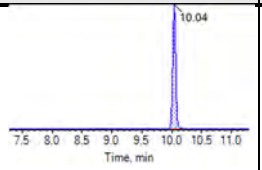
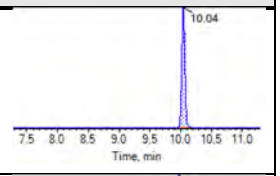
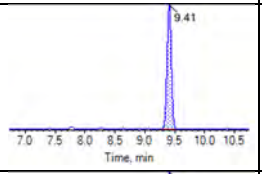
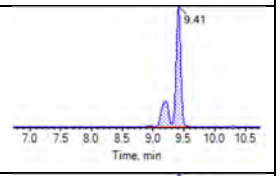
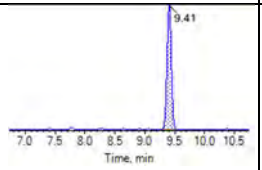
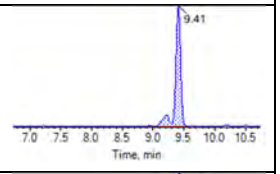
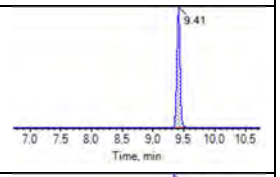
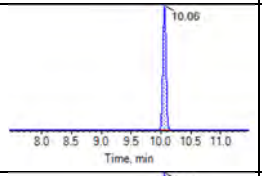
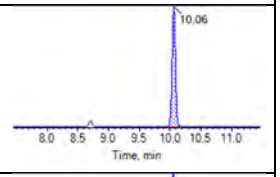
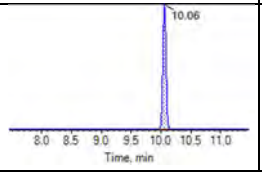
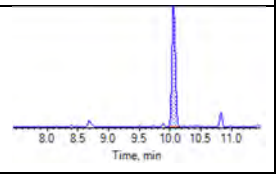
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	2020000	13C8_PFOSA	521400	925.5	1035.8	111.9	1.00/ 1.00		
PFOS	499.0 / 80.0	9.41 (9.45)	1096000	13C8_PFOS	59220	1000.0	1138.8	113.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.41 (9.45)	167400	13C8_PFOS	59220	1000.0	1178.0	117.8	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1645000	N/A	N/A	1000.0	980.8	98.1	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.06 (10.08)	779000	13C6_PFDA	147100	1000.0	1027.4	102.7	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.06 (10.08)	92220	13C6_PFDA	147100	1000.0	971.0	97.1	0.12/ 0.13		

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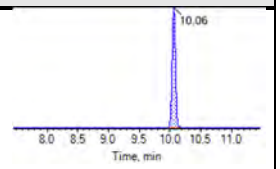
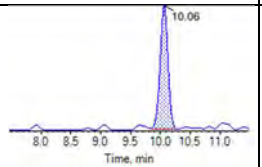
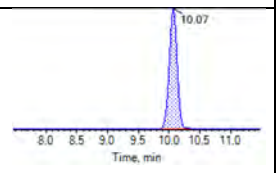
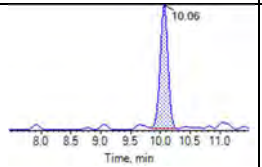
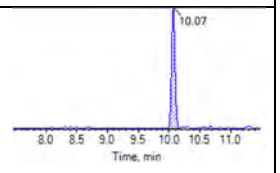
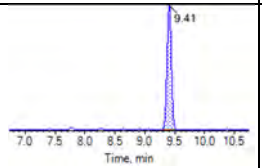
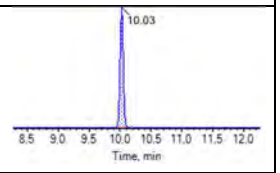
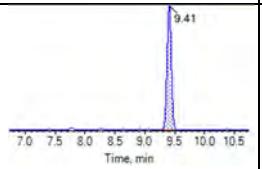
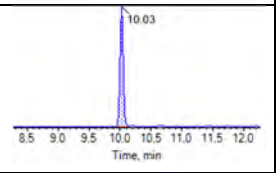
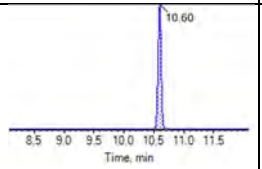
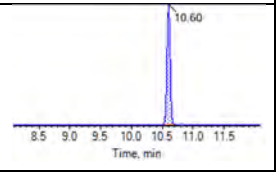
PFC103117098.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1114000	N/A	N/A	1000.0	965.7	96.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	123800	13C2_8:2 FTS	20790	960.0	1155.3	120.3	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	97850	13C2_8:2 FTS	20790	960.0	942.1	98.1	0.79/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1059000	13C8_PFOS	59220	960.0	1132.9	118.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	206900	13C8_PFOS	59220	960.0	1215.1	126.6	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	659400	13C7_PFUdA	204600	1000.0	905.0	90.5	1.00/ 1.00		

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LCMSMS#6

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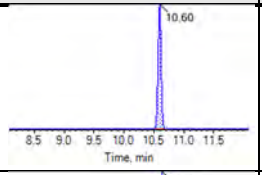
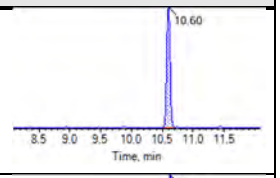
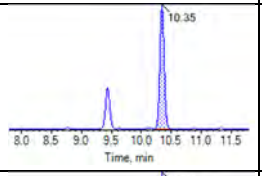
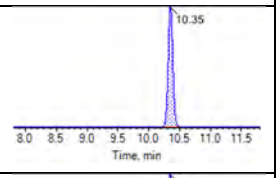
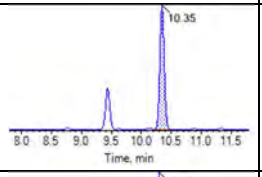
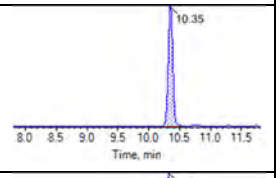
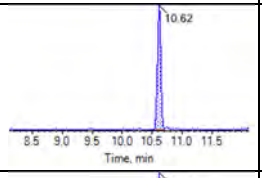
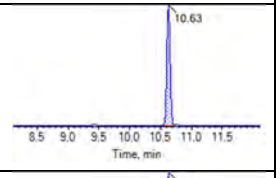
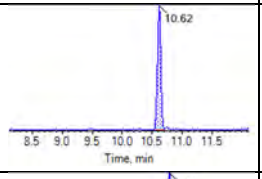
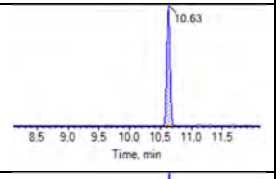
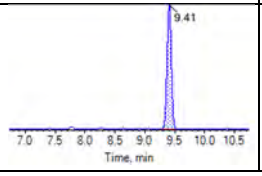
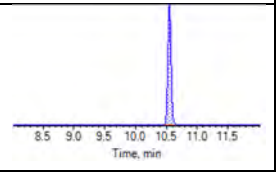
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	82690	13C7_PFUdA	204600	1000.0	952.4	95.2	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.35 (10.37)	201000	d3-N-MeFOSAA	52360	1000.0	968.0	96.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	88110	d3-N-MeFOSAA	52360	1000.0	861.4	86.1	0.44/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	184200	d5-N-EtFOSAA	50180	1000.0	904.5	90.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	87910	d5-N-EtFOSAA	50180	1000.0	908.1	90.8	0.48/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	1153000	13C8_PFOS	59220	965.0	1011.6	104.8	1.00/ 1.00		

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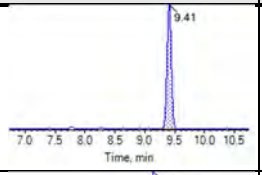
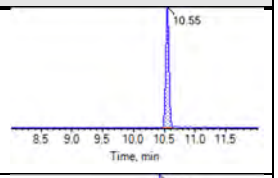
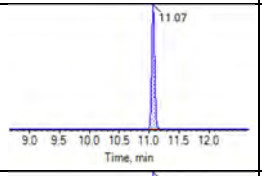
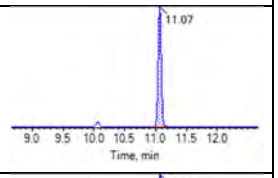
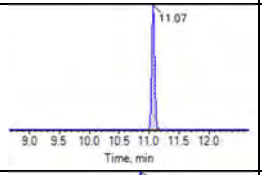
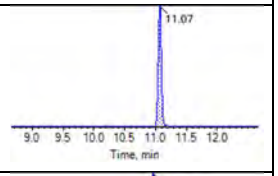
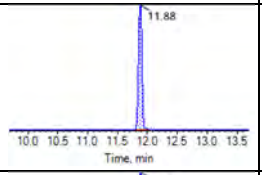
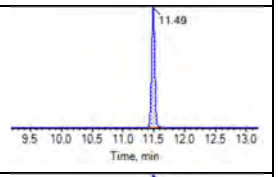
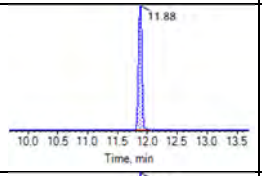
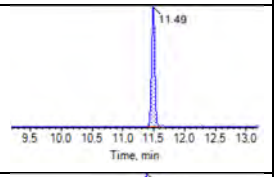
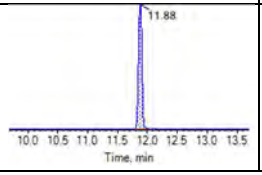
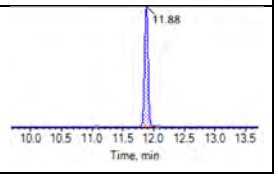
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	299400	13C8_PFOS	59220	965.0	985.6	102.1	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	624100	13C2_PFDoA	168900	1000.0	981.2	98.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	112400	13C2_PFDoA	168900	1000.0	1080.8	108.1	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.49 (11.82)	583800	13C2_PFTeDA	129000	1000.0	920.4	92.0	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.49 (11.82)	135800	13C2_PFTeDA	129000	1000.0	968.2	96.8	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.88 (11.91)	414700	13C2_PFTeDA	129000	1000.0	892.4	89.2	1.00/ 1.00		

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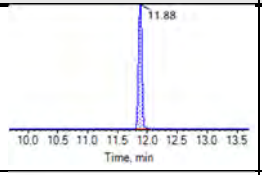
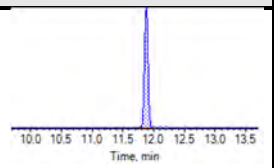
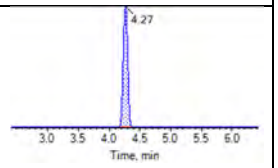
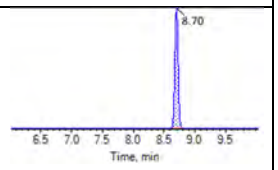
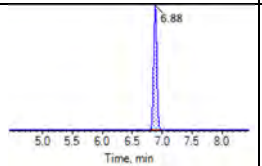
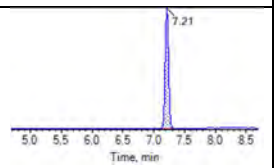
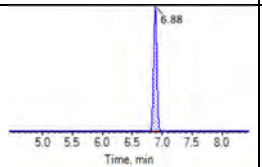
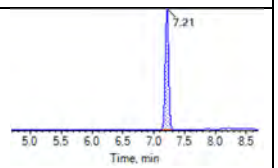
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.88 (11.91)	100500	13C2_PFTeDA	129000	1000.0	982.2	98.2	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1740000	N/A	N/A	1000.0	1005.6	100.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1289000	N/A	N/A	1000.0	1048.0	104.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	642800	13C5_PFHxA	275700	1000.0	937.5	93.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	496200	13C5_PFHxA	275700	1000.0	961.6	96.2	0.77/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Client SDG: 436518

Injection Date: 02-NOV-17 07:44

Data File: PFC103117110.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	852.946	85.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	795.63	79.6	
Perfluorotetradecanoic acid (PFTeDA)	1000	897.468	89.7	
Perfluorotridecanoic acid (PFTrDA)	1000	1011.201	101.1	
Perfluorododecanoic acid (PFDoA)	1000	991.476	99.1	
Perfluoroundecanoic acid (PFUdA)	1000	1142.492	114.2	
Perfluorononanoic acid (PFNA)	1000	1120.6	112.1	
Perfluorodecanoic acid (PFDA)	1000	1164.287	116.4	
Perfluorooctanoic acid (PFOA)	1000	938.219	93.8	
Perfluoroheptanoic acid (PFHpA)	1000	1073.323	107.3	
Perfluorooctanesulfonate (PFOS)	1000	1139.587	114	
Perfluorohexanoic acid (PFHxA)	1000	996.82	99.7	
Perfluorobutanesulfonate (PFBS)	885	846.906	95.7	
Perfluorohexanesulfonate (PFHxS)	912	890.863	97.7	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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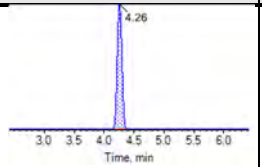
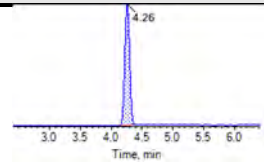
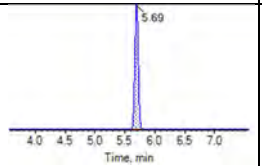
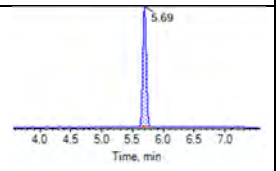
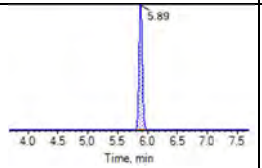
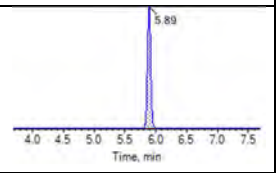
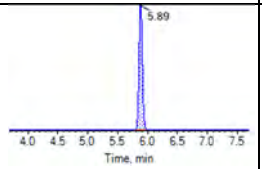
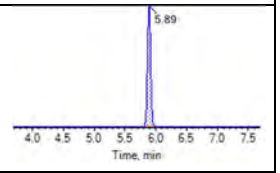
PFC103117110.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	43
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117110.wiff
Acquisition Date	11/2/2017 07:44:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117110.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	1043000	13C4_PFBA	144100	1000.0	1027.2	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	931800	13C5_PFPeA	208900	1000.0	1037.0	103.7	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	1278000	13C3_PFBS	153100	885.0	846.9	95.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	553400	13C3_PFBS	153100	885.0	816.9	92.3	0.43/ 0.45		

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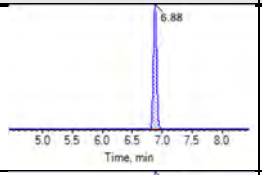
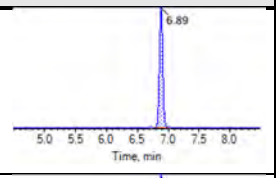
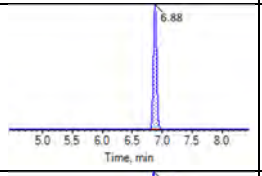
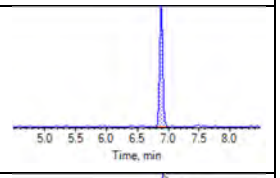
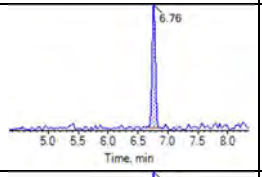
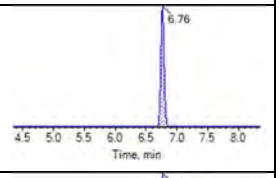
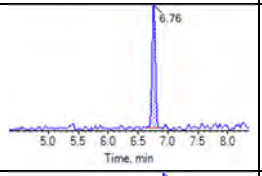
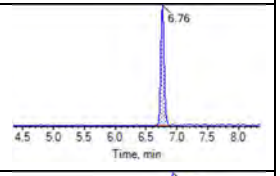
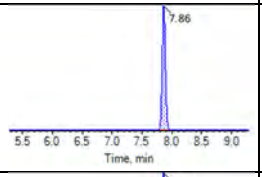
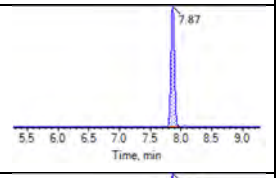
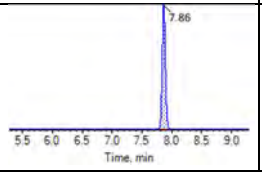
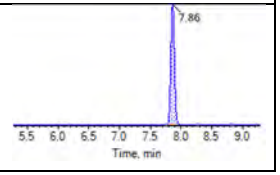
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1039000	13C5_PFHxA	274500	1000.0	996.8	99.7	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	76930	13C5_PFHxA	274500	1000.0	1044.4	104.4	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.76 (6.80)	166900	13C2_4:2 FTS	31070	935.0	897.4	96.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.76 (6.80)	117300	13C2_4:2 FTS	31070	935.0	877.9	93.9	0.70/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	992900	13C4_PFHpA	221200	1000.0	1073.3	107.3	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.86 (7.93)	241300	13C4_PFHpA	221200	1000.0	997.6	99.8	0.24/ 0.26		

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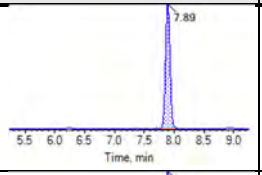
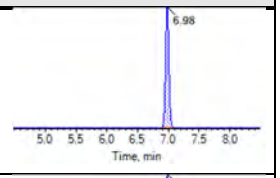
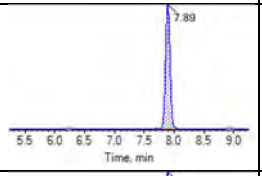
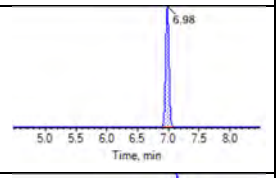
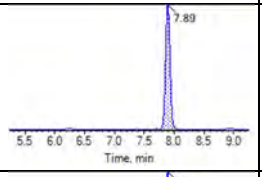
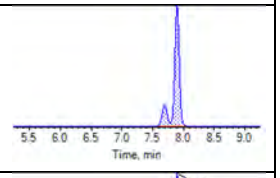
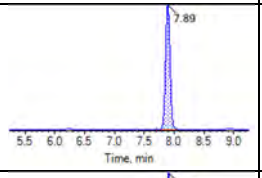
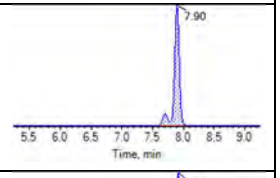
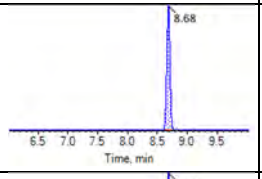
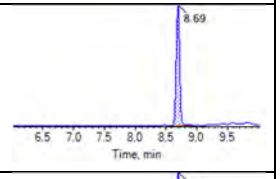
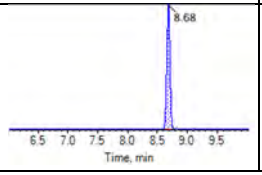
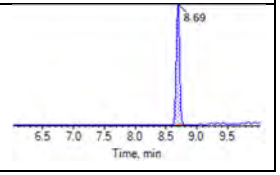
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1457000	13C3_PFHxS	74950	940.0	928.3	98.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	546200	13C3_PFHxS	74950	940.0	996.2	106.0	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1288000	13C3_PFHxS	74950	912.0	890.9	97.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	346700	13C3_PFHxS	74950	912.0	949.7	104.1	0.27/ 0.25		
PFOA	413.0 / 369.0	8.69 (8.75)	911300	13C8_PFOA	230200	1000.0	938.2	93.8	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.69 (8.75)	351600	13C8_PFOA	230200	1000.0	970.1	97.0	0.39/ 0.37		

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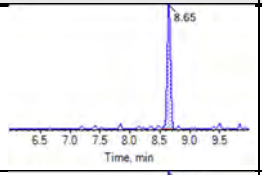
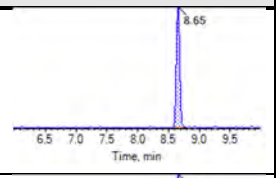
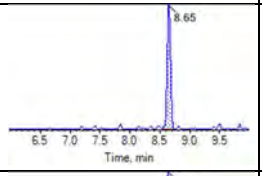
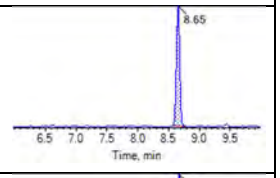
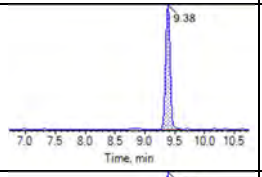
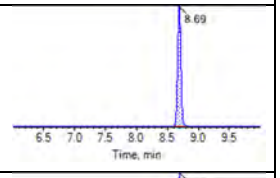
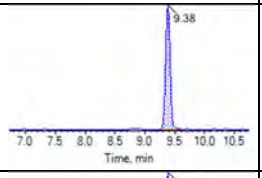
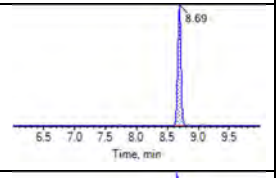
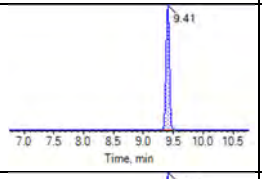
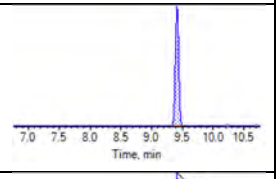
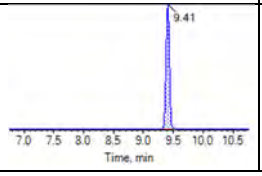
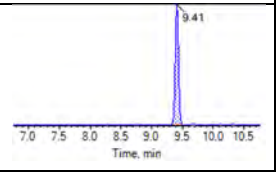
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.65 (8.72)	160000	13C2_6:2 FTS	39260	950.0	773.1	81.4	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.65 (8.72)	130700	13C2_6:2 FTS	39260	950.0	703.3	74.0	0.82/ 0.91		
PFHpS	449.0 / 80.0	8.69 (8.76)	1127000	13C8_PFOS	55450	950.0	1042.2	109.7	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.69 (8.76)	238100	13C8_PFOS	55450	950.0	1094.0	115.2	0.21/ 0.20		
PFNA	463.0 / 419.0	9.41 (9.47)	766900	13C9_PFNA	203600	1000.0	1120.6	112.1	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.41 (9.47)	193200	13C9_PFNA	203600	1000.0	1170.5	117.1	0.25/ 0.24		

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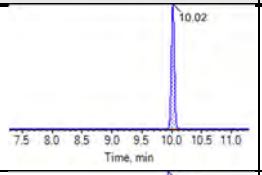
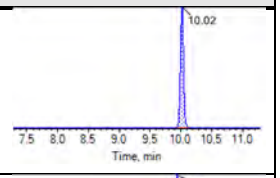
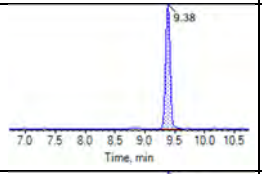
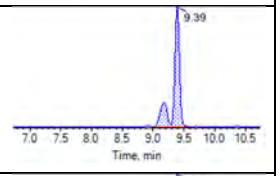
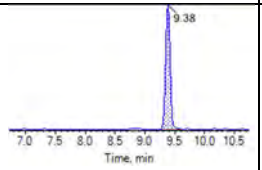
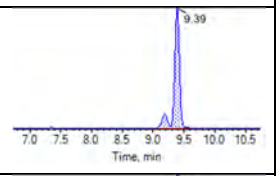
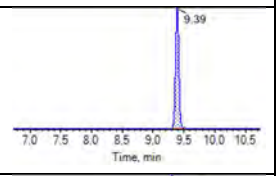
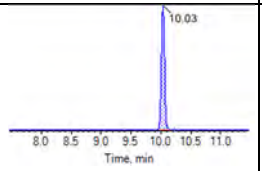
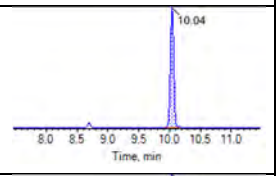
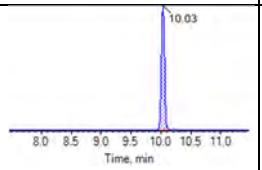
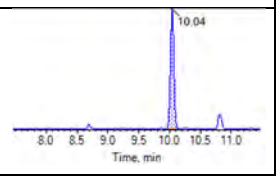
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1748000	13C8_PFOSA	483100	925.5	967.2	104.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	1027000	13C8_PFOS	55450	1000.0	1139.6	114.0	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	163000	13C8_PFOS	55450	1000.0	1224.9	122.5	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1574000	N/A	N/A	1000.0	938.6	93.9	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	786300	13C6_PFDA	131000	1000.0	1164.3	116.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	85320	13C6_PFDA	131000	1000.0	1008.7	100.9	0.11/ 0.13		

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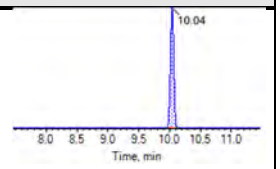
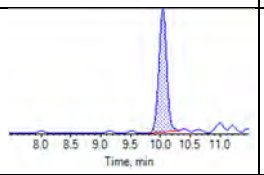
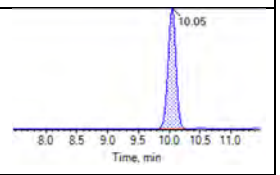
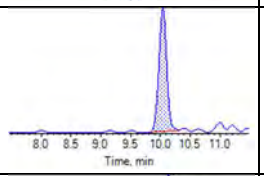
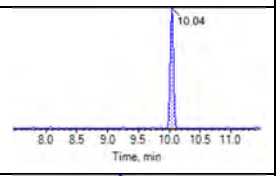
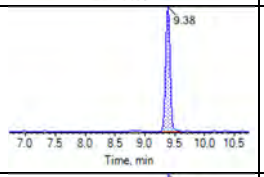
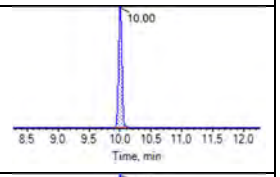
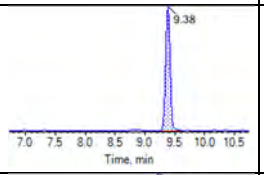
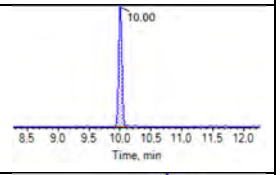
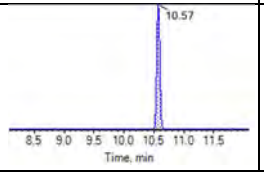
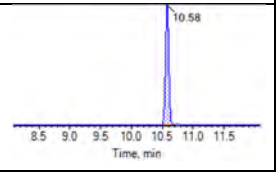
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1075000	N/A	N/A	1000.0	931.5	93.2	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	102200	13C2_8:2 FTS	16840	960.0	1177.5	122.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	98560	13C2_8:2 FTS	16840	960.0	1171.6	122.0	0.96/ 0.96		
PFNS	549.0 / 80.0	10.00 (10.49)	1030000	13C8_PFOS	55450	960.0	1176.8	122.6	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	195200	13C8_PFOS	55450	960.0	1224.2	127.5	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	634600	13C7_PFUdA	156000	1000.0	1142.5	114.2	1.00/ 1.00		

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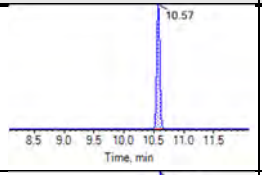
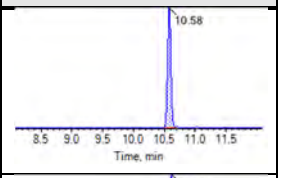
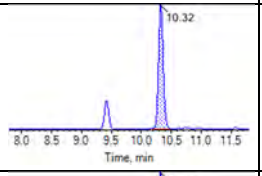
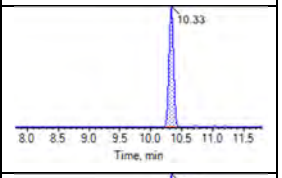
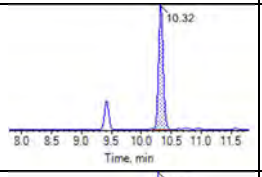
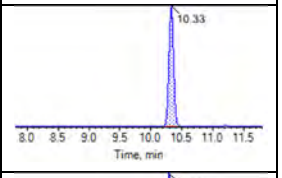
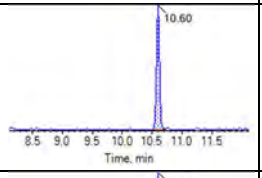
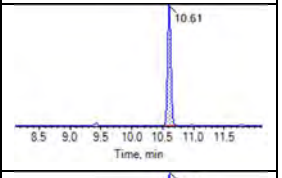
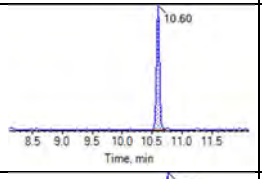
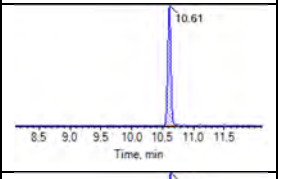
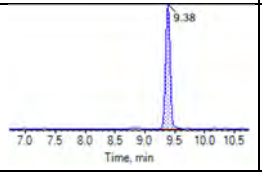
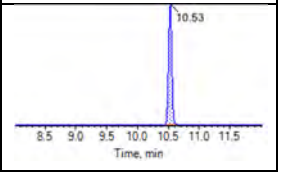
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.58 (10.62)	89020	13C7_PFUdA	156000	1000.0	1345.1	134.5	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	176700	d3-N-MeFOSAA	56010	1000.0	795.6	79.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	84090	d3-N-MeFOSAA	56010	1000.0	768.6	76.9	0.48/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	172200	d5-N-EtFOSAA	49740	1000.0	852.9	85.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.61 (10.64)	88910	d5-N-EtFOSAA	49740	1000.0	926.6	92.7	0.52/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1129000	13C8_PFOS	55450	965.0	1057.2	109.5	1.00/ 1.00		

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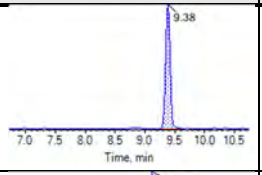
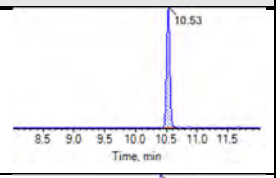
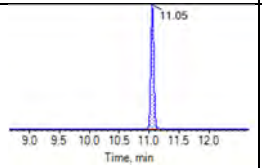
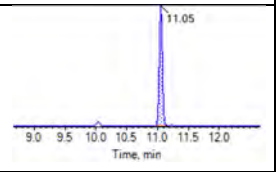
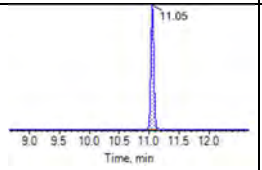
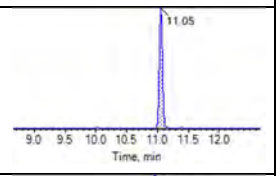
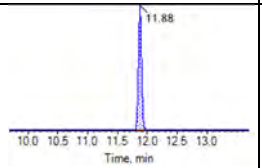
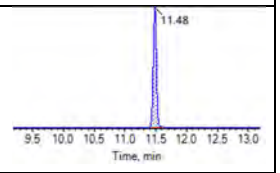
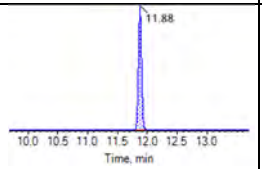
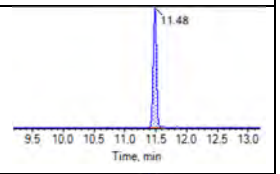
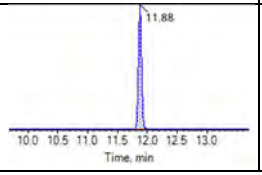
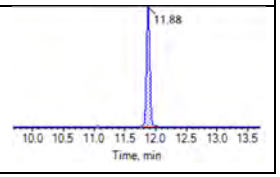
PFDS_2	599.0 / 99.0	10.53 (10.93)	306400	13C8_PFOS	55450	965.0	1077.4	111.6	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	629500	13C2_PFDoA	168600	1000.0	991.5	99.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	108600	13C2_PFDoA	168600	1000.0	1046.0	104.6	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	596200	13C2_PFTeDA	119900	1000.0	1011.2	101.1	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	142800	13C2_PFTeDA	119900	1000.0	1095.5	109.6	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.88 (11.91)	387600	13C2_PFTeDA	119900	1000.0	897.5	89.7	1.00/ 1.00		

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LCMSMS#6

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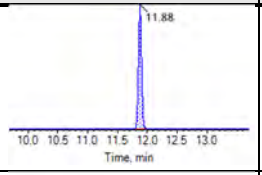
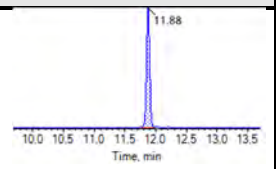
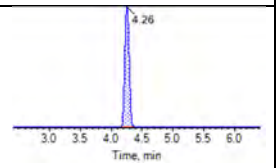
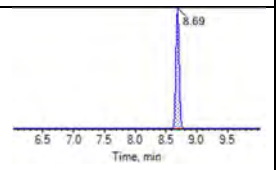
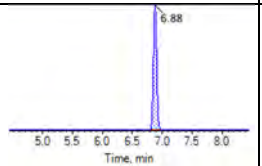
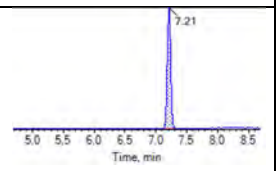
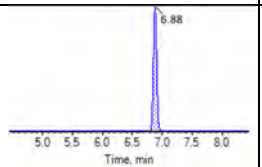
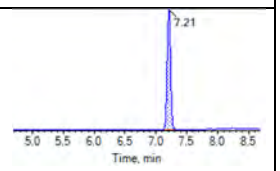
PFC103117110.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.88 (11.91)	95290	13C2_PFTeDA	119900	1000.0	1001.9	100.2	0.25/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1733000	N/A	N/A	1000.0	1001.6	100.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1247000	N/A	N/A	1000.0	1013.5	101.4	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	616800	13C5_PFHxA	274500	1000.0	903.4	90.3	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	465900	13C5_PFHxA	274500	1000.0	906.9	90.7	0.76/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 11:39

Data File: PFC103117121.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	887.467	88.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	835.057	83.5	
Perfluorotetradecanoic acid (PFTeDA)	1000	997.756	99.8	
Perfluorotridecanoic acid (PFTrDA)	1000	988.917	98.9	
Perfluorododecanoic acid (PFDoA)	1000	1074.002	107.4	
Perfluoroundecanoic acid (PFUdA)	1000	1099.226	109.9	
Perfluorononanoic acid (PFNA)	1000	987.906	98.8	
Perfluorodecanoic acid (PFDA)	1000	1089.382	108.9	
Perfluorooctanoic acid (PFOA)	1000	884.286	88.4	
Perfluoroheptanoic acid (PFHpA)	1000	980.47	98	
Perfluorooctanesulfonate (PFOS)	1000	1139.37	113.9	
Perfluorohexanoic acid (PFHxA)	1000	1126.515	112.7	
Perfluorohexanesulfonate (PFHxS)	912	830.145	91	
Perfluorobutanesulfonate (PFBS)	885	900.243	101.7	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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LCMSMS#6

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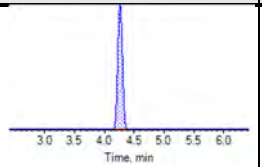
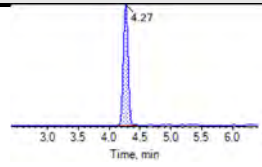
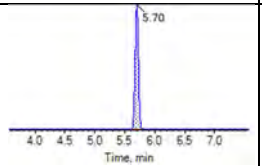
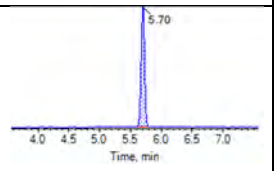
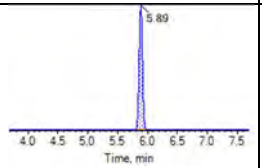
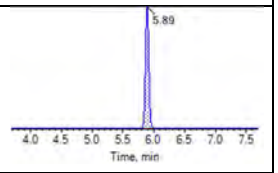
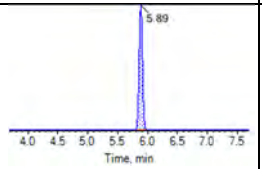
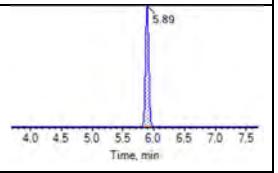
PFC103117121.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	43
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117121.wiff
Acquisition Date	11/2/2017 11:39:58	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117121.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.27 (4.25)	1055000	13C4_PFBA	143500	1000.0	1043.4	104.3	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	936500	13C5_PFPeA	216500	1000.0	1005.5	100.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	1267000	13C3_PFBS	142800	885.0	900.2	101.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	592300	13C3_PFBS	142800	885.0	937.6	105.9	0.47/ 0.45		

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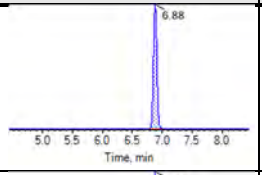
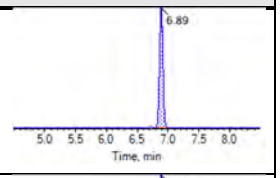
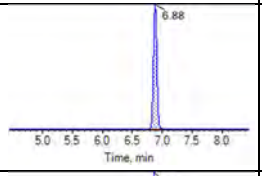
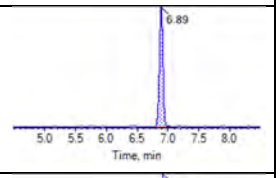
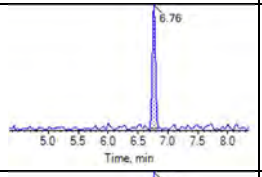
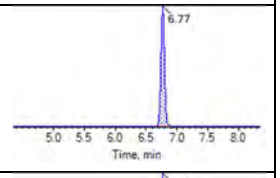
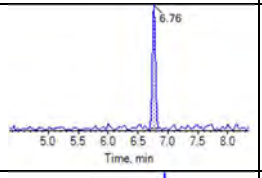
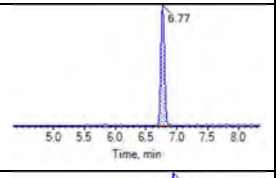
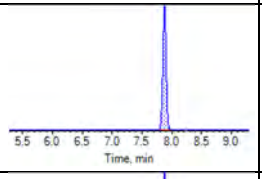
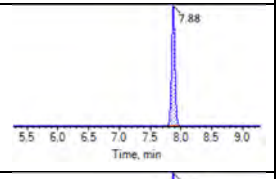
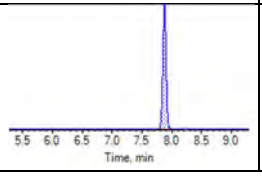
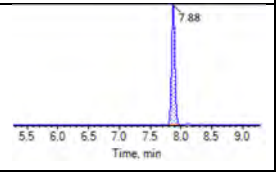
PFC103117121.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1130000	13C5_PFHxA	264200	1000.0	1126.5	112.7	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	90240	13C5_PFHxA	264200	1000.0	1272.8	127.3	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	155000	13C2_4:2 FTS	31330	935.0	826.5	88.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	113300	13C2_4:2 FTS	31330	935.0	841.1	90.0	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	952400	13C4_PFHpA	232200	1000.0	980.5	98.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	254800	13C4_PFHpA	232200	1000.0	1003.3	100.3	0.27/ 0.26		

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LCMSMS#6

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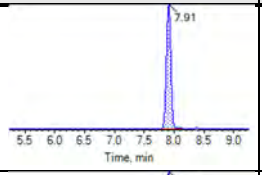
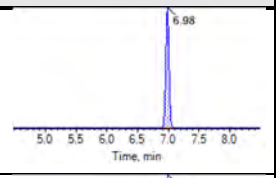
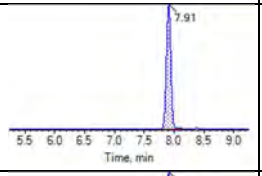
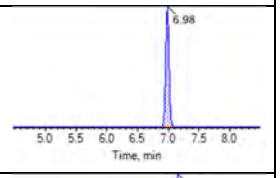
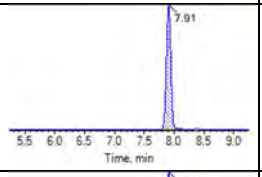
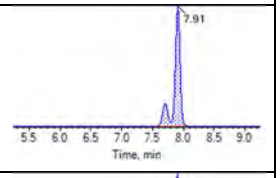
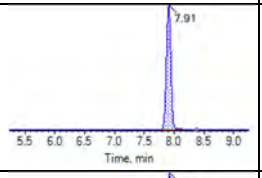
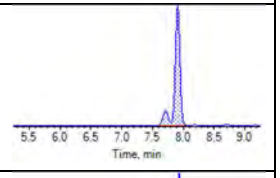
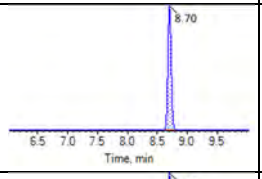
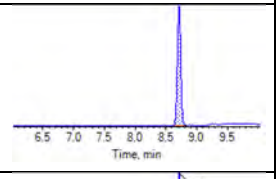
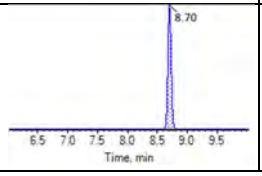
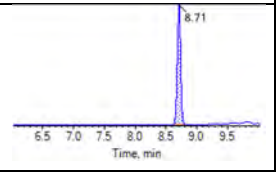
PFC103117121.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1486000	13C3_PFHxS	77900	940.0	911.2	96.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	564000	13C3_PFHxS	77900	940.0	989.8	105.3	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1247000	13C3_PFHxS	77900	912.0	830.1	91.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	348700	13C3_PFHxS	77900	912.0	918.9	100.8	0.28/ 0.25		
PFOA	413.0 / 369.0	8.71 (8.75)	879800	13C8_PFOA	235800	1000.0	884.3	88.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.71 (8.75)	355100	13C8_PFOA	235800	1000.0	956.6	95.7	0.40/ 0.37		

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LCMSMS#6

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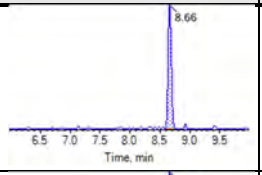
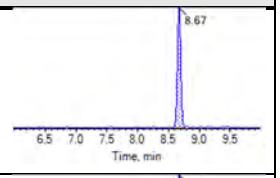
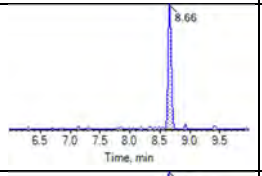
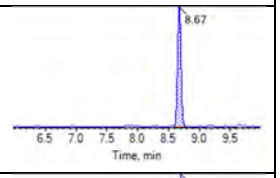
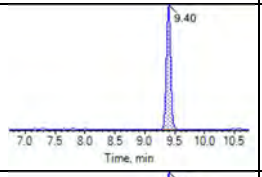
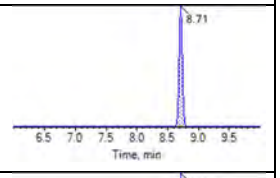
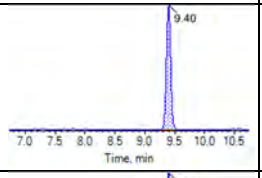
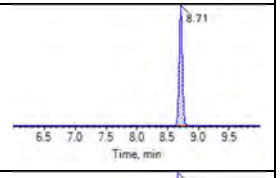
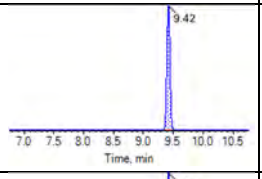
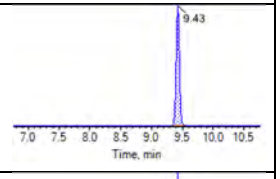
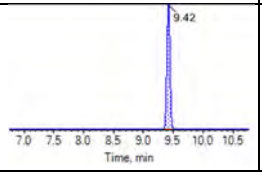
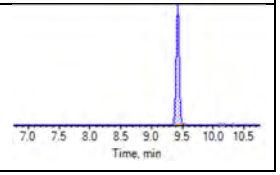
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	170200	13C2_6:2 FTS	36610	950.0	881.4	92.8	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.67 (8.72)	123500	13C2_6:2 FTS	36610	950.0	712.6	75.0	0.73/ 0.91		
PFHpS	449.0 / 80.0	8.71 (8.76)	1140000	13C8_PFOS	58180	950.0	1005.1	105.8	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.71 (8.76)	212800	13C8_PFOS	58180	950.0	932.1	98.1	0.19/ 0.20		
PFNA	463.0 / 419.0	9.43 (9.47)	754600	13C9_PFNA	227300	1000.0	987.9	98.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	206000	13C9_PFNA	227300	1000.0	1118.3	111.8	0.27/ 0.24		

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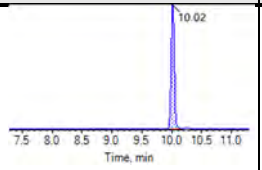
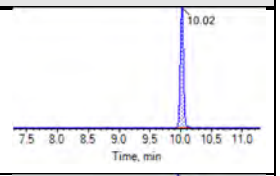
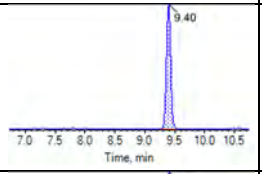
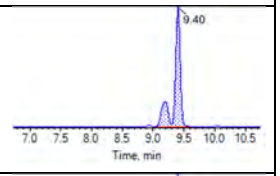
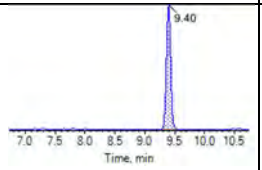
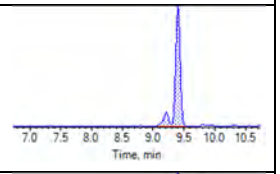
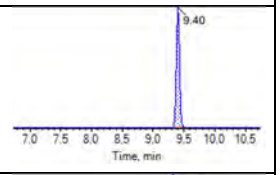
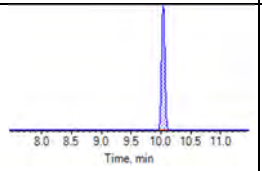
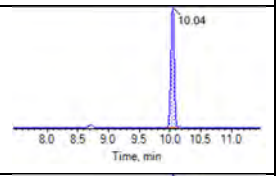
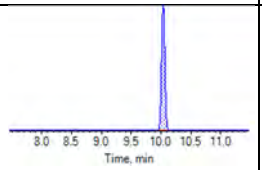
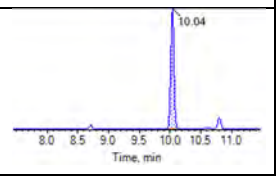
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1834000	13C8_PFOSA	482100	925.5	1016.9	109.9	1.00/ 1.00		
PFOS	499.0 / 80.0	9.40 (9.45)	1077000	13C8_PFOS	58180	1000.0	1139.4	113.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.40 (9.45)	156400	13C8_PFOS	58180	1000.0	1120.4	112.0	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1638000	N/A	N/A	1000.0	976.8	97.7	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	773300	13C6_PFDA	137700	1000.0	1089.4	108.9	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.04 (10.08)	102000	13C6_PFDA	137700	1000.0	1147.0	114.7	0.13/ 0.13		

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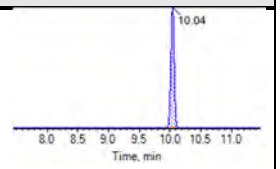
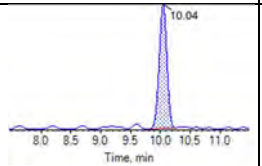
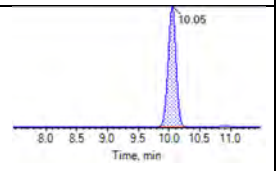
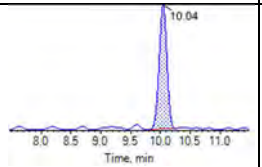
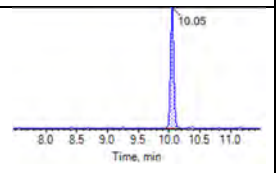
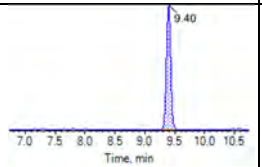
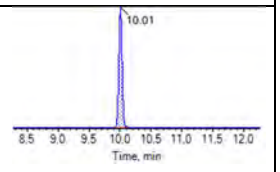
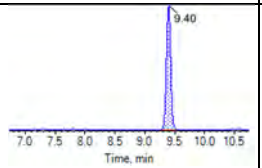
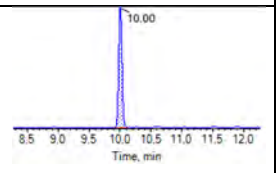
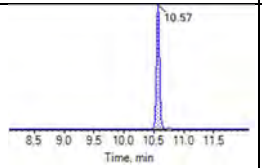
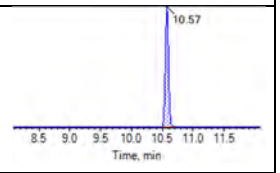
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1144000	N/A	N/A	1000.0	992.0	99.2	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.05 (10.09)	104600	13C2_8:2 FTS	21490	960.0	944.2	98.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.05 (10.09)	113000	13C2_8:2 FTS	21490	960.0	1052.5	109.6	1.08/ 0.96		
PFNS	549.0 / 80.0	10.01 (10.49)	1005000	13C8_PFOS	58180	960.0	1094.2	114.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	183400	13C8_PFOS	58180	960.0	1096.4	114.2	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.57 (10.62)	680800	13C7_PFUdA	173900	1000.0	1099.2	109.9	1.00/ 1.00		

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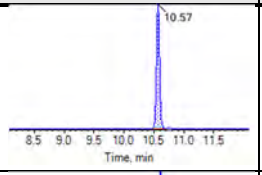
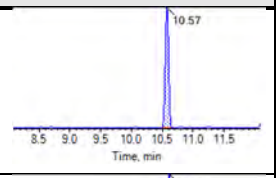
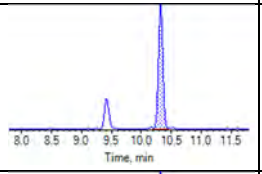
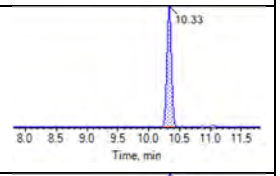
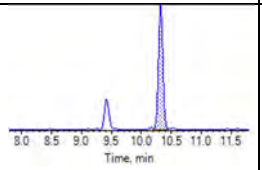
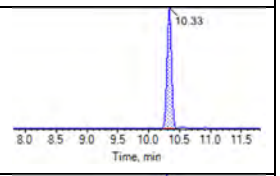
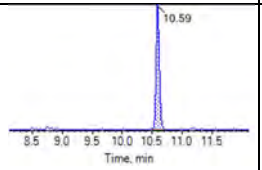
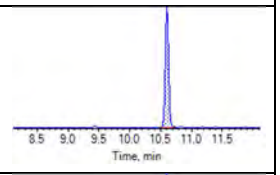
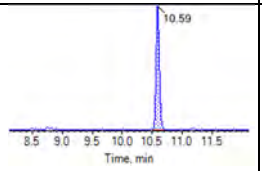
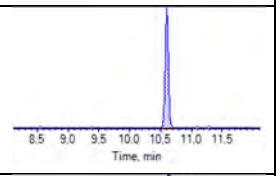
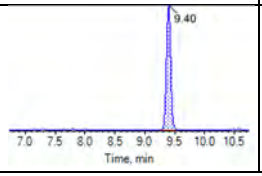
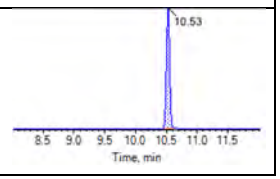
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.57 (10.62)	94320	13C7_PFUdA	173900	1000.0	1278.0	127.8	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	193800	d3-N-MeFOSAA	58520	1000.0	835.1	83.5	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	89490	d3-N-MeFOSAA	58520	1000.0	782.8	78.3	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.60 (10.64)	182400	d5-N-EtFOSAA	50640	1000.0	887.5	88.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	88100	d5-N-EtFOSAA	50640	1000.0	901.8	90.2	0.48/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1122000	13C8_PFOS	58180	965.0	1001.5	103.8	1.00/ 1.00		

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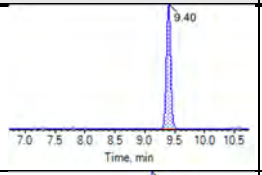
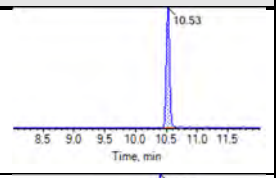
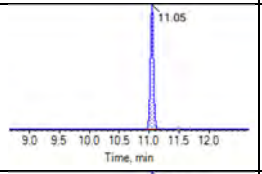
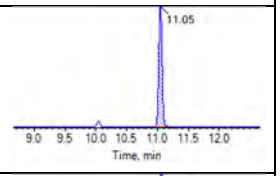
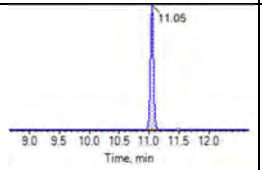
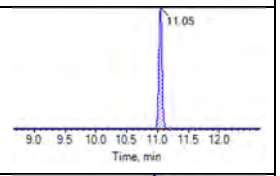
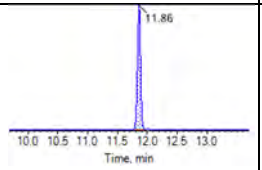
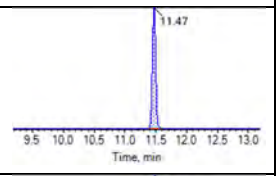
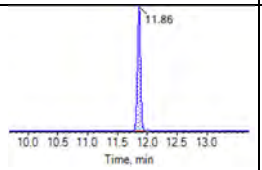
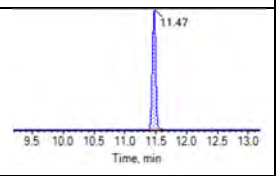
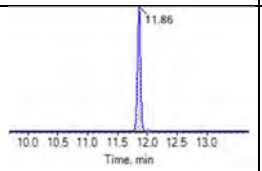
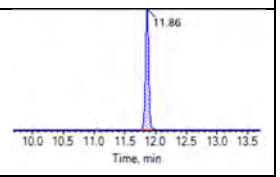
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	323400	13C8_PFOS	58180	965.0	1083.8	112.3	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	644600	13C2_PFDoA	159400	1000.0	1074.0	107.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	116500	13C2_PFDoA	159400	1000.0	1187.3	118.7	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	593800	13C2_PFTeDA	122100	1000.0	988.9	98.9	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	137500	13C2_PFTeDA	122100	1000.0	1035.9	103.6	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.86 (11.91)	438800	13C2_PFTeDA	122100	1000.0	997.8	99.8	1.00/ 1.00		

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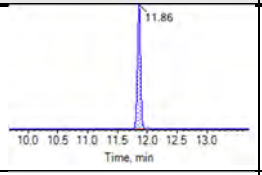
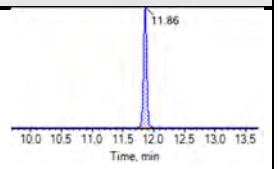
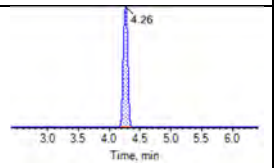
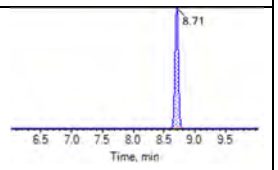
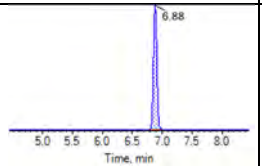
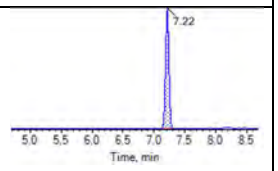
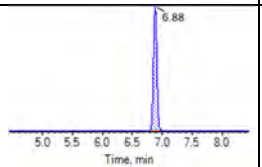
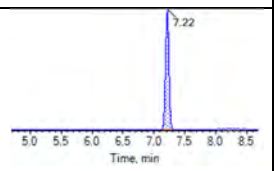
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.86 (11.91)	101800	13C2_PFTeDA	122100	1000.0	1050.6	105.1	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1721000	N/A	N/A	1000.0	995.1	99.5	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1205000	N/A	N/A	1000.0	979.0	97.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	646800	13C5_PFHxA	264200	1000.0	984.4	98.4	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	519800	13C5_PFHxA	264200	1000.0	1051.3	105.1	0.80/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 15:56

Data File: PFC103117133.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	805.904	80.6	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1018.473	101.8	
Perfluorotetradecanoic acid (PFTeDA)	1000	900.809	90.1	
Perfluorotridecanoic acid (PFTrDA)	1000	862.87	86.3	
Perfluoroundecanoic acid (PFUdA)	1000	1014.575	101.5	
Perfluorododecanoic acid (PFDoA)	1000	1064.592	106.5	
Perfluorodecanoic acid (PFDA)	1000	1173.7	117.4	
Perfluorononanoic acid (PFNA)	1000	1072.325	107.2	
Perfluorooctanoic acid (PFOA)	1000	1001.285	100.1	
Perfluoroheptanoic acid (PFHpA)	1000	1083.591	108.4	
Perfluorooctanesulfonate (PFOS)	1000	1000.173	100	
Perfluorohexanoic acid (PFHxA)	1000	958.913	95.9	
Perfluorohexanesulfonate (PFHxS)	912	922.592	101.2	
Perfluorobutanesulfonate (PFBS)	885	893.964	101	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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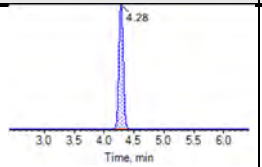
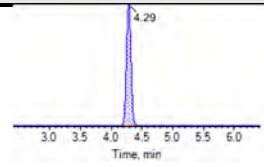
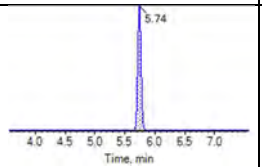
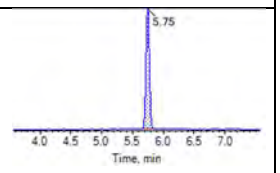
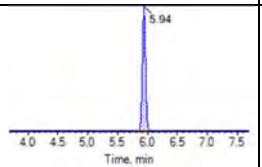
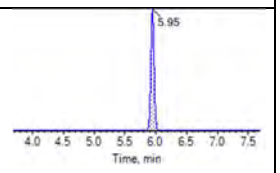
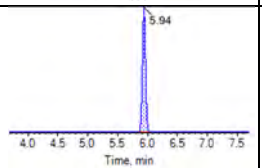
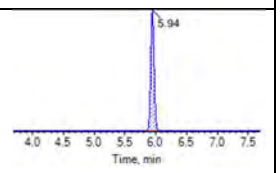
PFC103117133.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	11
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117133.wiff
Acquisition Date	11/2/2017 15:56:43	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117133.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	1172000	13C4_PFBA	152000	1000.0	1094.3	109.4	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.75 (5.69)	1023000	13C5_PFPeA	247100	1000.0	962.5	96.2	1.00/ 1.00		
PFBS	298.9 / 80.0	5.95 (5.89)	1423000	13C3_PFBS	161500	885.0	894.0	101.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.94 (5.89)	652400	13C3_PFBS	161500	885.0	912.8	103.1	0.46/ 0.45		

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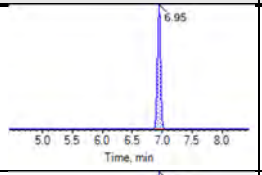
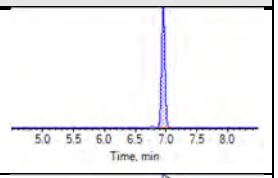
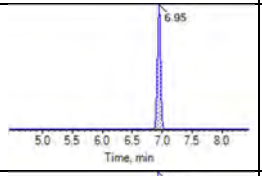
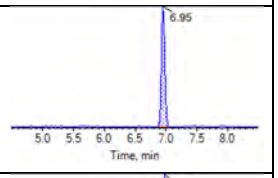
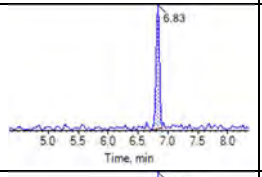
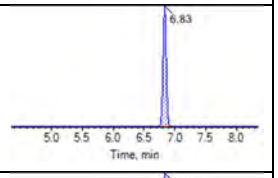
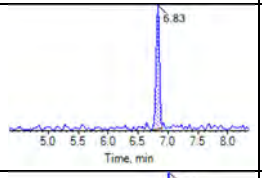
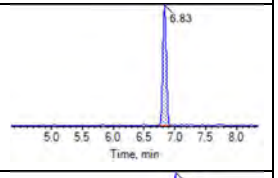
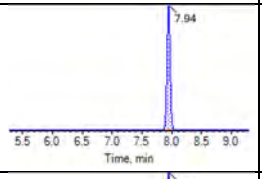
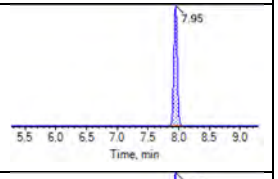
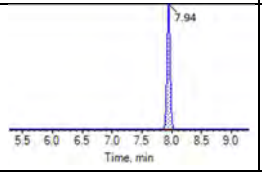
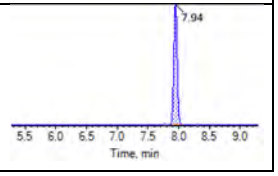
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.95 (6.92)	1157000	13C5_PFHxA	317700	1000.0	958.9	95.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.95 (6.92)	85120	13C5_PFHxA	317700	1000.0	998.3	99.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.83 (6.80)	164300	13C2_4:2 FTS	31300	935.0	876.9	93.8	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.83 (6.80)	125600	13C2_4:2 FTS	31300	935.0	932.9	99.8	0.76/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	1089000	13C4_PFHpA	240200	1000.0	1083.6	108.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.94 (7.93)	271900	13C4_PFHpA	240200	1000.0	1035.1	103.5	0.25/ 0.26		

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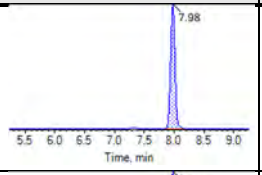
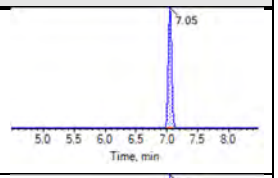
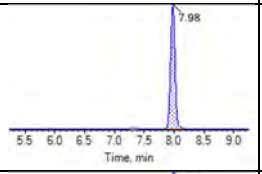
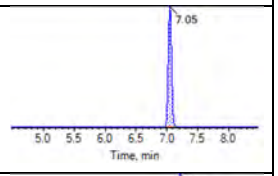
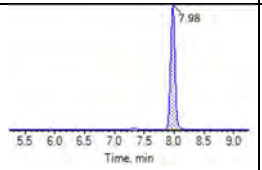
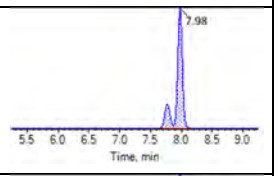
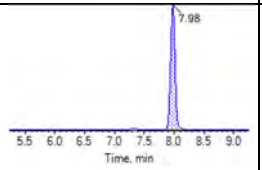
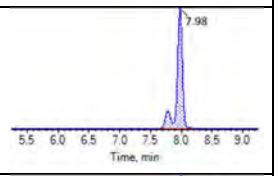
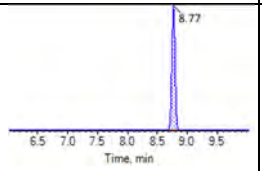
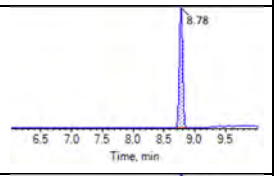
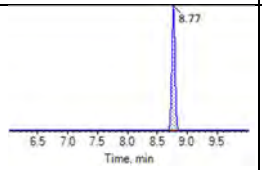
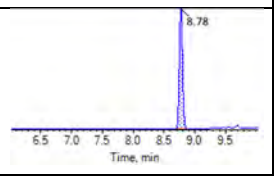
PFPeS	349.0 / 80.0	7.05 (7.02)	1677000	13C3_PFHxS	77070	940.0	1039.6	110.6	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.05 (7.02)	601500	13C3_PFHxS	77070	940.0	1067.0	113.5	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.98 (7.96)	1371000	13C3_PFHxS	77070	912.0	922.6	101.2	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.98 (7.96)	379900	13C3_PFHxS	77070	912.0	1012.0	111.0	0.28/ 0.25		
PFOA	413.0 / 369.0	8.78 (8.75)	1021000	13C8_PFOA	241600	1000.0	1001.3	100.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.78 (8.75)	386700	13C8_PFOA	241600	1000.0	1016.6	101.7	0.38/ 0.37		

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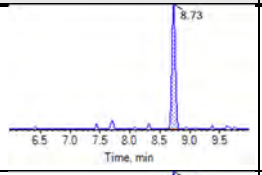
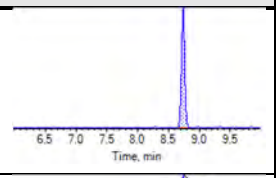
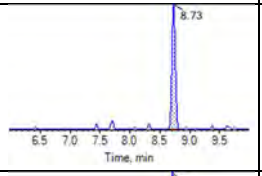
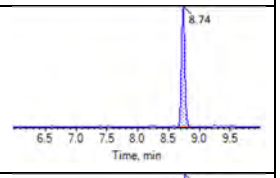
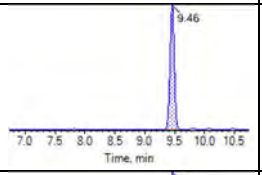
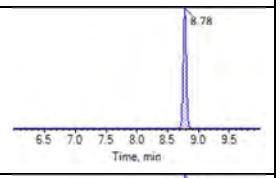
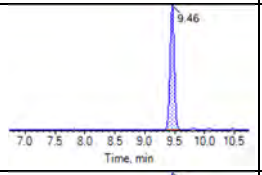
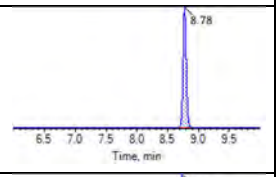
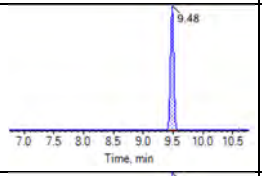
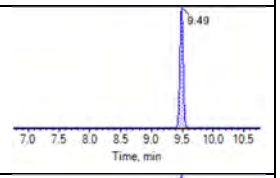
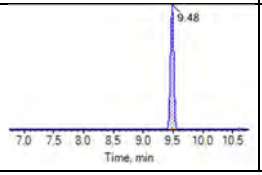
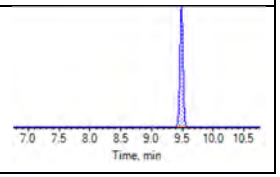
6:2 FTS	427.0 / 407.0	8.74 (8.72)	174300	13C2_6:2 FTS	35600	950.0	928.2	97.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.74 (8.72)	152200	13C2_6:2 FTS	35600	950.0	902.6	95.0	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.78 (8.76)	1268000	13C8_PFOS	69820	950.0	931.6	98.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.78 (8.76)	264400	13C8_PFOS	69820	950.0	964.7	101.5	0.21/ 0.20		
PFNA	463.0 / 419.0	9.49 (9.47)	910600	13C9_PFNA	252700	1000.0	1072.3	107.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	209700	13C9_PFNA	252700	1000.0	1024.1	102.4	0.23/ 0.24		

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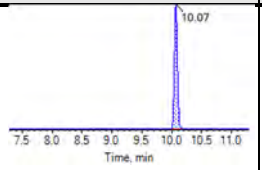
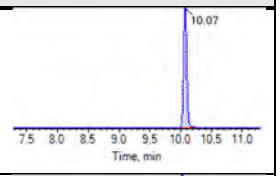
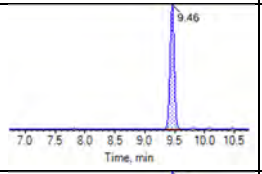
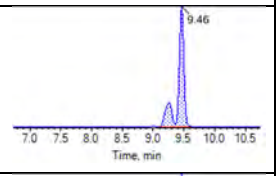
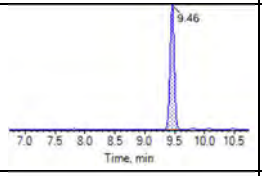
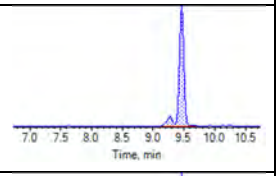
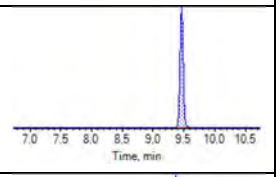
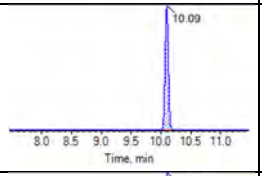
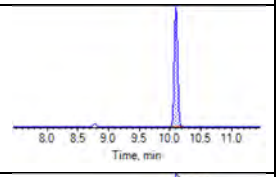
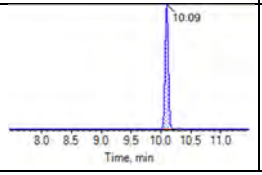
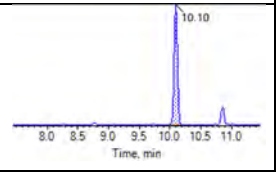
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.07 (10.04)	2017000	13C8_PFOSA	580300	925.5	929.1	100.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1134000	13C8_PFOS	69820	1000.0	1000.2	100.0	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	166700	13C8_PFOS	69820	1000.0	995.1	99.5	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1718000	N/A	N/A	1000.0	1024.5	102.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	875000	13C6_PFDA	144600	1000.0	1173.7	117.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	104500	13C6_PFDA	144600	1000.0	1119.1	111.9	0.12/ 0.13		

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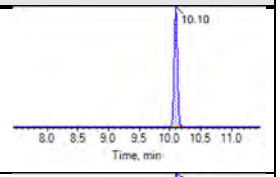
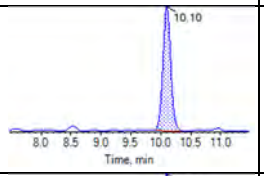
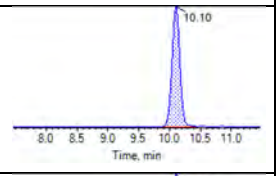
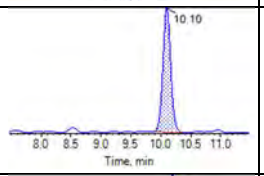
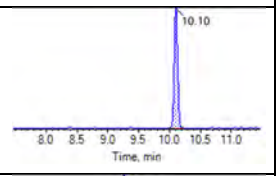
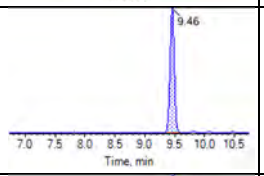
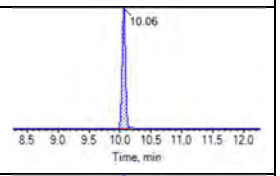
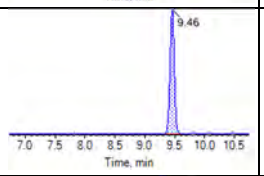
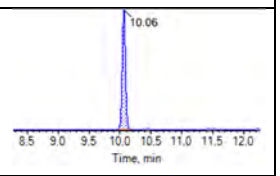
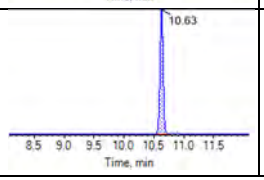
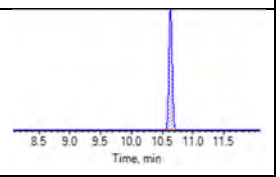
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1145000	N/A	N/A	1000.0	992.8	99.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.10 (10.09)	102200	13C2_8:2 FTS	26730	960.0	741.5	77.2	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	103400	13C2_8:2 FTS	26730	960.0	774.4	80.7	1.01/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1139000	13C8_PFOS	69820	960.0	1033.3	107.6	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	224100	13C8_PFOS	69820	960.0	1116.4	116.3	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.63 (10.62)	700000	13C7_PFUdA	193700	1000.0	1014.6	101.5	1.00/ 1.00		

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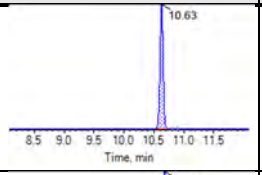
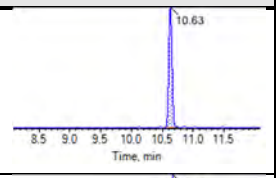
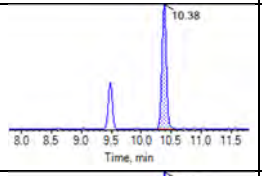
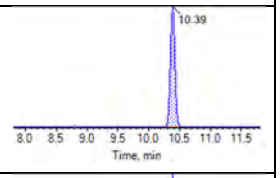
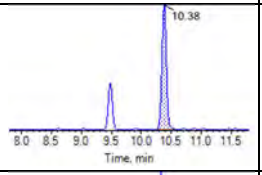
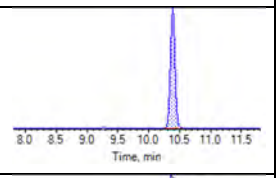
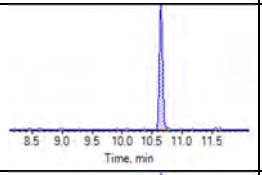
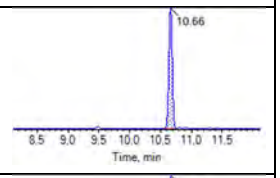
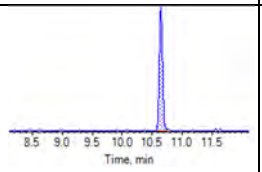
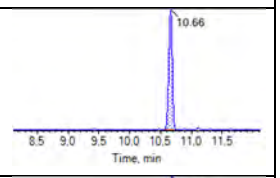
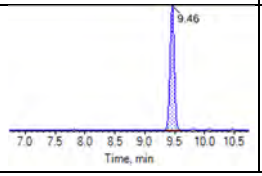
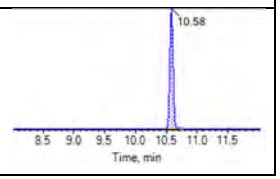
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	112500	13C7_PFUdA	193700	1000.0	1368.6	136.9	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	202200	d3-N-MeFOSAA	50070	1000.0	1018.5	101.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	108700	d3-N-MeFOSAA	50070	1000.0	1111.7	111.2	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	184300	d5-N-EtFOSAA	56350	1000.0	805.9	80.6	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	94650	d5-N-EtFOSAA	56350	1000.0	870.7	87.1	0.51/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	1239000	13C8_PFOS	69820	965.0	922.0	95.5	1.00/ 1.00		

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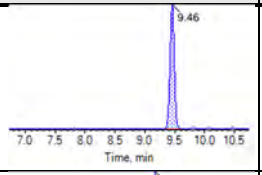
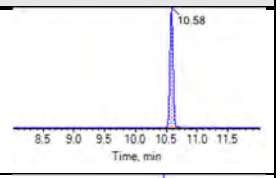
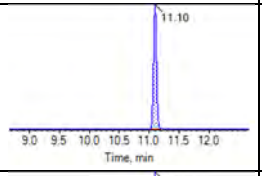
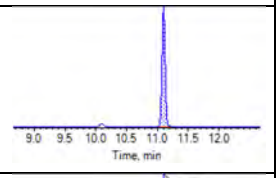
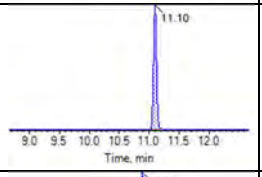
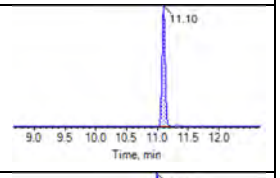
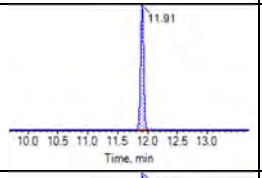
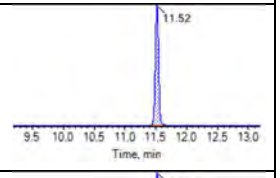
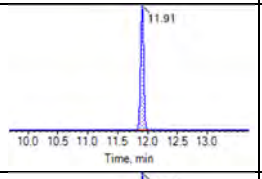
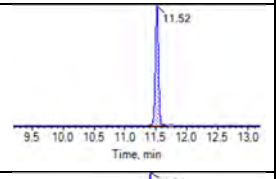
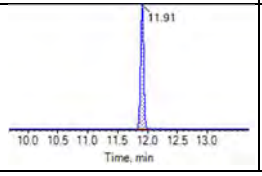
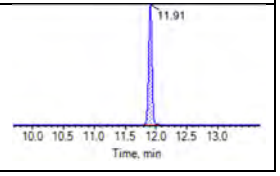
PFDS_2	599.0 / 99.0	10.58 (10.93)	339800	13C8_PFOS	69820	965.0	949.0	98.3	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	707600	13C2_PFDoA	176500	1000.0	1064.6	106.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	122000	13C2_PFDoA	176500	1000.0	1123.0	112.3	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	577300	13C2_PFTeDA	136100	1000.0	862.9	86.3	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	140400	13C2_PFTeDA	136100	1000.0	949.2	94.9	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.91 (11.91)	441500	13C2_PFTeDA	136100	1000.0	900.8	90.1	1.00/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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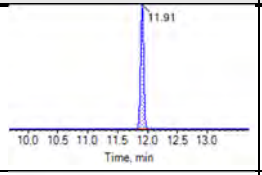
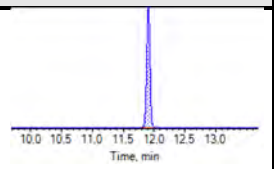
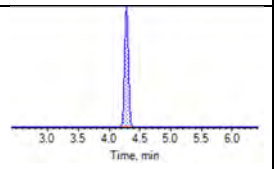
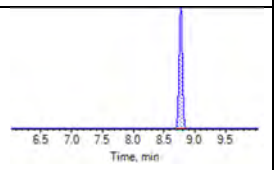
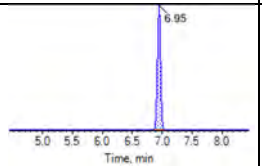
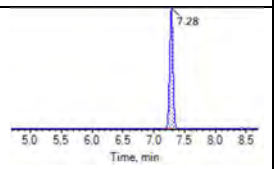
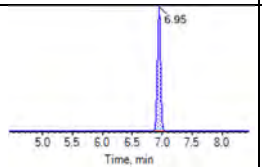
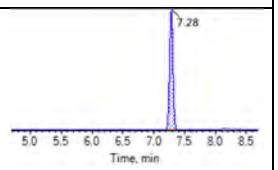
PFC103117133.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.91 (11.91)	97680	13C2_PFTeDA	136100	1000.0	905.1	90.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1812000	N/A	N/A	1000.0	1047.2	104.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1229000	N/A	N/A	1000.0	998.6	99.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.28 (7.26)	719000	13C5_PFHxA	317700	1000.0	910.0	91.0	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.28 (7.26)	572700	13C5_PFHxA	317700	1000.0	963.2	96.3	0.80/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Client SDG: 436518

Injection Date: 02-NOV-17 19:52

Data File: PFC103117144.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	821.574	82.2	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1106.091	110.6	
Perfluorotetradecanoic acid (PFTeDA)	1000	965.919	96.6	
Perfluorotridecanoic acid (PFTrDA)	1000	1043.085	104.3	
Perfluorododecanoic acid (PFDoA)	1000	976.664	97.7	
Perfluoroundecanoic acid (PFUdA)	1000	1056.532	105.7	
Perfluorodecanoic acid (PFDA)	1000	1244.794	124.5	
Perfluorononanoic acid (PFNA)	1000	999.07	99.9	
Perfluorooctanoic acid (PFOA)	1000	967.795	96.8	
Perfluoroheptanoic acid (PFHpA)	1000	959.049	95.9	
Perfluorooctanesulfonate (PFOS)	1000	1028.657	102.9	
Perfluorohexanoic acid (PFHxA)	1000	994.436	99.4	
Perfluorohexanesulfonate (PFHxS)	912	916.207	100.5	
Perfluorobutanesulfonate (PFBS)	885	755.958	85.4	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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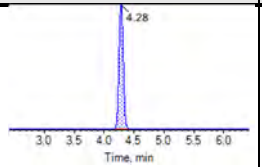
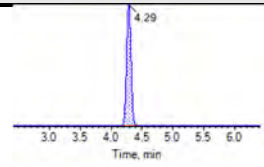
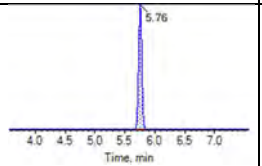
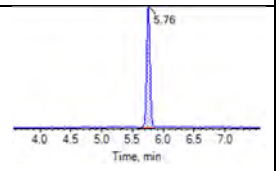
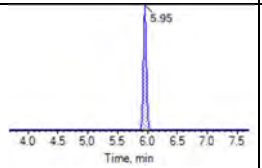
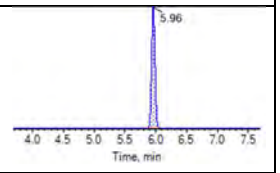
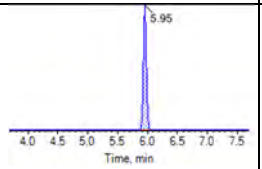
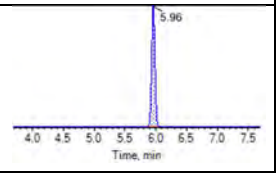
PFC103117144.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	11
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117144.wiff
Acquisition Date	11/2/2017 19:52:05	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117144.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	1104000	13C4_PFBA	154900	1000.0	1011.5	101.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.76 (5.69)	995700	13C5_PFPeA	232700	1000.0	994.6	99.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.96 (5.89)	1354000	13C3_PFBS	181700	885.0	756.0	85.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.96 (5.89)	640100	13C3_PFBS	181700	885.0	796.1	90.0	0.47/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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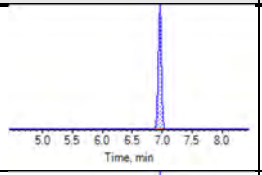
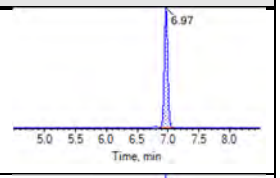
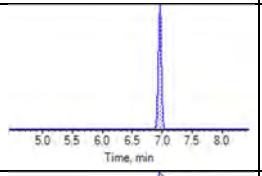
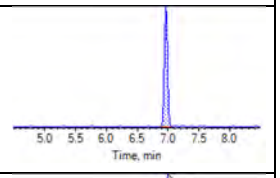
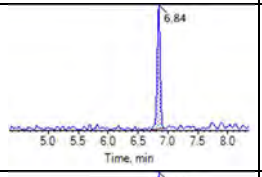
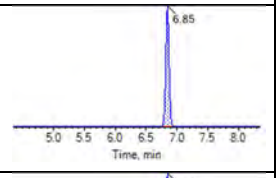
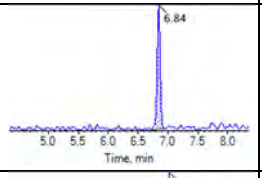
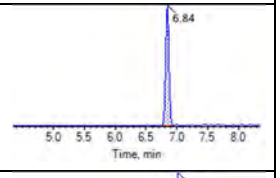
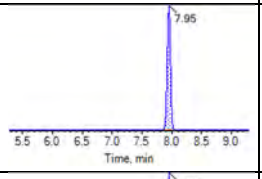
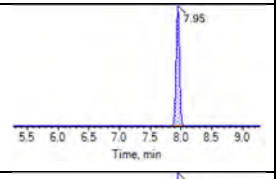
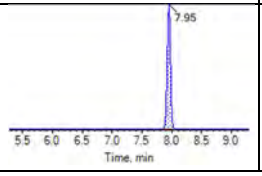
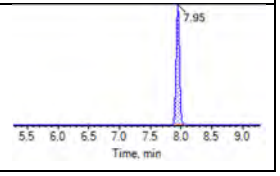
PFC103117144.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.97 (6.92)	1120000	13C5_PFHxA	296600	1000.0	994.4	99.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.96 (6.92)	89310	13C5_PFHxA	296600	1000.0	1121.9	112.2	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.85 (6.80)	156900	13C2_4:2 FTS	31920	935.0	821.1	87.8	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.84 (6.80)	122300	13C2_4:2 FTS	31920	935.0	890.9	95.3	0.78/ 0.72		
PFHpA	363.0 / 319.0	7.95 (7.93)	1042000	13C4_PFHpA	259800	1000.0	959.0	95.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.95 (7.93)	264000	13C4_PFHpA	259800	1000.0	929.2	92.9	0.25/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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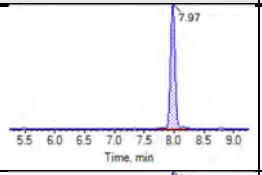
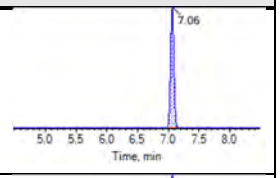
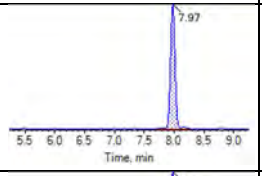
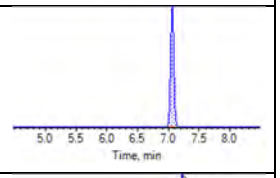
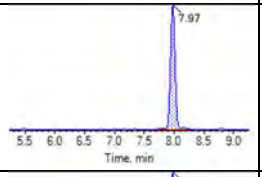
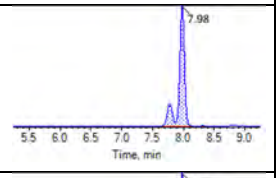
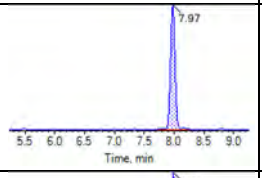
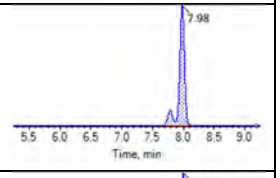
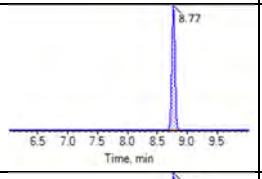
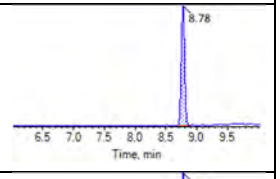
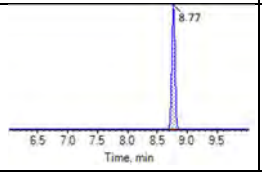
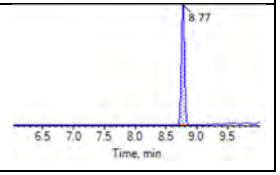
PFC103117144.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.06 (7.02)	1595000	13C3_PFHxS	73570	940.0	1035.5	110.2	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.06 (7.02)	555500	13C3_PFHxS	73570	940.0	1032.2	109.8	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.98 (7.96)	1300000	13C3_PFHxS	73570	912.0	916.2	100.5	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.98 (7.96)	348300	13C3_PFHxS	73570	912.0	972.0	106.6	0.27/ 0.25		
PFOA	413.0 / 369.0	8.78 (8.75)	978100	13C8_PFOA	239500	1000.0	967.8	96.8	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	378000	13C8_PFOA	239500	1000.0	1002.3	100.2	0.39/ 0.37		

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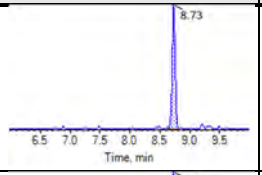
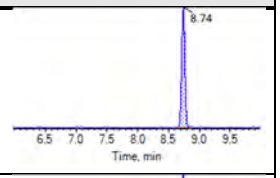
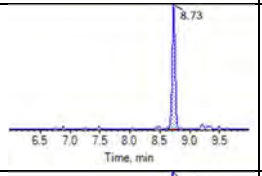
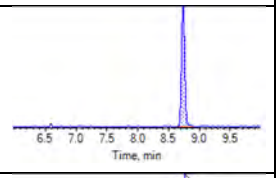
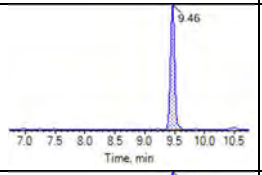
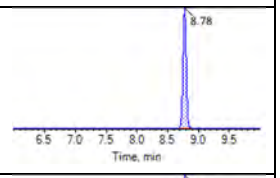
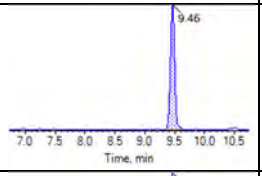
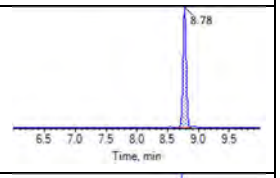
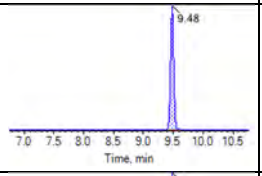
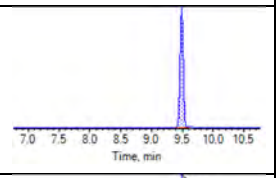
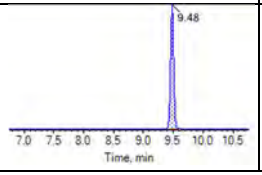
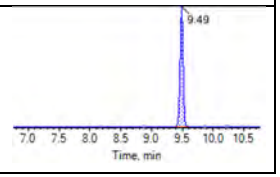
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.74 (8.72)	167300	13C2_6:2 FTS	37110	950.0	855.0	90.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	154800	13C2_6:2 FTS	37110	950.0	880.7	92.7	0.93/ 0.91		
PFHpS	449.0 / 80.0	8.78 (8.76)	1152000	13C8_PFOS	63860	950.0	925.3	97.4	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.78 (8.76)	239100	13C8_PFOS	63860	950.0	953.9	100.4	0.21/ 0.20		
PFNA	463.0 / 419.0	9.49 (9.47)	813800	13C9_PFNA	242400	1000.0	999.1	99.9	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	202900	13C9_PFNA	242400	1000.0	1033.2	103.3	0.25/ 0.24		

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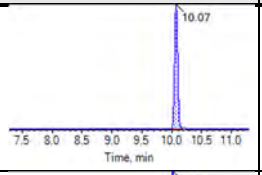
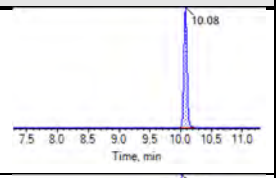
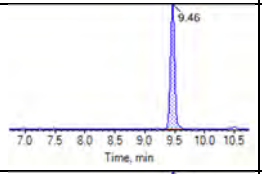
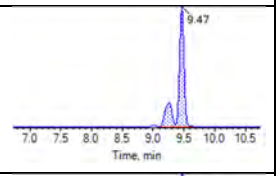
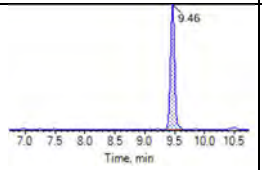
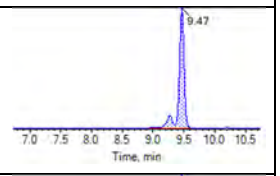
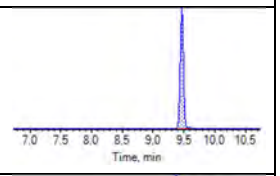
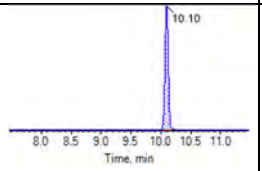
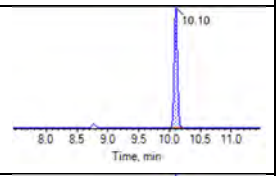
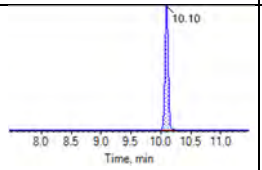
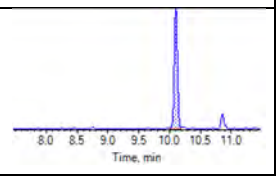
PFOSA	498.0 / 78.0	10.08 (10.04)	1830000	13C8_PFOSA	493800	925.5	990.3	107.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.47 (9.45)	1067000	13C8_PFOS	63860	1000.0	1028.7	102.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.47 (9.45)	159100	13C8_PFOS	63860	1000.0	1038.0	103.8	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.47 (9.45)	1641000	N/A	N/A	1000.0	978.6	97.9	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	783600	13C6_PFDA	122100	1000.0	1244.8	124.5	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	98950	13C6_PFDA	122100	1000.0	1255.0	125.5	0.13/ 0.13		

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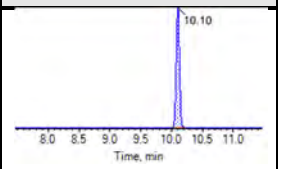
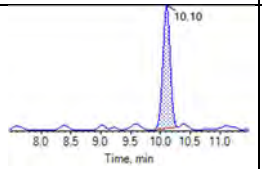
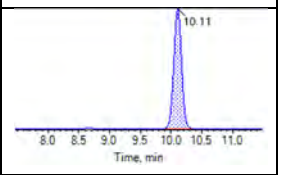
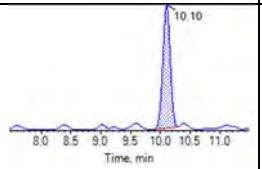
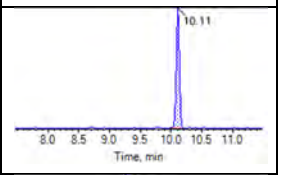
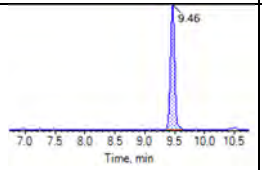
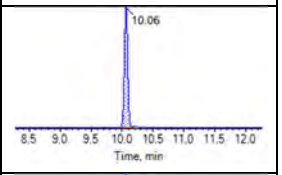
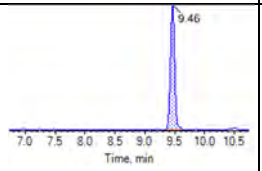
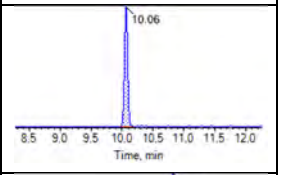
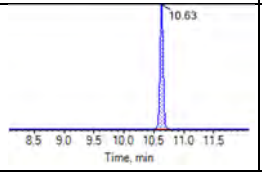
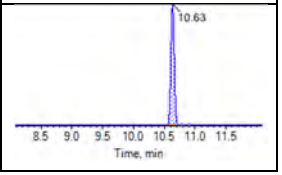
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1066000	N/A	N/A	1000.0	923.7	92.4	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	104300	13C2_8:2 FTS	25840	960.0	782.8	81.5	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	107900	13C2_8:2 FTS	25840	960.0	836.3	87.1	1.04/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1014000	13C8_PFOS	63860	960.0	1005.7	104.8	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	204500	13C8_PFOS	63860	960.0	1113.7	116.0	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.63 (10.62)	705800	13C7_PFUdA	187600	1000.0	1056.5	105.7	1.00/ 1.00		

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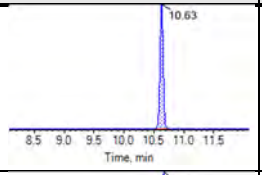
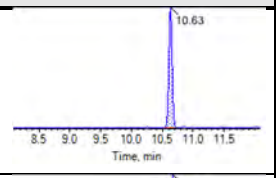
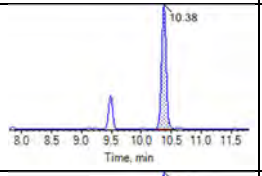
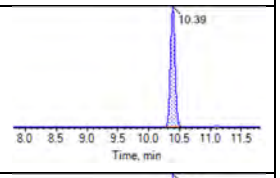
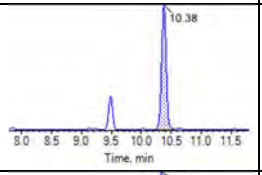
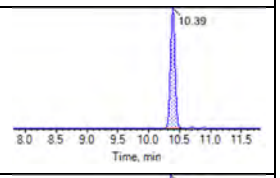
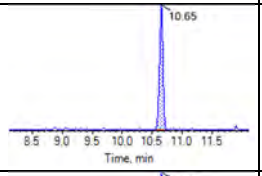
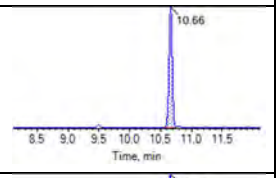
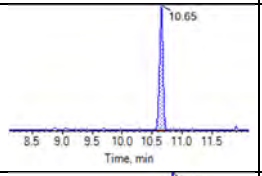
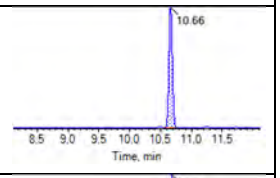
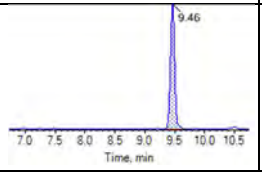
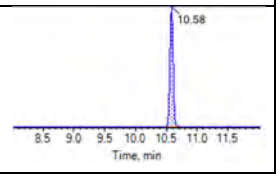
PFC103117144.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.63 (10.62)	91040	13C7_PFUdA	187600	1000.0	1143.7	114.4	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	208000	d3-N-MeFOSAA	47410	1000.0	1106.1	110.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	93190	d3-N-MeFOSAA	47410	1000.0	1006.2	100.6	0.45/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	175900	d5-N-EtFOSAA	52740	1000.0	821.6	82.2	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	94460	d5-N-EtFOSAA	52740	1000.0	928.3	92.8	0.54/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	1139000	13C8_PFOS	63860	965.0	926.3	96.0	1.00/ 1.00		

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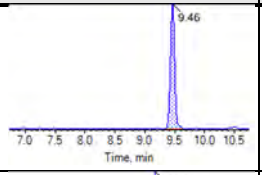
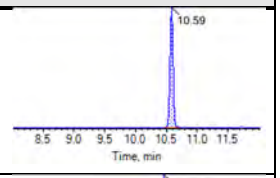
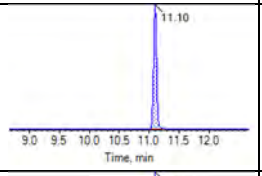
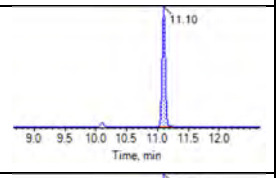
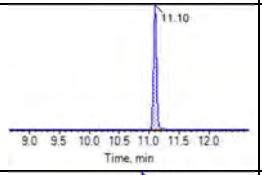
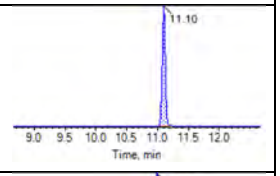
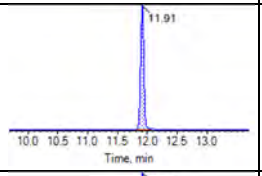
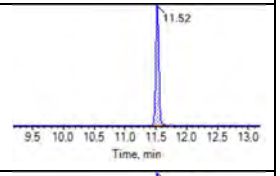
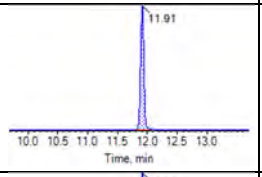
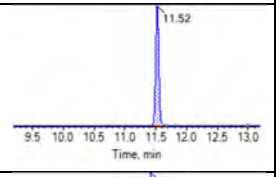
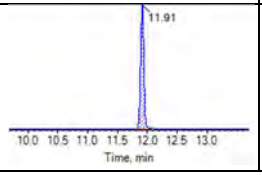
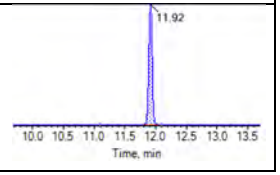
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.59 (10.93)	320500	13C8_PFOS	63860	965.0	978.6	101.4	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	686200	13C2_PFDoA	186600	1000.0	976.7	97.7	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	114700	13C2_PFDoA	186600	1000.0	998.8	99.9	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	621800	13C2_PFTeDA	121200	1000.0	1043.1	104.3	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	143900	13C2_PFTeDA	121200	1000.0	1091.7	109.2	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	421800	13C2_PFTeDA	121200	1000.0	965.9	96.6	1.00/ 1.00		

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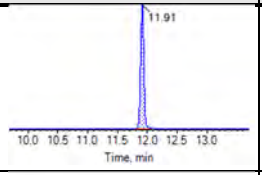
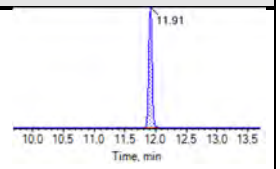
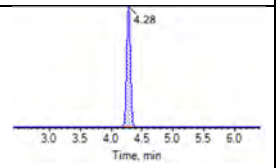
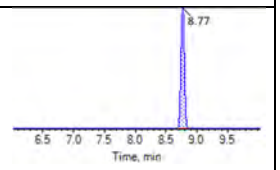
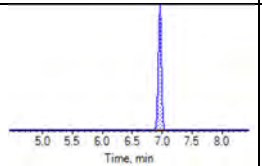
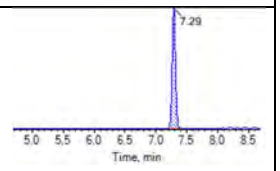
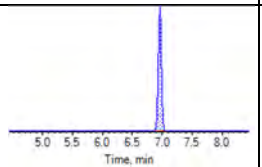
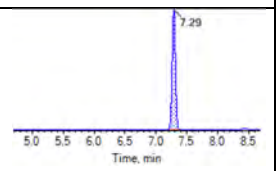
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.91 (11.91)	97830	13C2_PFTeDA	121200	1000.0	1017.4	101.7	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1739000	N/A	N/A	1000.0	1005.3	100.5	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1176000	N/A	N/A	1000.0	955.6	95.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.29 (7.26)	676200	13C5_PFHxA	296600	1000.0	916.5	91.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.29 (7.26)	539000	13C5_PFHxA	296600	1000.0	970.9	97.1	0.80/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Client SDG: 436518

Injection Date: 03-NOV-17 09:46

Data File: PFC103117161.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-08

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	100	98.708	98.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	94.21	94.2	
Perfluorotetradecanoic acid (PFTeDA)	100	88.749	88.7	
Perfluorotridecanoic acid (PFTrDA)	100	89.73	89.7	
Perfluorododecanoic acid (PFDoA)	100	103.189	103.2	
Perfluoroundecanoic acid (PFUdA)	100	129.736	129.7	
Perfluorodecanoic acid (PFDA)	100	109.851	109.9	
Perfluorononanoic acid (PFNA)	100	99.588	99.6	
Perfluorooctanoic acid (PFOA)	100	90.354	90.4	
Perfluorooctanesulfonate (PFOS)	100	91.146	91.1	
Perfluoroheptanoic acid (PFHpA)	100	94.438	94.4	
Perfluorohexanoic acid (PFHxA)	100	95.066	95.1	
Perfluorohexanesulfonate (PFHxS)	91.2	82.067	90	
Perfluorobutanesulfonate (PFBS)	88.5	86.448	97.7	

Recovery criteria is 70% - 130%

JISB
11/06/2017

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LCMSMS#6

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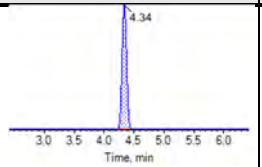
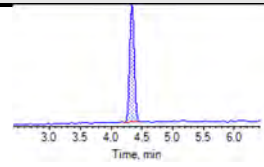
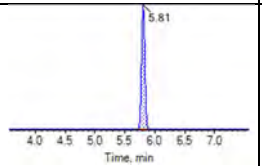
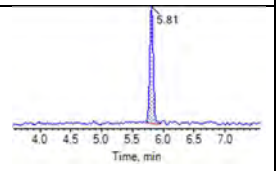
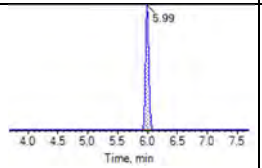
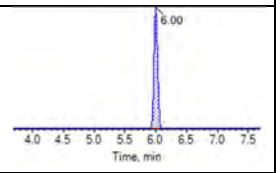
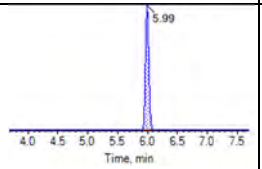
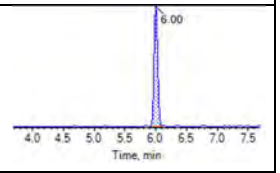
PFC103117161.wiff			
Sample Name	WPF171018-08DISC	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117161.wiff
Acquisition Date	11/3/2017 09:46:46	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117161.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.34 (4.25)	117600	13C4_PFBA	174600	100.0	95.6	95.6	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.81 (5.69)	117500	13C5_PFPeA	275900	100.0	99.0	99.0	1.00/ 1.00		
PFBS	298.9 / 80.0	6.00 (5.89)	163500	13C3_PFBS	191900	88.5	86.4	97.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	6.00 (5.89)	67040	13C3_PFBS	191900	88.5	79.0	89.2	0.41/ 0.45		

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LCMSMS#6

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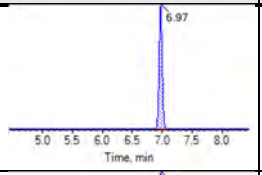
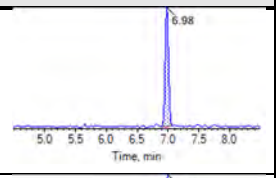
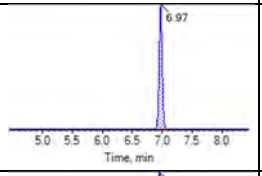
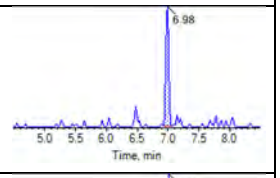
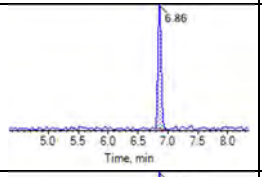
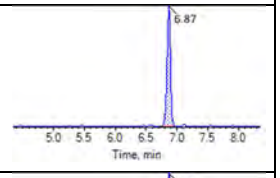
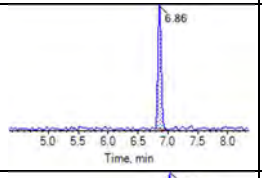
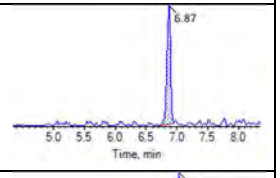
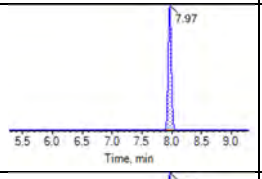
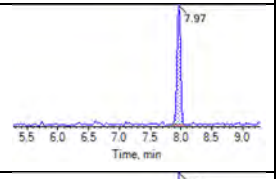
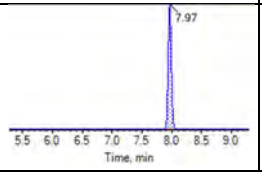
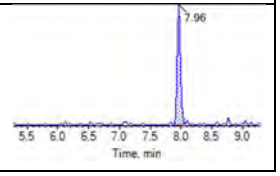
PFC103117161.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.98 (6.92)	127200	13C5_PFHxA	352600	100.0	95.1	95.1	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.98 (6.92)	10450	13C5_PFHxA	352600	100.0	110.4	110.4	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.87 (6.80)	25230	13C2_4:2 FTS	51870	93.5	81.3	86.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.87 (6.80)	23320	13C2_4:2 FTS	51870	93.5	104.5	111.8	0.92/ 0.72		
PFHpA	363.0 / 319.0	7.97 (7.93)	123700	13C4_PFHpA	313200	100.0	94.4	94.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.96 (7.93)	34250	13C4_PFHpA	313200	100.0	100.0	100.0	0.28/ 0.26		

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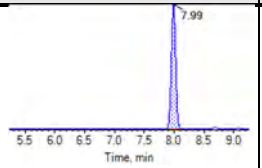
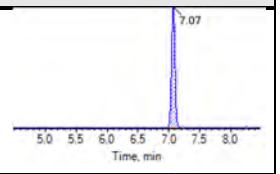
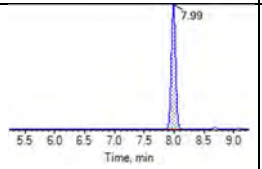
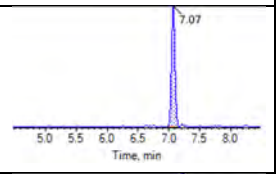
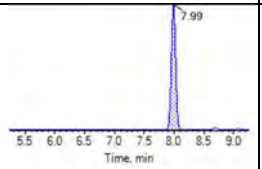
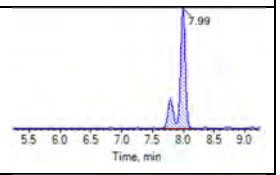
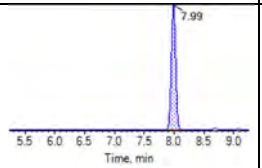
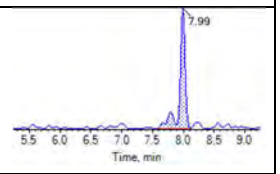
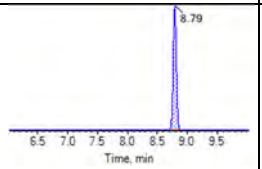
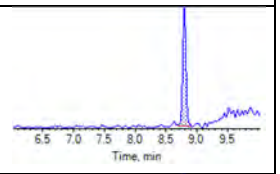
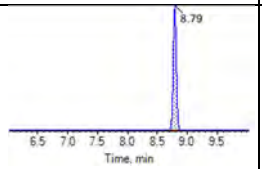
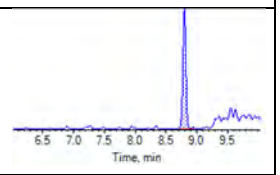
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.07 (7.02)	171400	13C3_PFHxS	94650	94.0	86.5	92.0	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.07 (7.02)	62590	13C3_PFHxS	94650	94.0	90.4	96.2	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.99 (7.96)	149800	13C3_PFHxS	94650	91.2	82.1	90.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.99 (7.96)	41300	13C3_PFHxS	94650	91.2	89.6	98.2	0.28/ 0.25		
PFOA	413.0 / 369.0	8.80 (8.75)	96540	13C8_PFOA	253200	100.0	90.4	90.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.80 (8.75)	42030	13C8_PFOA	253200	100.0	105.4	105.4	0.44/ 0.37		

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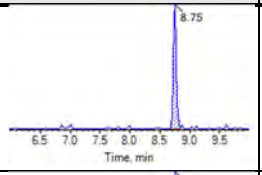
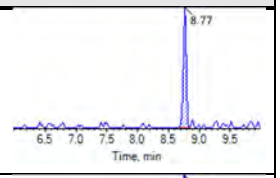
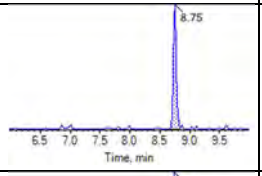
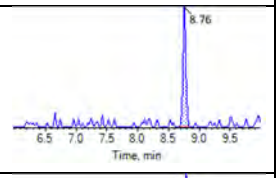
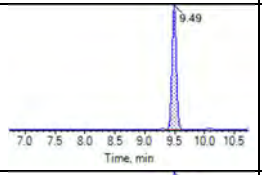
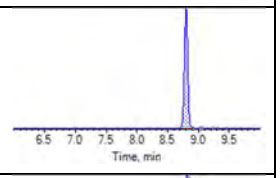
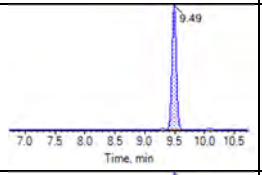
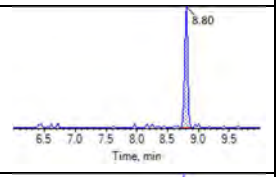
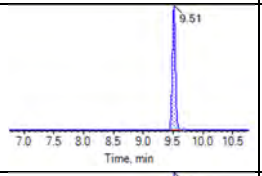
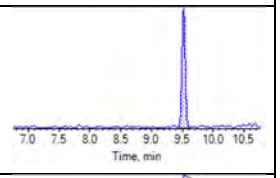
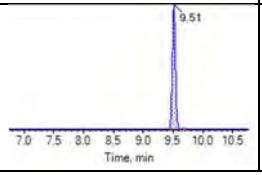
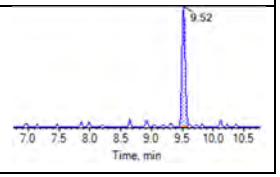
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.77 (8.72)	17170	13C2_6:2 FTS	40000	95.0	81.4	85.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.76 (8.72)	13220	13C2_6:2 FTS	40000	95.0	69.8	73.5	0.77/ 0.91		
PFHpS	449.0 / 80.0	8.80 (8.76)	140200	13C8_PFOS	79260	95.0	90.7	95.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.80 (8.76)	29580	13C8_PFOS	79260	95.0	95.1	100.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.52 (9.47)	91420	13C9_PFNA	273100	100.0	99.6	99.6	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.52 (9.47)	20920	13C9_PFNA	273100	100.0	94.5	94.5	0.23/ 0.24		

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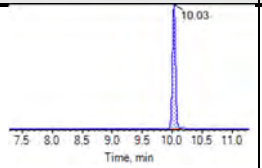
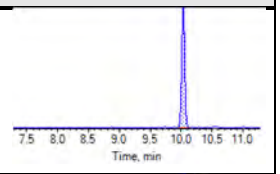
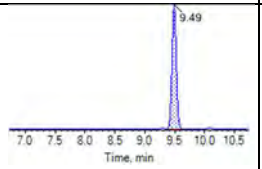
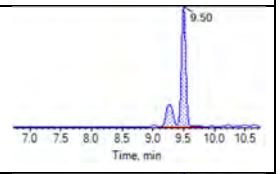
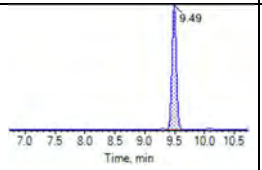
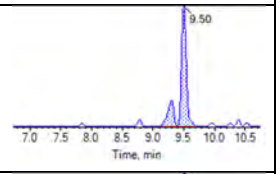
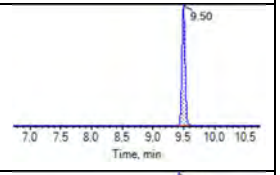
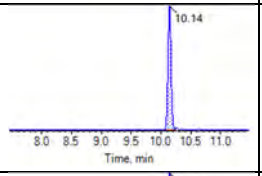
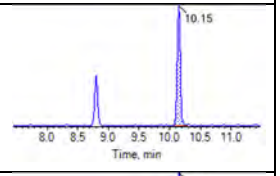
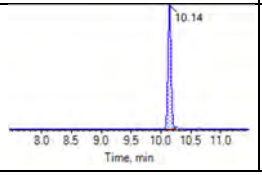
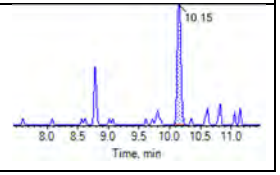
PFOSA	498.0 / 78.0	10.03 (10.04)	193300	13C8_PFOSA	638700	92.6	80.9	87.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.50 (9.45)	117400	13C8_PFOS	79260	100.0	91.1	91.1	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.50 (9.45)	15850	13C8_PFOS	79260	100.0	83.3	83.3	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.50 (9.45)	1694000	N/A	N/A	1000.0	1009.9	101.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.15 (10.08)	82980	13C6_PFDA	146600	100.0	109.9	109.9	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.15 (10.08)	10740	13C6_PFDA	146600	100.0	113.5	113.5	0.13/ 0.13		

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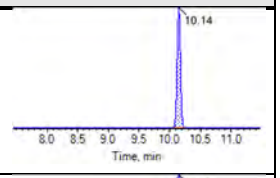
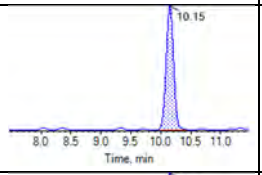
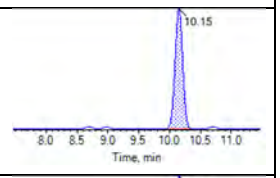
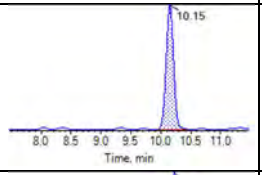
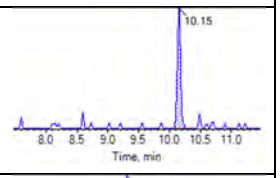
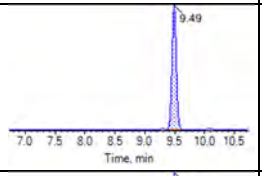
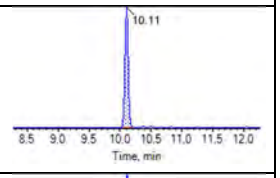
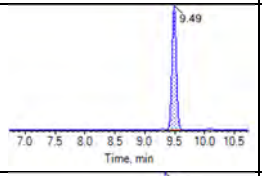
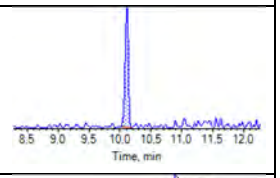
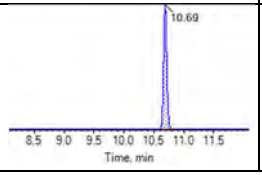
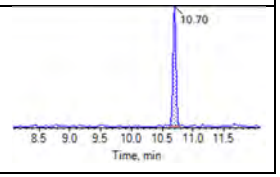
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.14 (10.02)	1132000	N/A	N/A	1000.0	981.0	98.1	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.15 (10.09)	14540	13C2_8:2 FTS	33890	96.0	83.2	86.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.15 (10.09)	11000	13C2_8:2 FTS	33890	96.0	65.0	67.7	0.76/ 0.96		
PFNS	549.0 / 80.0	10.11 (10.49)	116900	13C8_PFOS	79260	96.0	93.5	97.3	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.11 (10.49)	22340	13C8_PFOS	79260	96.0	98.0	102.1	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.70 (10.62)	80410	13C7_PFUdA	174000	100.0	129.7	129.7	1.00/ 1.00		

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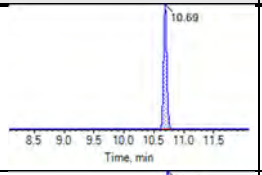
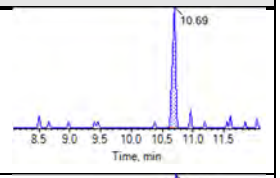
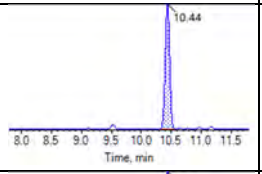
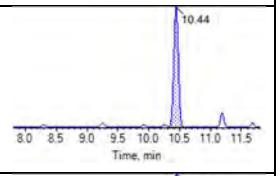
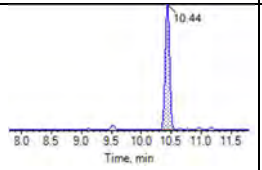
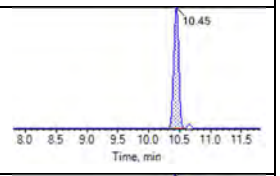
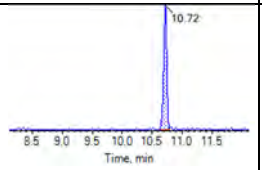
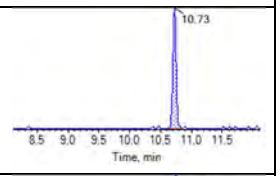
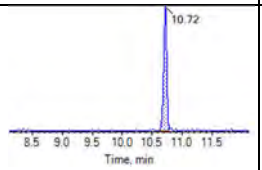
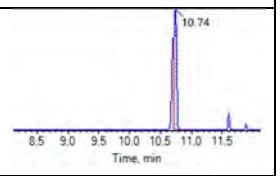
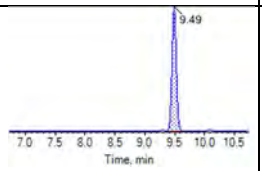
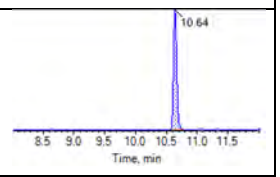
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.69 (10.62)	8110	13C7_PFUdA	174000	100.0	109.8	109.8	0.10/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.44 (10.37)	19490	d3-N-MeFOSAA	52180	100.0	94.2	94.2	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.45 (10.37)	9910	d3-N-MeFOSAA	52180	100.0	97.2	97.2	0.51/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.73 (10.64)	16990	d5-N-EtFOSAA	42400	100.0	98.7	98.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.74 (10.64)	6846	d5-N-EtFOSAA	42400	100.0	83.7	83.7	0.40/ 0.48		
PFDS	599.0 / 80.0	10.64 (10.93)	111900	13C8_PFOS	79260	96.5	73.4	76.0	1.00/ 1.00		

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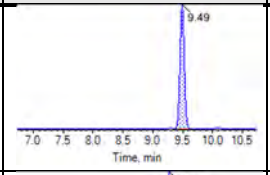
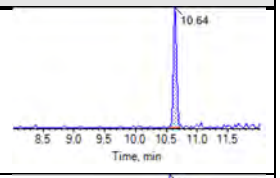
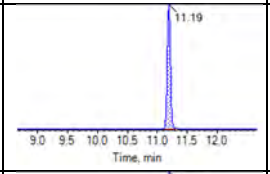
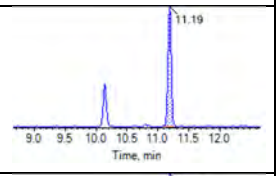
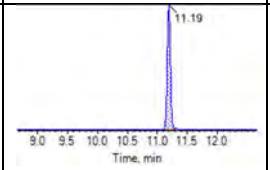
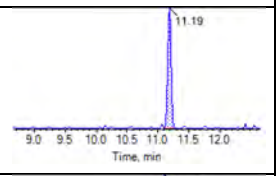
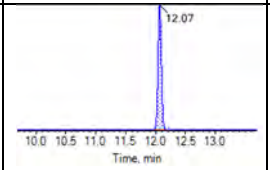
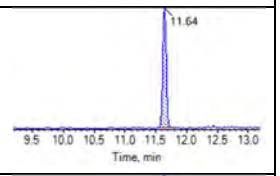
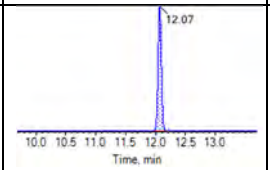
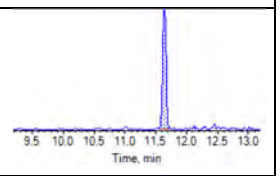
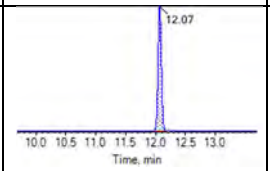
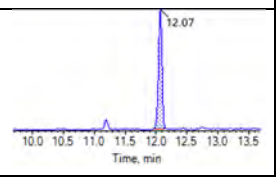
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.64 (10.93)	31090	13C8_PFOS	79260	96.5	76.5	79.2	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.19 (11.09)	76620	13C2_PFDoA	197200	100.0	103.2	103.2	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.19 (11.09)	14730	13C2_PFDoA	197200	100.0	121.4	121.4	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.64 (11.82)	63400	13C2_PFTeDA	143700	100.0	89.7	89.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.64 (11.82)	13250	13C2_PFTeDA	143700	100.0	84.8	84.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	12.07 (11.91)	45930	13C2_PFTeDA	143700	100.0	88.7	88.7	1.00/ 1.00		

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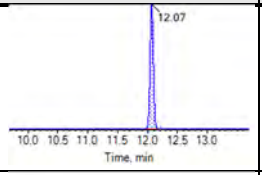
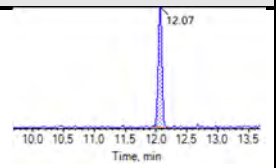
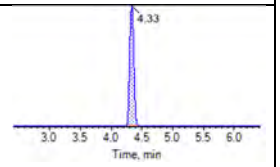
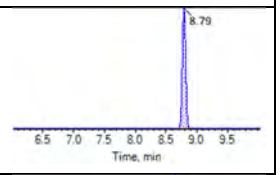
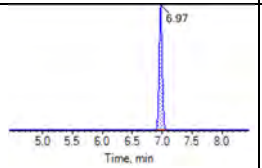
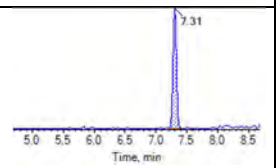
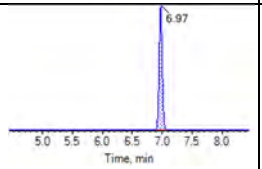
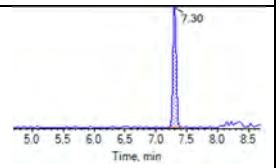
PFTeDA_2	713.0 / 169.0	12.07 (11.91)	11380	13C2_PFTeDA	143700	100.0	99.8	99.8	0.25/ 0.22		
13C3_PFBA	216.0 / 172.0	4.33 (4.60)	2004000	N/A	N/A	1000.0	1158.3	115.8	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.79 (8.75)	1302000	N/A	N/A	1000.0	1058.1	105.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.31 (7.26)	82870	13C5_PFHxA	352600	100.0	94.5	94.5	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.30 (7.26)	66770	13C5_PFHxA	352600	100.0	101.2	101.2	0.81/ 0.75		

Continuing Calibration Summary

Instrument ID: LCMSMS6

Client SDG: 436518

Injection Date: 03-NOV-17 16:54

Data File: PFC103117181.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	784.748	78.5	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	963.616	96.4	
Perfluorotetradecanoic acid (PFTeDA)	1000	991.361	99.1	
Perfluorotridecanoic acid (PFTrDA)	1000	1000.446	100	
Perfluorododecanoic acid (PFDoA)	1000	944.413	94.4	
Perfluoroundecanoic acid (PFUdA)	1000	1045.087	104.5	
Perfluorodecanoic acid (PFDA)	1000	1168.056	116.8	
Perfluorononanoic acid (PFNA)	1000	1002.026	100.2	
Perfluorooctanoic acid (PFOA)	1000	997.21	99.7	
Perfluoroheptanoic acid (PFHpA)	1000	894.358	89.4	
Perfluorooctanesulfonate (PFOS)	1000	1108.046	110.8	
Perfluorohexanoic acid (PFHxA)	1000	1104.728	110.5	
Perfluorohexanesulfonate (PFHxS)	912	963.984	105.7	
Perfluorobutanesulfonate (PFBS)	885	909.515	102.8	

Recovery criteria is 70% - 130%

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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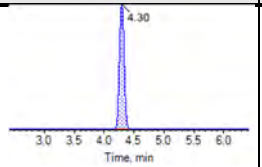
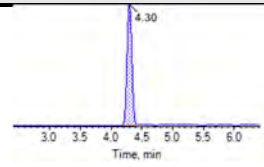
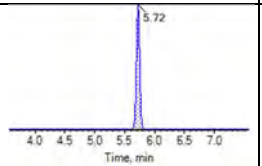
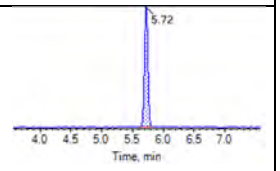
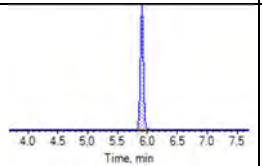
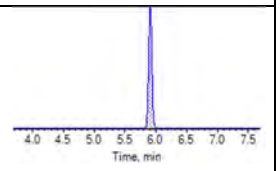
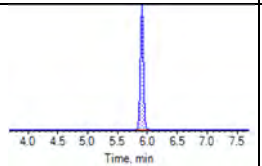
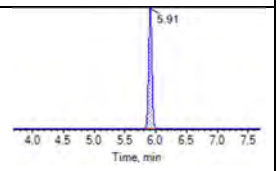
PFC103117181.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	9
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117181.wiff
Acquisition Date	11/3/2017 16:54:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117181.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.30 (4.25)	1128000	13C4_PFBA	159300	1000.0	1005.4	100.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	983100	13C5_PFPeA	230600	1000.0	990.8	99.1	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	1500000	13C3_PFBS	167300	885.0	909.5	102.8	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	652700	13C3_PFBS	167300	885.0	881.5	99.6	0.44/ 0.45		

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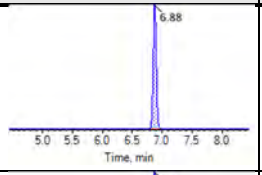
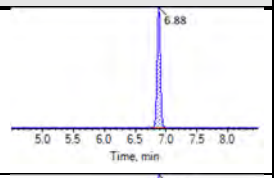
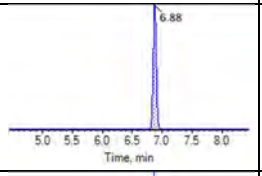
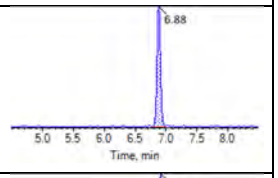
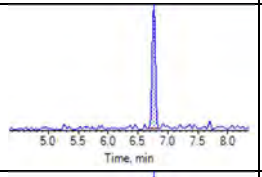
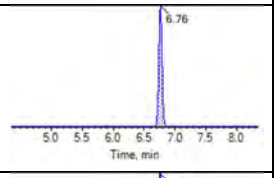
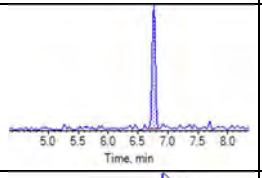
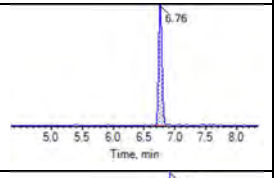
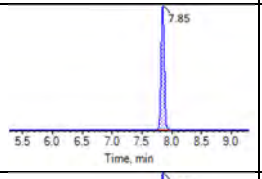
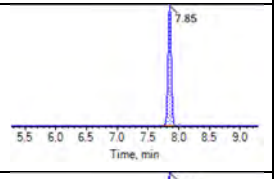
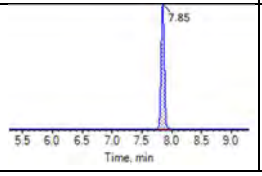
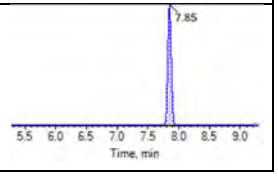
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.88 (6.92)	1223000	13C5_PFHxA	291600	1000.0	1104.7	110.5	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.88 (6.92)	85540	13C5_PFHxA	291600	1000.0	1093.1	109.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.76 (6.80)	201100	13C2_4:2 FTS	35610	935.0	943.6	100.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.76 (6.80)	158100	13C2_4:2 FTS	35610	935.0	1032.3	110.4	0.79/ 0.72		
PFHpA	363.0 / 319.0	7.85 (7.93)	987000	13C4_PFHpA	263900	1000.0	894.4	89.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.85 (7.93)	240700	13C4_PFHpA	263900	1000.0	834.4	83.4	0.24/ 0.26		

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LCMSMS#6

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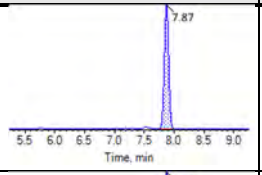
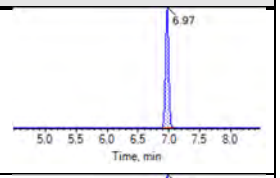
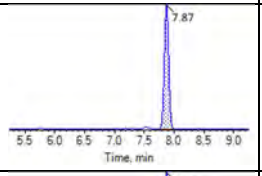
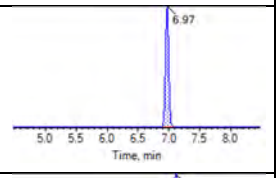
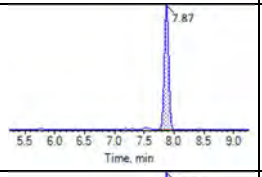
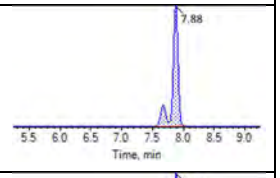
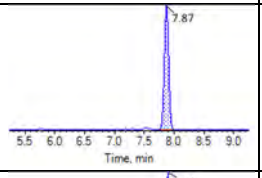
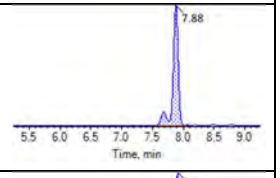
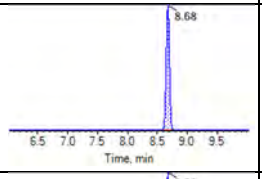
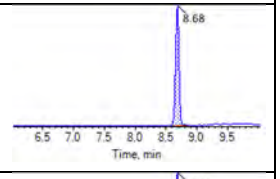
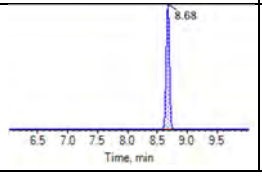
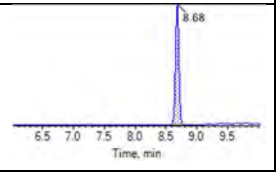
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.97 (7.02)	1673000	13C3_PFHxS	71750	940.0	1113.7	118.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.97 (7.02)	597900	13C3_PFHxS	71750	940.0	1139.2	121.2	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.88 (7.96)	1334000	13C3_PFHxS	71750	912.0	964.0	105.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.88 (7.96)	355000	13C3_PFHxS	71750	912.0	1015.8	111.4	0.27/ 0.25		
PFOA	413.0 / 369.0	8.68 (8.75)	939300	13C8_PFOA	223200	1000.0	997.2	99.7	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.68 (8.75)	366600	13C8_PFOA	223200	1000.0	1043.1	104.3	0.39/ 0.37		

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LCMSMS#6

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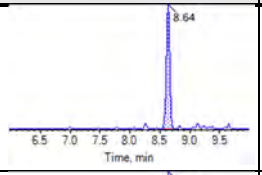
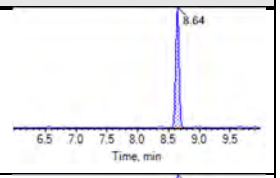
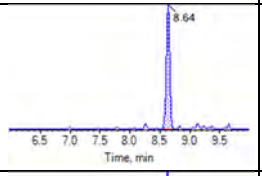
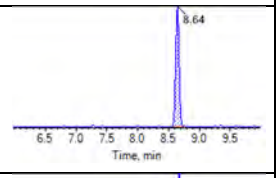
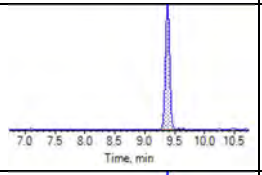
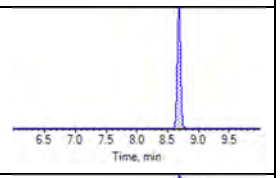
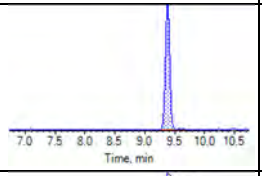
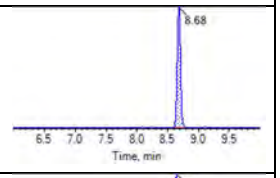
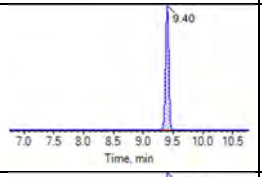
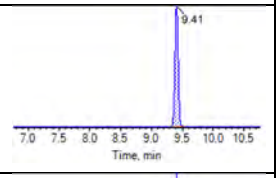
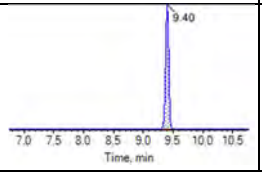
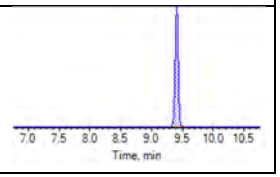
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.64 (8.72)	170000	13C2_6:2 FTS	35350	950.0	911.8	96.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.64 (8.72)	149500	13C2_6:2 FTS	35350	950.0	892.7	94.0	0.88/ 0.91		
PFHpS	449.0 / 80.0	8.68 (8.76)	1174000	13C8_PFOS	61030	950.0	986.5	103.8	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.68 (8.76)	239300	13C8_PFOS	61030	950.0	999.1	105.2	0.20/ 0.20		
PFNA	463.0 / 419.0	9.41 (9.47)	814100	13C9_PFNA	241700	1000.0	1002.0	100.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.41 (9.47)	199700	13C9_PFNA	241700	1000.0	1019.4	101.9	0.25/ 0.24		

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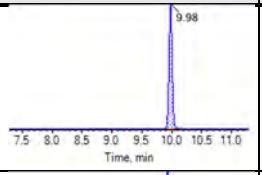
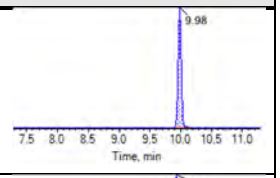
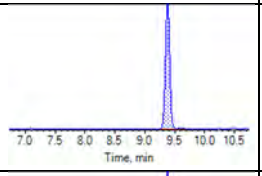
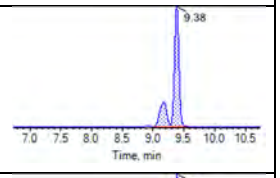
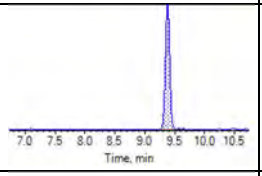
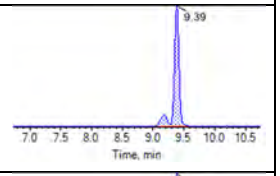
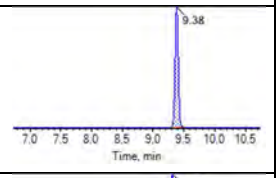
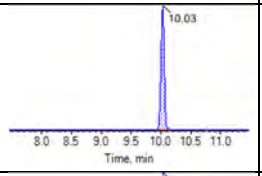
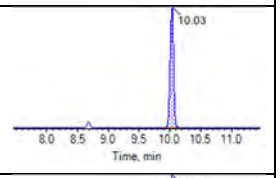
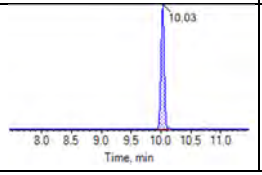
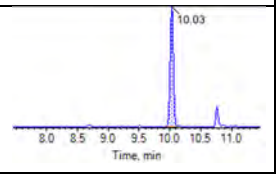
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	9.98 (10.04)	1822000	13C8_PFOSA	518400	925.5	939.4	101.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.38 (9.45)	1099000	13C8_PFOS	61030	1000.0	1108.0	110.8	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	167900	13C8_PFOS	61030	1000.0	1146.8	114.7	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.38 (9.45)	1800000	N/A	N/A	1000.0	1073.2	107.3	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.03 (10.08)	800000	13C6_PFDA	132900	1000.0	1168.1	116.8	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	83810	13C6_PFDA	132900	1000.0	977.0	97.7	0.10/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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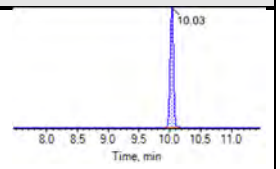
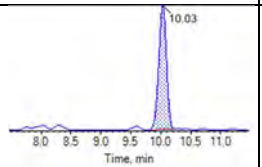
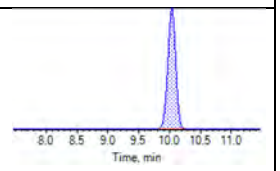
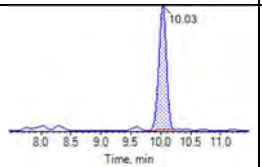
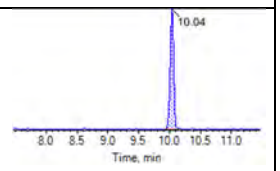
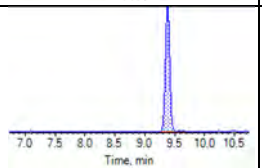
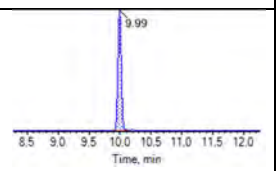
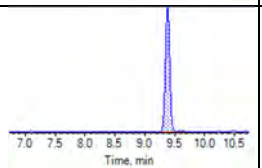
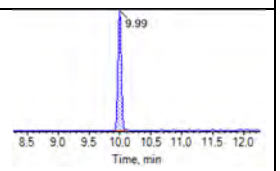
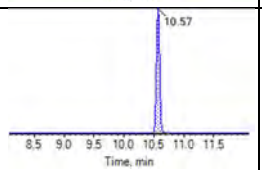
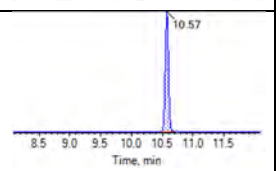
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.03 (10.02)	1107000	N/A	N/A	1000.0	959.4	95.9	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.04 (10.09)	129400	13C2_8:2 FTS	24390	960.0	1029.6	107.2	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	111400	13C2_8:2 FTS	24390	960.0	914.5	95.3	0.86/ 0.96		
PFNS	549.0 / 80.0	9.99 (10.49)	1017000	13C8_PFOS	61030	960.0	1055.8	110.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	9.99 (10.49)	206700	13C8_PFOS	61030	960.0	1177.9	122.7	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.57 (10.62)	687500	13C7_PFUdA	184700	1000.0	1045.1	104.5	1.00/ 1.00		

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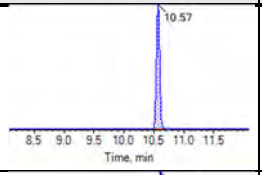
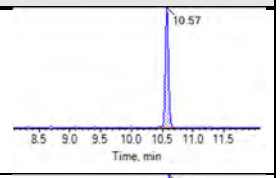
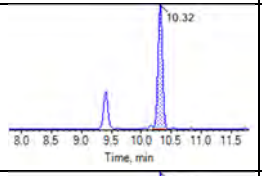
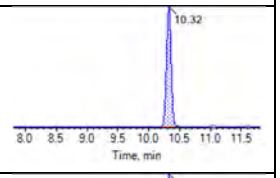
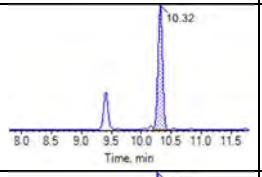
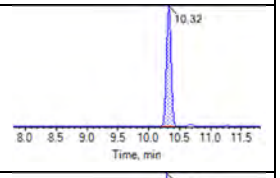
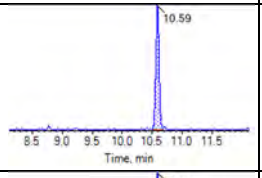
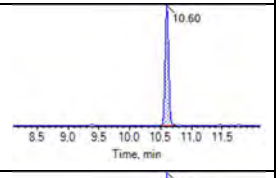
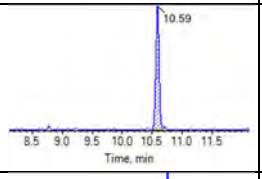
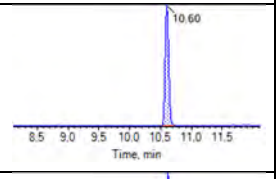
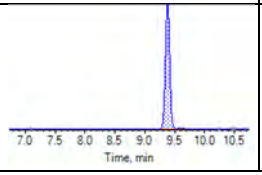
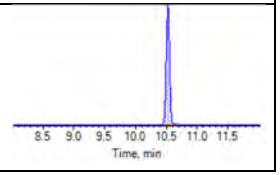
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.57 (10.62)	90970	13C7_PFUdA	184700	1000.0	1160.5	116.0	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.32 (10.37)	178100	d3-N-MeFOSAA	46600	1000.0	963.6	96.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.32 (10.37)	92390	d3-N-MeFOSAA	46600	1000.0	1014.8	101.5	0.52/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.60 (10.64)	159700	d5-N-EtFOSAA	50130	1000.0	784.7	78.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	84700	d5-N-EtFOSAA	50130	1000.0	875.7	87.6	0.53/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	1149000	13C8_PFOS	61030	965.0	977.7	101.3	1.00/ 1.00		

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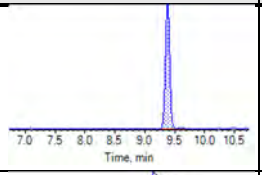
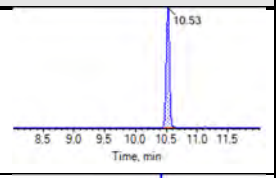
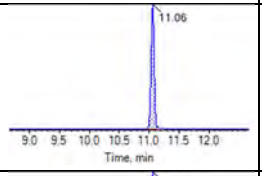
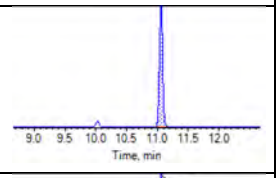
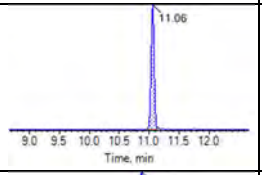
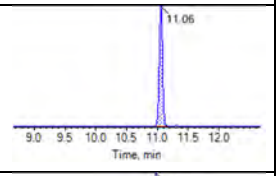
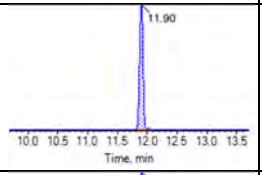
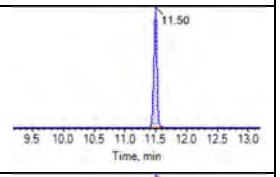
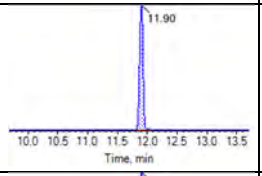
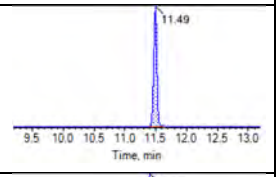
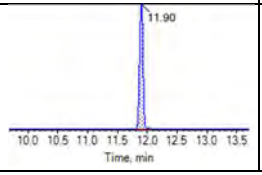
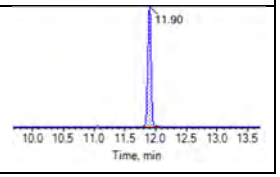
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	338600	13C8_PFOS	61030	965.0	1081.8	112.1	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.06 (11.09)	619800	13C2_PFDoA	174200	1000.0	944.4	94.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.06 (11.09)	113500	13C2_PFDoA	174200	1000.0	1058.4	105.8	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	604100	13C2_PFTeDA	122800	1000.0	1000.4	100.0	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.49 (11.82)	142600	13C2_PFTeDA	122800	1000.0	1067.7	106.8	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	438500	13C2_PFTeDA	122800	1000.0	991.4	99.1	1.00/ 1.00		

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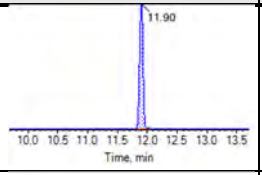
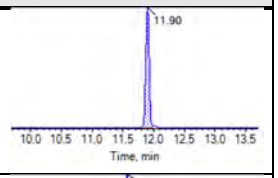
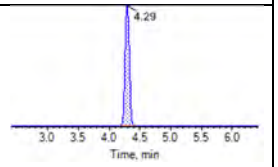
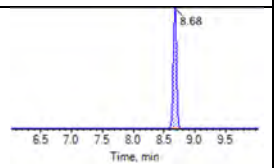
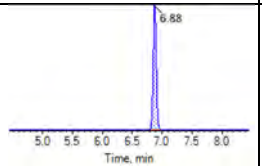
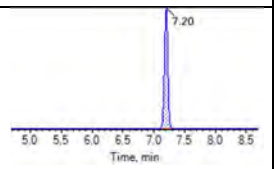
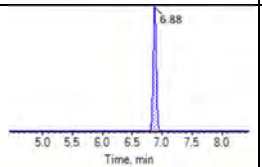
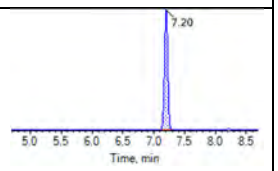
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	102000	13C2_PFTeDA	122800	1000.0	1047.5	104.8	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1880000	N/A	N/A	1000.0	1086.8	108.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.68 (8.75)	1201000	N/A	N/A	1000.0	976.4	97.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.20 (7.26)	687000	13C5_PFHxA	291600	1000.0	947.3	94.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.20 (7.26)	532100	13C5_PFHxA	291600	1000.0	975.0	97.5	0.77/ 0.75		

Continuing Calibration Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 21:32

Data File: PFC103117194.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	887.436	88.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	966.6	96.7	
Perfluorotetradecanoic acid (PFTeDA)	1000	922.96	92.3	
Perfluorotridecanoic acid (PFTrDA)	1000	927.478	92.7	
Perfluorododecanoic acid (PFDoA)	1000	1046.539	104.7	
Perfluoroundecanoic acid (PFUdA)	1000	1023.561	102.4	
Perfluorononanoic acid (PFNA)	1000	977.97	97.8	
Perfluorodecanoic acid (PFDA)	1000	1114.62	111.5	
Perfluoroheptanoic acid (PFHpA)	1000	991.215	99.1	
Perfluorooctanoic acid (PFOA)	1000	928.393	92.8	
Perfluorooctanesulfonate (PFOS)	1000	973.993	97.4	
Perfluorohexanoic acid (PFHxA)	1000	1021.946	102.2	
Perfluorohexanesulfonate (PFHxS)	912	817.45	89.6	
Perfluorobutanesulfonate (PFBS)	885	936.649	105.8	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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LCMSMS#6

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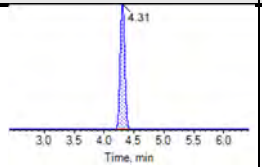
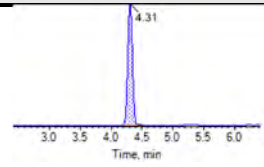
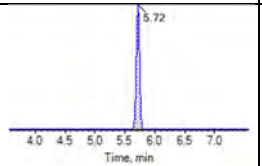
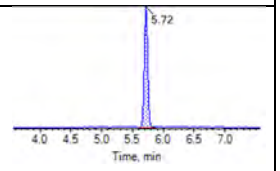
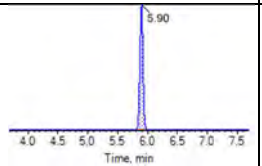
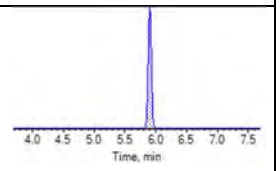
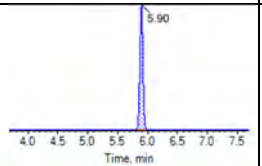
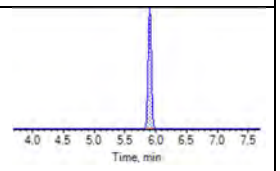
PFC103117194.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	9
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117194.wiff
Acquisition Date	11/3/2017 21:32:45	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117194.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.31 (4.25)	1288000	13C4_PFBA	176600	1000.0	1035.0	103.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	1098000	13C5_PFPeA	263400	1000.0	969.1	96.9	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1734000	13C3_PFBS	187900	885.0	936.6	105.8	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	758300	13C3_PFBS	187900	885.0	912.3	103.1	0.44/ 0.45		

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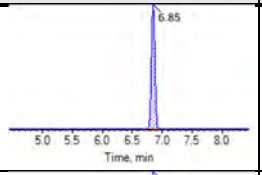
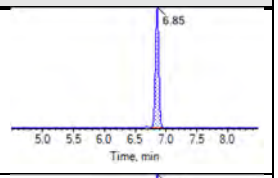
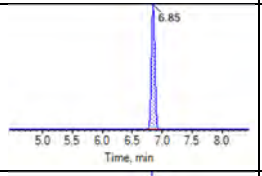
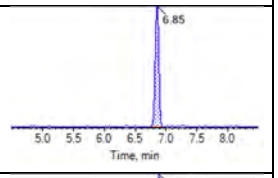
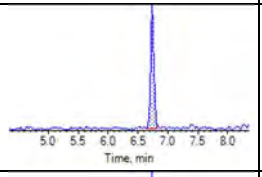
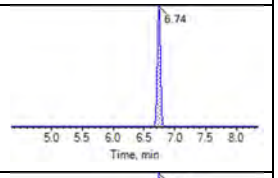
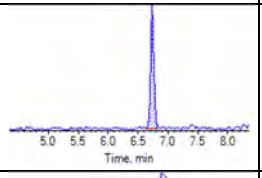
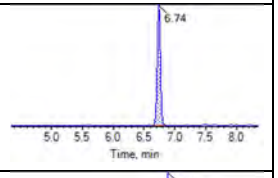
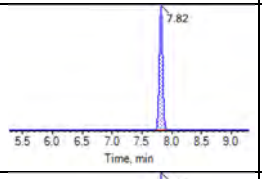
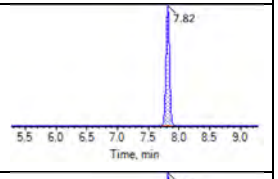
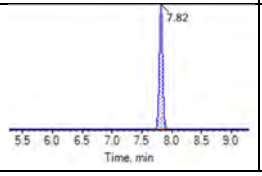
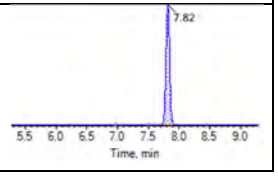
PFC103117194.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.85 (6.92)	1355000	13C5_PFHxA	349300	1000.0	1021.9	102.2	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.85 (6.92)	97740	13C5_PFHxA	349300	1000.0	1042.6	104.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.74 (6.80)	235700	13C2_4:2 FTS	45210	935.0	871.1	93.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.74 (6.80)	163000	13C2_4:2 FTS	45210	935.0	838.5	89.7	0.69/ 0.72		
PFHpA	363.0 / 319.0	7.82 (7.93)	1075000	13C4_PFHpA	259300	1000.0	991.2	99.1	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.82 (7.93)	282800	13C4_PFHpA	259300	1000.0	997.3	99.7	0.26/ 0.26		

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LCMSMS#6

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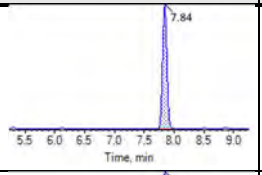
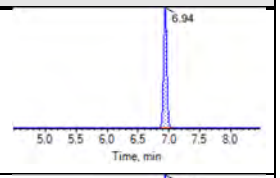
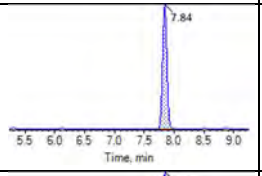
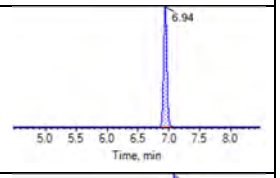
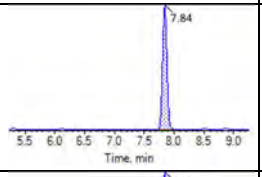
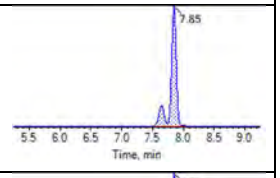
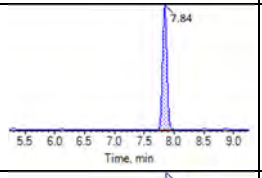
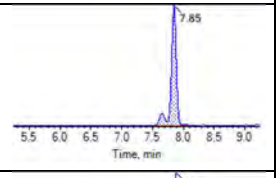
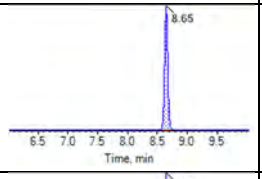
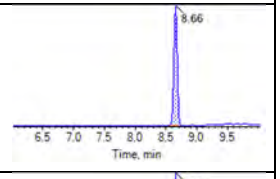
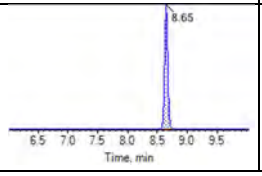
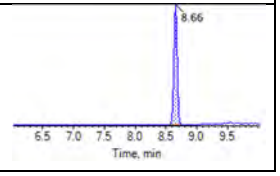
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.94 (7.02)	1791000	13C3_PFHxS	90440	940.0	946.1	100.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.94 (7.02)	646000	13C3_PFHxS	90440	940.0	976.5	103.9	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.85 (7.96)	1426000	13C3_PFHxS	90440	912.0	817.5	89.6	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.85 (7.96)	408400	13C3_PFHxS	90440	912.0	927.0	101.6	0.29/ 0.25		
PFOA	413.0 / 369.0	8.66 (8.75)	1102000	13C8_PFOA	281400	1000.0	928.4	92.8	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.66 (8.75)	431500	13C8_PFOA	281400	1000.0	973.8	97.4	0.39/ 0.37		

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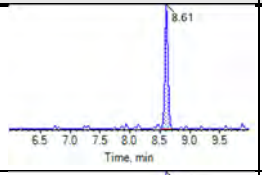
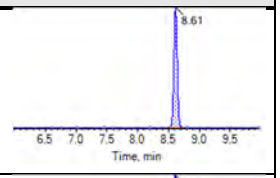
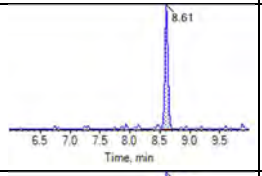
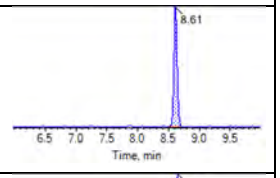
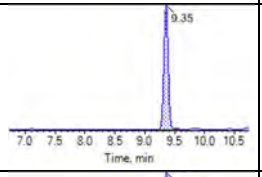
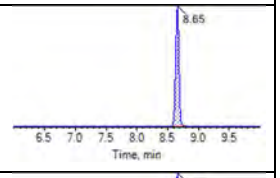
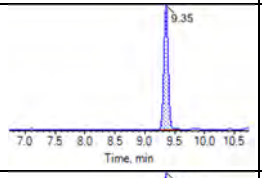
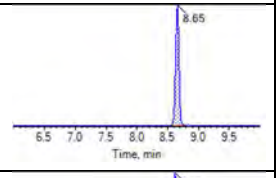
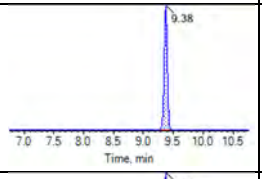
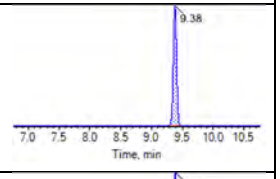
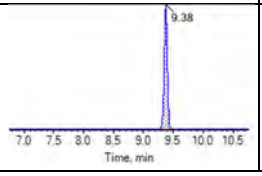
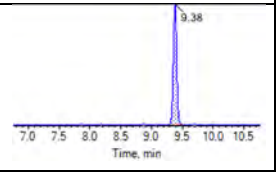
6:2 FTS	427.0 / 407.0	8.61 (8.72)	164400	13C2_6:2 FTS	33050	950.0	943.3	99.3	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.61 (8.72)	152800	13C2_6:2 FTS	33050	950.0	976.5	102.8	0.93/ 0.91		
PFHpS	449.0 / 80.0	8.65 (8.76)	1331000	13C8_PFOS	74510	950.0	916.5	96.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.65 (8.76)	280800	13C8_PFOS	74510	950.0	960.1	101.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.38 (9.47)	906300	13C9_PFNA	275700	1000.0	978.0	97.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.38 (9.47)	214400	13C9_PFNA	275700	1000.0	959.5	96.0	0.24/ 0.24		

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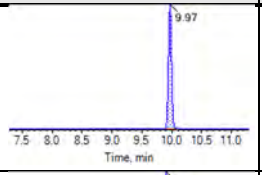
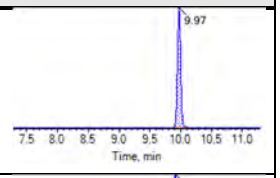
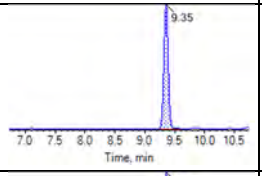
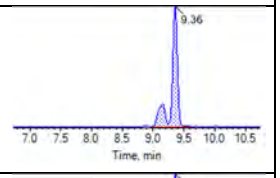
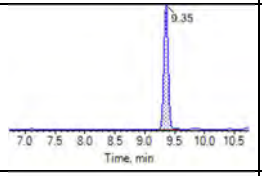
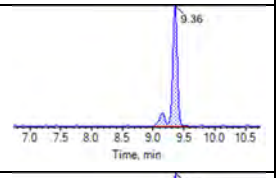
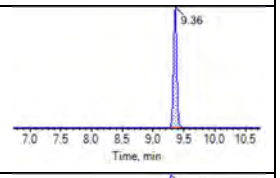
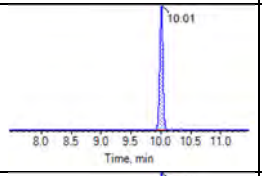
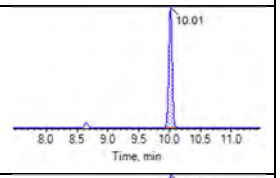
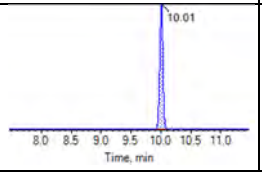
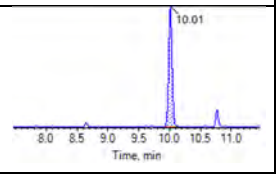
PFOSA	498.0 / 78.0	9.97 (10.04)	2102000	13C8_PFOSA	562100	925.5	999.6	108.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.36 (9.45)	1179000	13C8_PFOS	74510	1000.0	974.0	97.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.36 (9.45)	174000	13C8_PFOS	74510	1000.0	973.0	97.3	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.36 (9.45)	1917000	N/A	N/A	1000.0	1142.9	114.3	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.01 (10.08)	921500	13C6_PFDA	160400	1000.0	1114.6	111.5	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.01 (10.08)	100600	13C6_PFDA	160400	1000.0	971.2	97.1	0.11/ 0.13		

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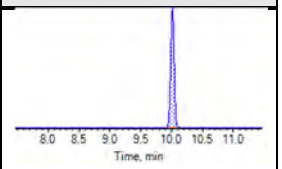
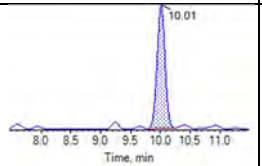
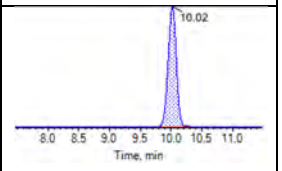
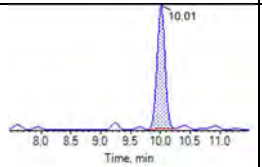
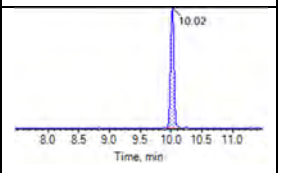
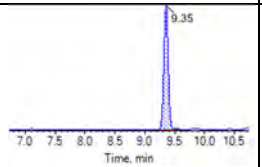
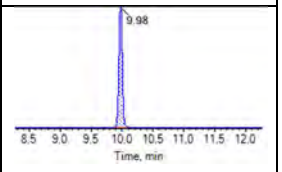
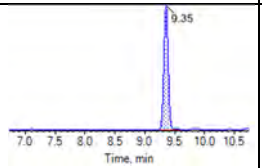
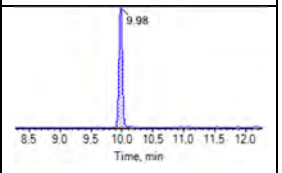
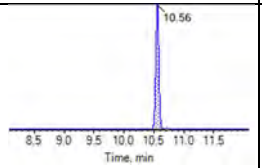
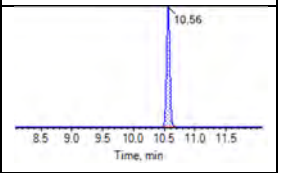
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1248000	N/A	N/A	1000.0	1081.7	108.2	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.02 (10.09)	136200	13C2_8:2 FTS	26860	960.0	984.0	102.5	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.02 (10.09)	122600	13C2_8:2 FTS	26860	960.0	913.6	95.2	0.90/ 0.96		
PFNS	549.0 / 80.0	9.98 (9.98)	1244000	13C8_PFOS	74510	960.0	1057.8	110.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	9.98 (9.98)	230500	13C8_PFOS	74510	960.0	1075.9	112.1	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.56 (10.62)	799500	13C7_PFUdA	219300	1000.0	1023.6	102.4	1.00/ 1.00		

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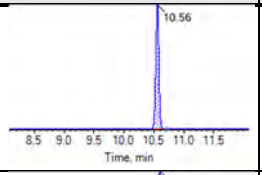
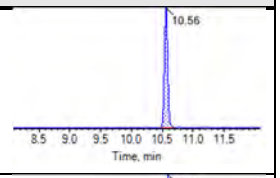
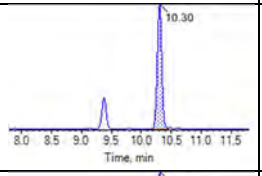
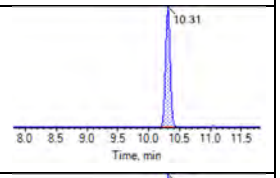
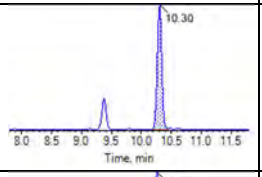
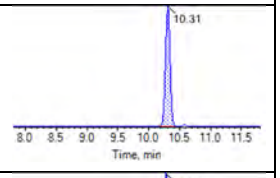
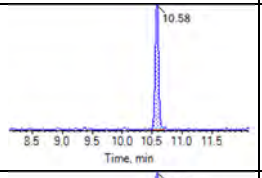
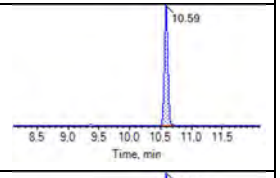
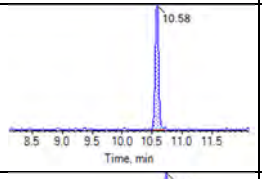
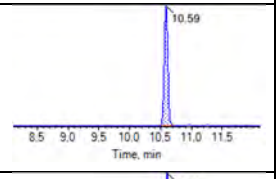
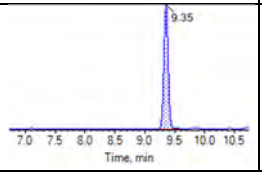
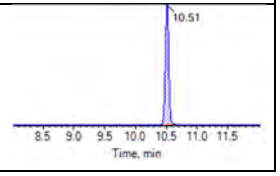
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.56 (10.62)	123900	13C7_PFUdA	219300	1000.0	1331.5	133.2	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.31 (10.37)	212200	d3-N-MeFOSAA	55350	1000.0	966.6	96.7	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.31 (10.37)	91060	d3-N-MeFOSAA	55350	1000.0	842.1	84.2	0.43/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.59 (10.64)	189500	d5-N-EtFOSAA	52590	1000.0	887.4	88.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.59 (10.64)	94020	d5-N-EtFOSAA	52590	1000.0	926.6	92.7	0.50/ 0.48		
PFDS	599.0 / 80.0	10.51 (10.93)	1289000	13C8_PFOS	74510	965.0	898.9	93.1	1.00/ 1.00		

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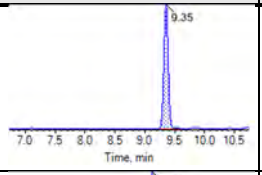
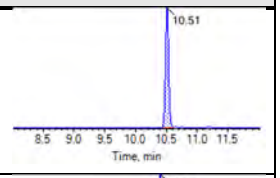
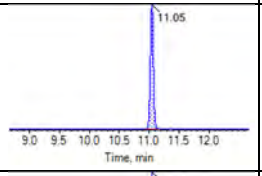
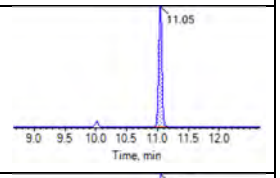
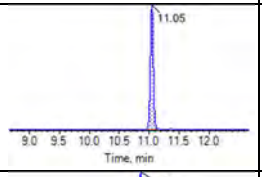
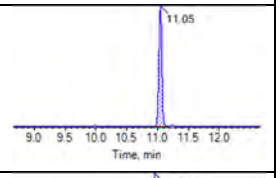
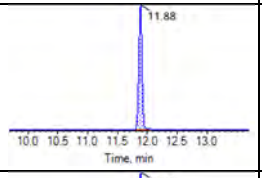
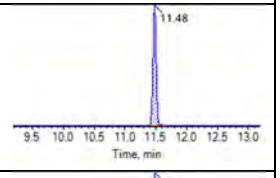
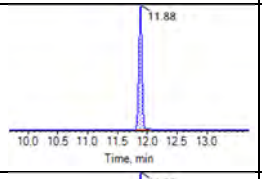
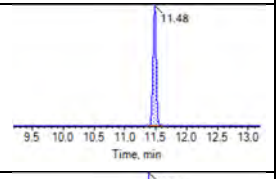
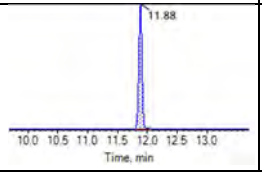
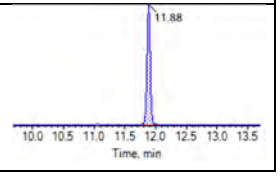
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.51 (10.93)	341200	13C8_PFOS	74510	965.0	892.8	92.5	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	722400	13C2_PFDoA	183300	1000.0	1046.5	104.7	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	124800	13C2_PFDoA	183300	1000.0	1105.6	110.6	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.48 (11.82)	662000	13C2_PFTeDA	145200	1000.0	927.5	92.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.48 (11.82)	147100	13C2_PFTeDA	145200	1000.0	931.9	93.2	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.88 (11.91)	482600	13C2_PFTeDA	145200	1000.0	923.0	92.3	1.00/ 1.00		

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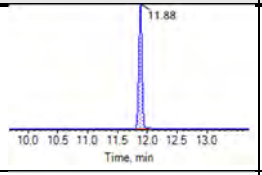
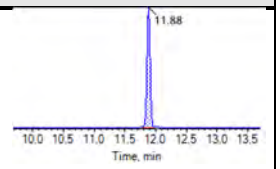
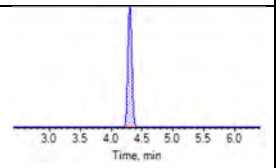
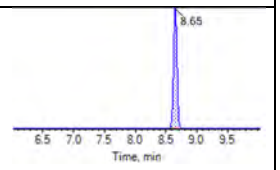
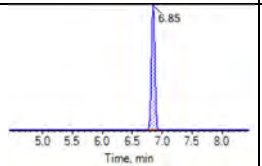
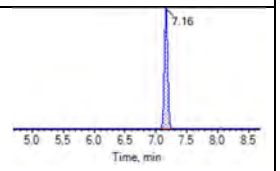
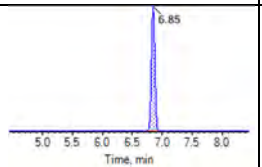
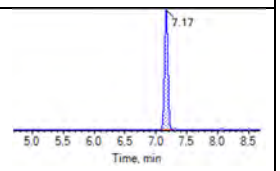
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.88 (11.91)	111400	13C2_PFTeDA	145200	1000.0	967.3	96.7	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	2141000	N/A	N/A	1000.0	1237.7	123.8	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.65 (8.75)	1324000	N/A	N/A	1000.0	1076.0	107.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.16 (7.26)	745300	13C5_PFHxA	349300	1000.0	857.9	85.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.17 (7.26)	547200	13C5_PFHxA	349300	1000.0	837.1	83.7	0.73/ 0.75		

Quality Control Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**			**Matrix:**	**WATER**
Lab Sample ID:	**1203908641**				
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**MB for batch 1714400**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/01/2017 23:54**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**251.8 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117088.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00264	ug/L	0.00131	0.00264	0.00397
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00264	ug/L	0.00131	0.00264	0.00397
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00133	ug/L	0.000655	0.00133	0.00177
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00133	ug/L	0.000774	0.00133	0.00199
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00121	ug/L	0.000655	0.00121	0.00181
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00133	ug/L	0.000655	0.00133	0.00199
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00131	ug/L	0.000655	0.00131	0.00199
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00131	ug/L	0.000695	0.00131	0.00199
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00131	ug/L	0.000655	0.00131	0.00199
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00131	ug/L	0.000655	0.00131	0.00199

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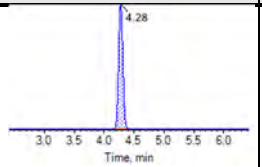
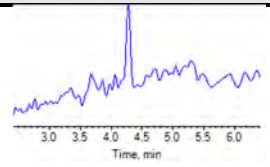
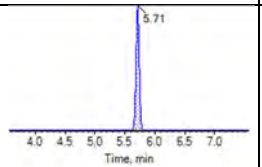
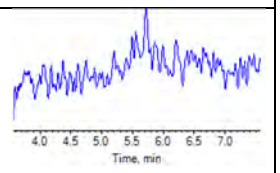
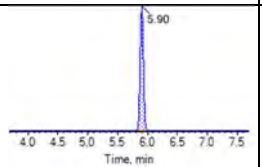
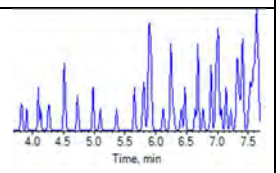
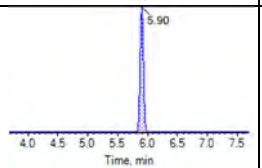
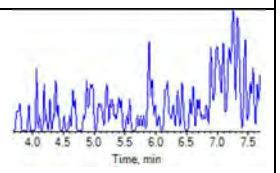
PFC103117088.wiff			
Sample Name	1203908641	**Injection Vial**	23
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117088.wiff
Acquisition Date	11/1/2017 23:54:09	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117088.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	138900	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	242500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	169100	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	169100	N/A	N/A	N/A	N/A/ 0.45		

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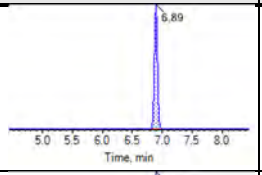
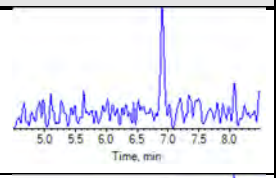
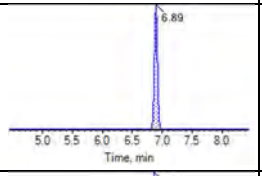
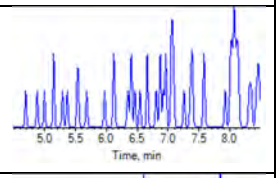
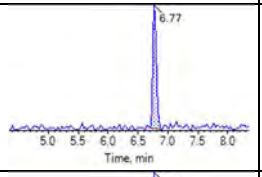
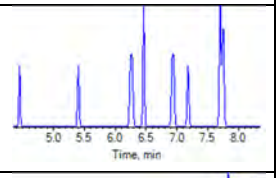
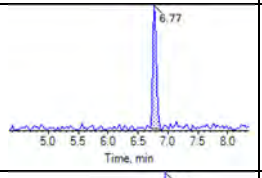
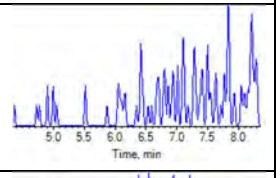
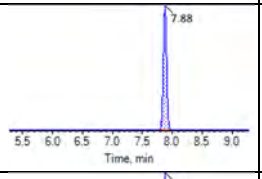
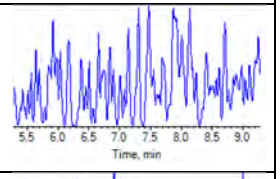
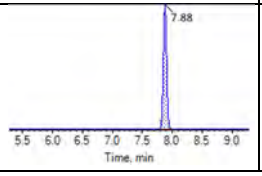
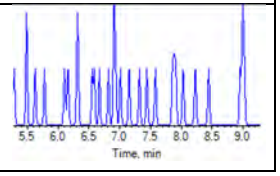
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	33960	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	33960	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	280600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	280600	N/A	N/A	N/A	N/A/ 0.26		

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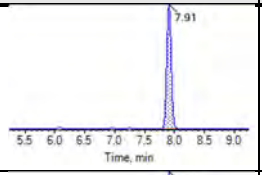
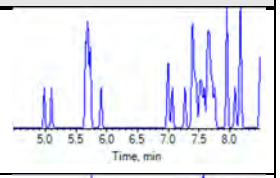
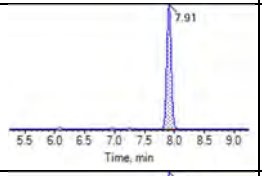
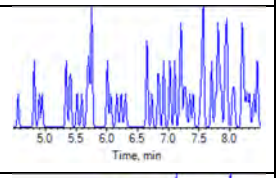
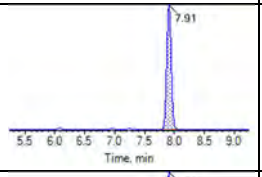
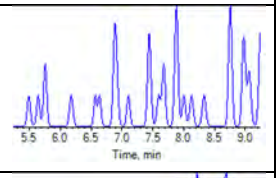
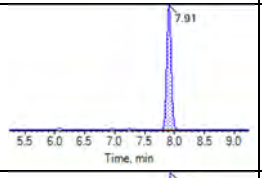
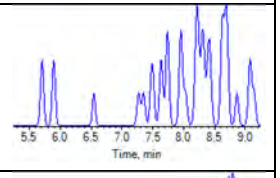
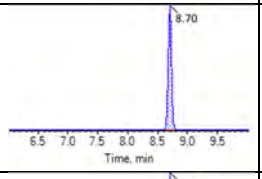
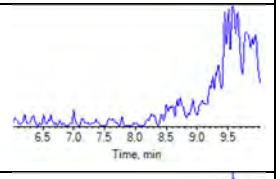
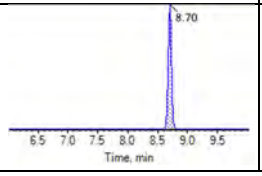
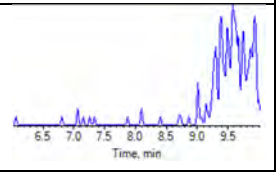
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	80960	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	257800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	257800	N/A	N/A	N/A	N/A/ 0.37		

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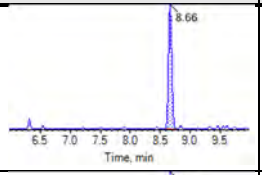
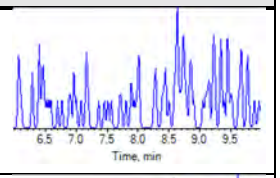
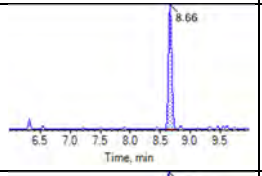
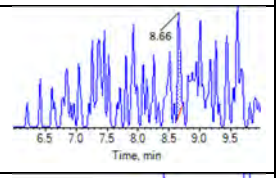
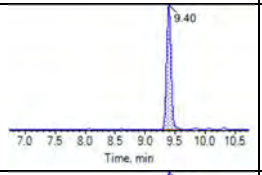
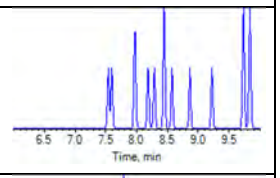
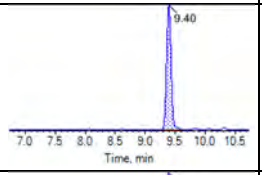
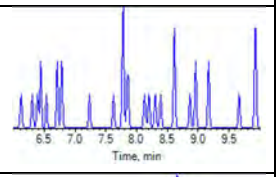
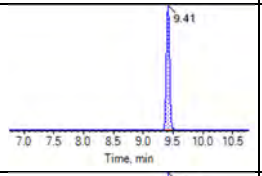
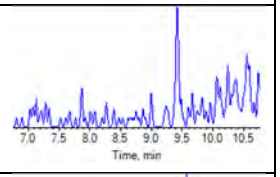
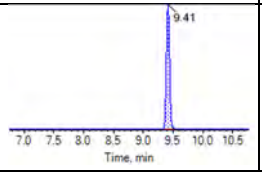
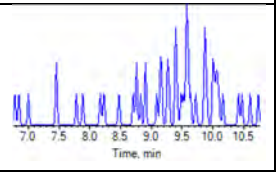
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	37530	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	1725	13C2_6:2 FTS	37530	N/A	9.7	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	264000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	264000	N/A	N/A	N/A	N/A/ 0.24		

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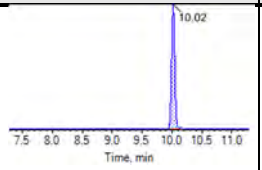
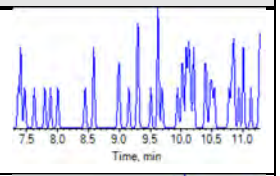
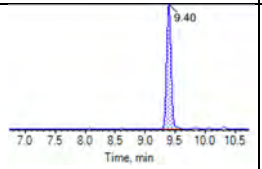
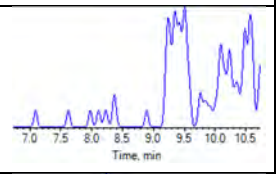
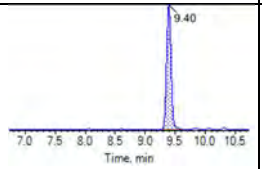
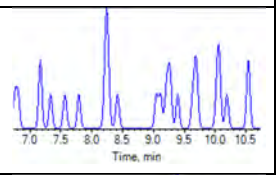
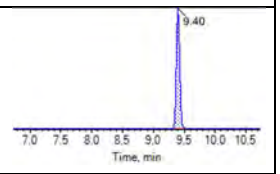
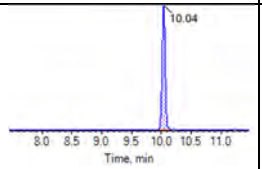
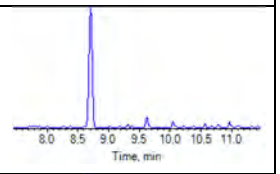
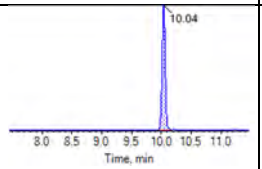
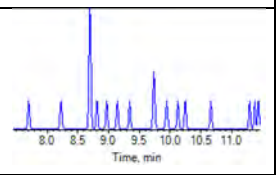
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	447200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1576000	N/A	N/A	N/A	939.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	140300	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	140300	N/A	N/A	N/A	N/A/ 0.13		

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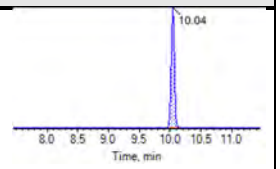
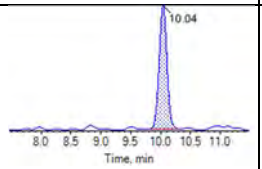
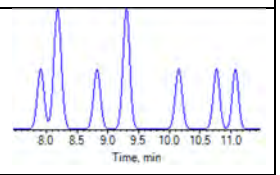
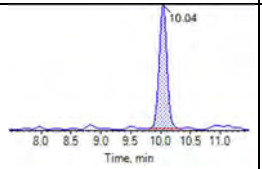
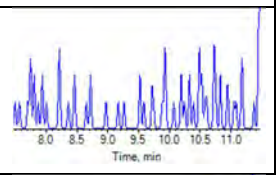
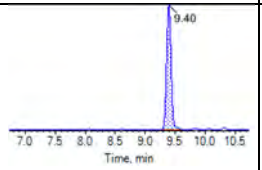
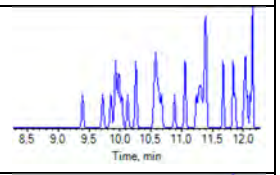
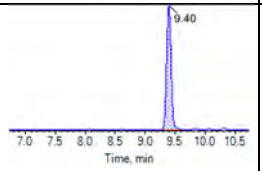
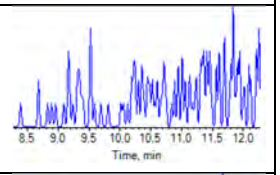
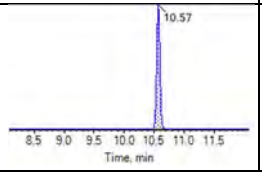
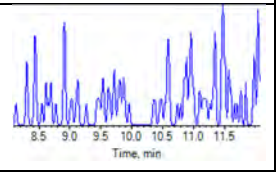
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1138000	N/A	N/A	N/A	986.7	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25830	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25830	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	197900	N/A	N/A	N/A	N/A/ 1.00		

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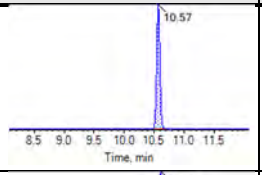
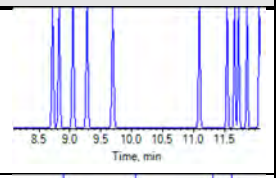
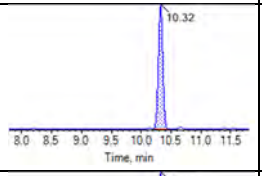
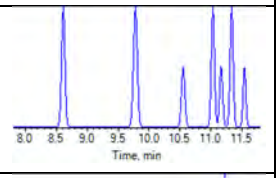
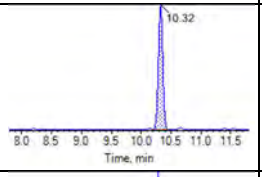
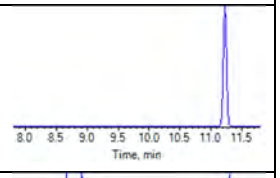
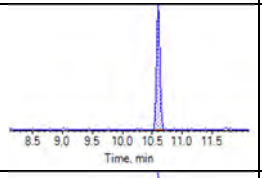
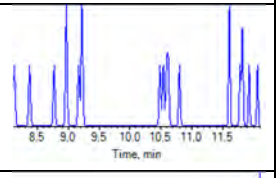
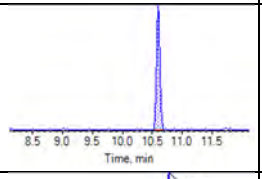
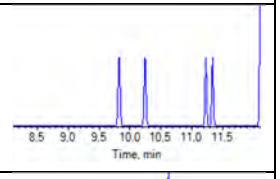
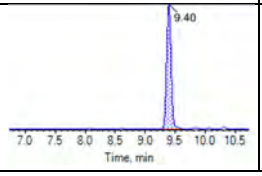
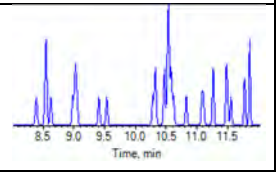
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	197900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	45530	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	45530	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47950	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47950	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 1.00		

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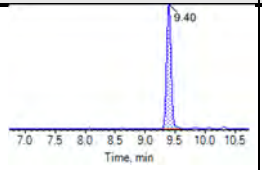
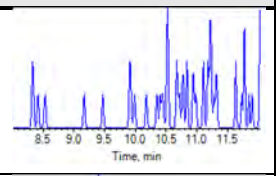
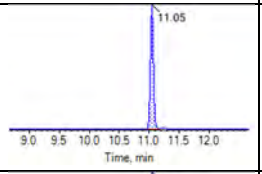
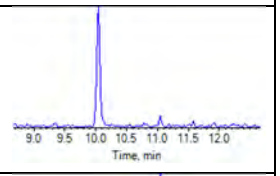
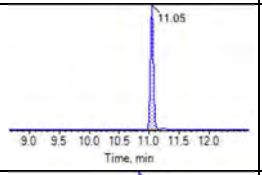
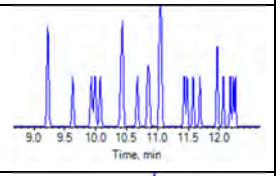
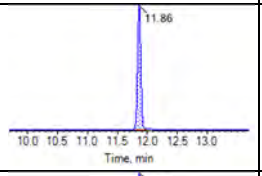
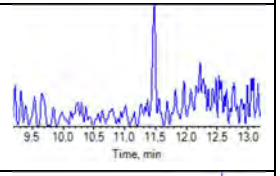
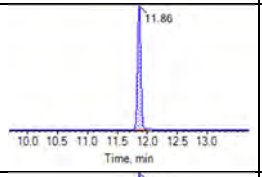
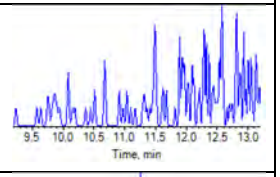
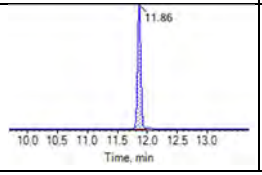
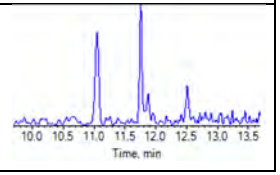
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	72400	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	158200	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	158200	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 1.00		

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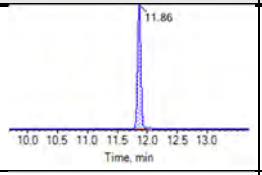
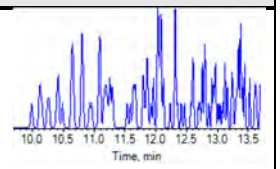
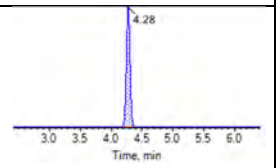
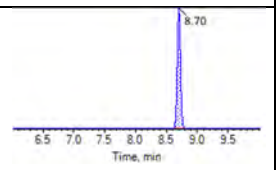
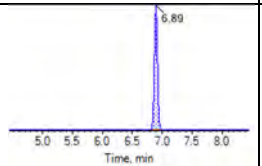
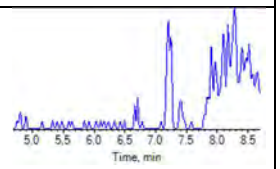
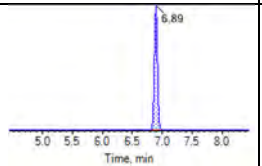
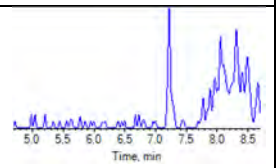
PFC103117088.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	130200	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.28 (4.60)	1723000	N/A	N/A	N/A	996.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1190000	N/A	N/A	N/A	967.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	312600	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**			**Matrix:**	**WATER**
Lab Sample ID:	**1203908642**				
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**LCS for batch 1714400**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 00:15**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**251.37 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117089.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0165	ug/L	0.00131	0.00265	0.00398
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0185	ug/L	0.00131	0.00265	0.00398
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0171	ug/L	0.000656	0.00133	0.00177
335-76-2	Perfluorodecanoic acid (PFDA)		0.0172	ug/L	0.000776	0.00133	0.00199
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0207	ug/L	0.000656	0.00133	0.00199
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0169	ug/L	0.000656	0.00133	0.00199
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.015	ug/L	0.000656	0.00121	0.00181
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0192	ug/L	0.000656	0.00133	0.00199
375-95-1	Perfluorononanoic acid (PFNA)		0.0195	ug/L	0.000656	0.00131	0.00199
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0175	ug/L	0.000656	0.00131	0.00199
335-67-1	Perfluorooctanoic acid (PFOA)		0.0173	ug/L	0.000696	0.00131	0.00199
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0178	ug/L	0.000656	0.00131	0.00199
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0173	ug/L	0.000656	0.00131	0.00199
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0173	ug/L	0.000656	0.00131	0.00199

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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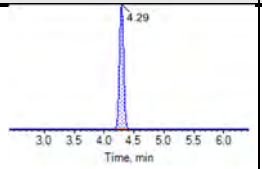
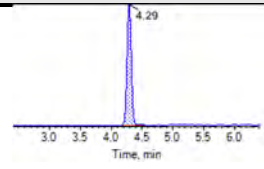
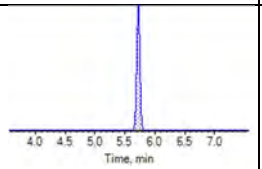
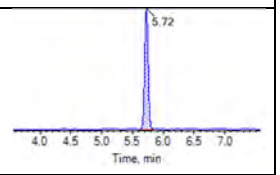
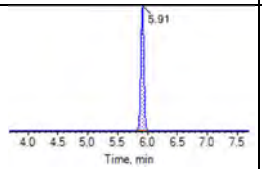
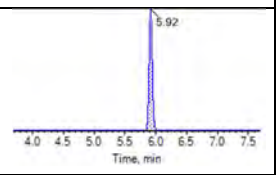
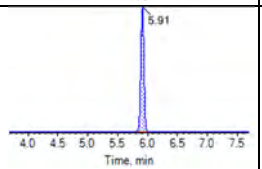
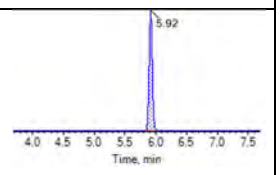
PFC103117089.wiff			
Sample Name	1203908642	**Injection Vial**	24
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117089.wiff
Acquisition Date	11/2/2017 00:15:33	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117089.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.29 (4.25)	963300	13C4_PFBA	153000	N/A	893.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	1050000	13C5_PFPeA	257600	N/A	947.6	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.92 (5.89)	1482000	13C3_PFBS	174900	N/A	859.8	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.92 (5.89)	639500	13C3_PFBS	174900	N/A	826.4	N/A	0.43/ 0.45		

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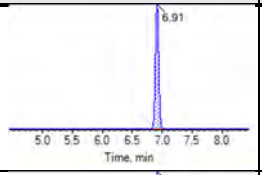
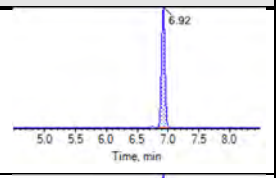
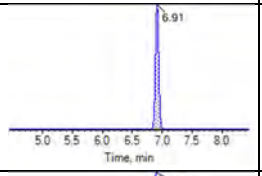
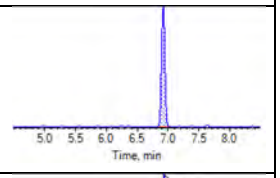
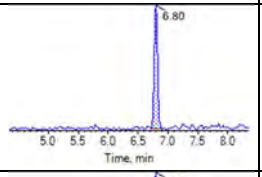
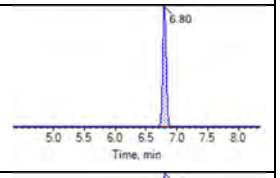
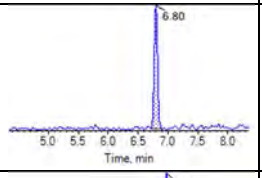
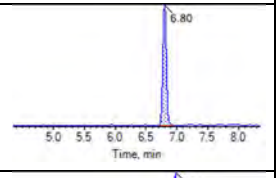
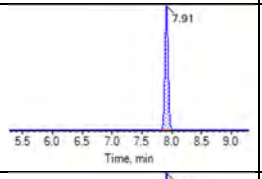
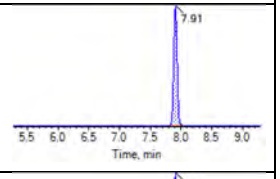
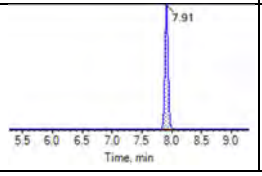
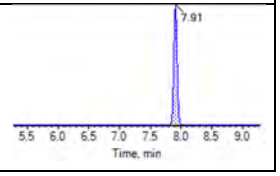
PFC103117089.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1196000	13C5_PFHxA	326600	N/A	964.3	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	91100	13C5_PFHxA	326600	N/A	1039.3	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	170500	13C2_4:2 FTS	38990	N/A	730.6	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	136800	13C2_4:2 FTS	38990	N/A	815.7	N/A	0.80/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	1041000	13C4_PFHpA	293100	N/A	848.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.91 (7.93)	302200	13C4_PFHpA	293100	N/A	942.9	N/A	0.29/ 0.26		

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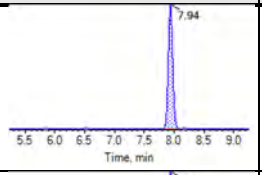
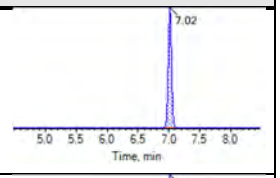
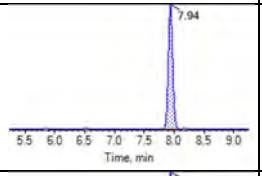
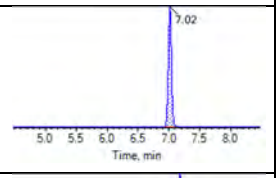
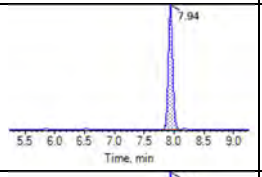
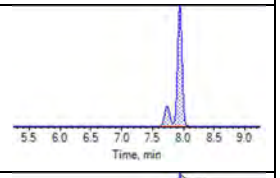
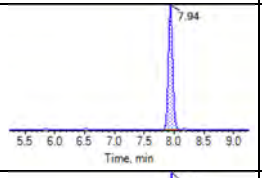
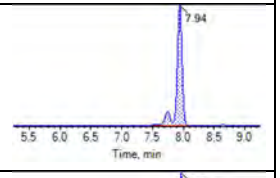
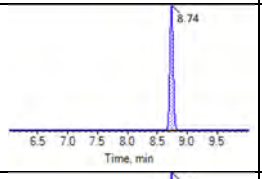
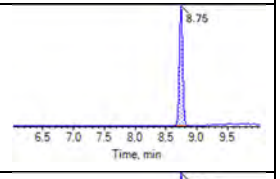
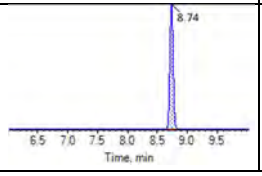
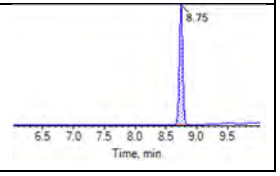
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1510000	13C3_PFHxS	90660	N/A	795.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	570300	13C3_PFHxS	90660	N/A	860.0	N/A	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.94 (7.96)	1315000	13C3_PFHxS	90660	N/A	752.1	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.94 (7.96)	345000	13C3_PFHxS	90660	N/A	781.2	N/A	0.26/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	1005000	13C8_PFOA	273200	N/A	871.9	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	407900	13C8_PFOA	273200	N/A	948.5	N/A	0.41/ 0.37		

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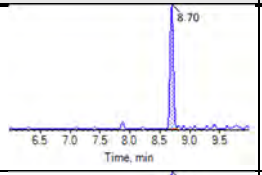
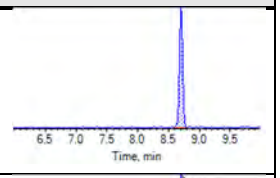
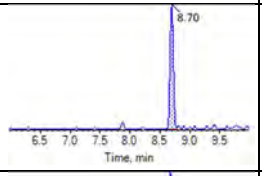
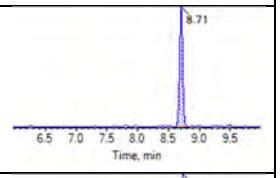
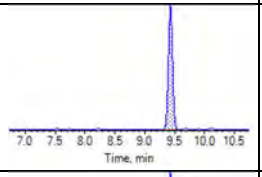
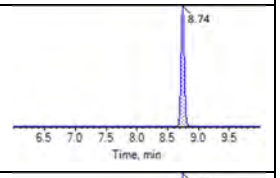
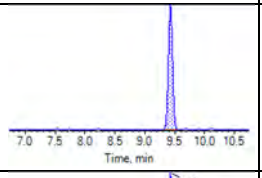
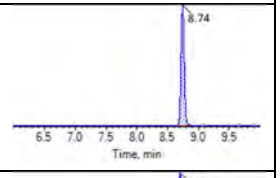
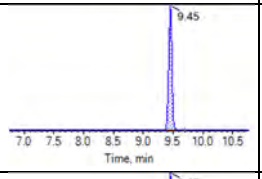
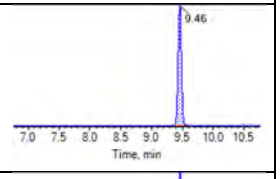
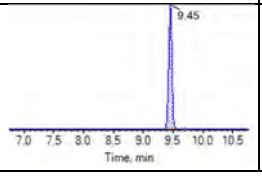
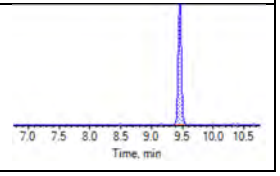
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.70 (8.72)	196400	13C2_6:2 FTS	35310	N/A	1054.8	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	151300	13C2_6:2 FTS	35310	N/A	905.1	N/A	0.77/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	1201000	13C8_PFOS	69290	N/A	888.8	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	256000	13C8_PFOS	69290	N/A	941.5	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	850500	13C9_PFNA	257900	N/A	981.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	205100	13C9_PFNA	257900	N/A	981.4	N/A	0.24/ 0.24		

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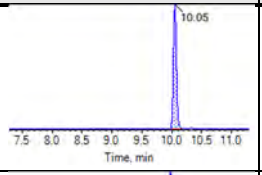
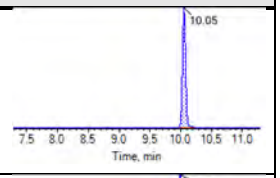
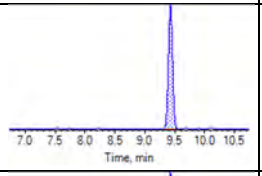
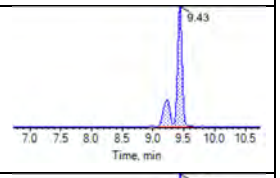
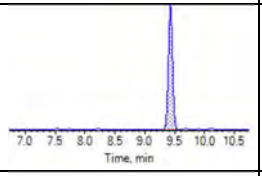
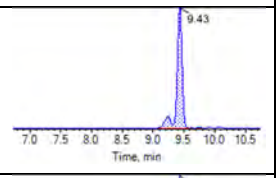
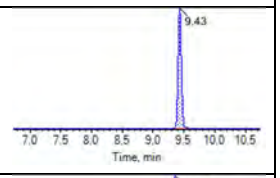
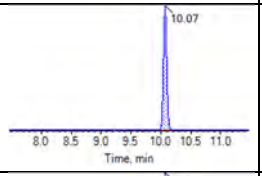
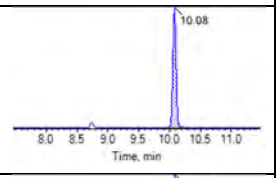
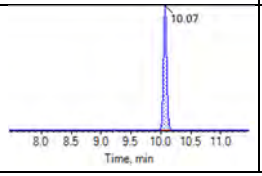
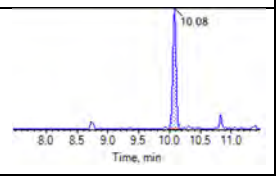
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.05 (10.04)	1561000	13C8_PFOSA	496200	N/A	840.8	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	992200	13C8_PFOS	69290	N/A	881.4	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	163600	13C8_PFOS	69290	N/A	983.8	N/A	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1597000	N/A	N/A	N/A	952.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	742400	13C6_PFDA	166400	N/A	865.6	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	80890	13C6_PFDA	166400	N/A	752.9	N/A	0.11/ 0.13		

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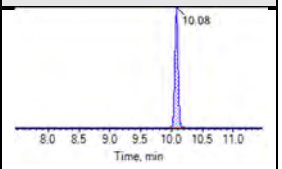
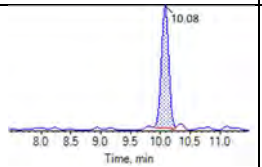
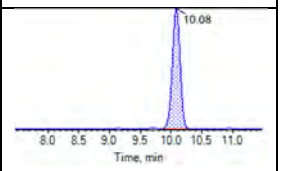
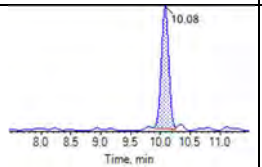
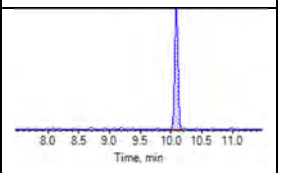
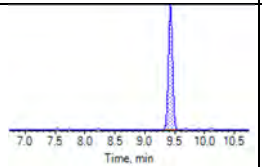
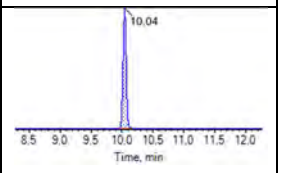
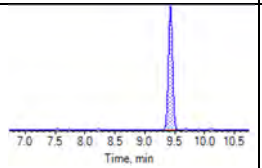
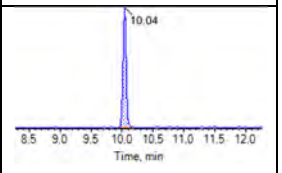
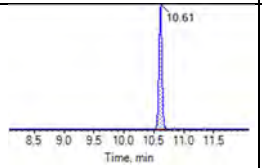
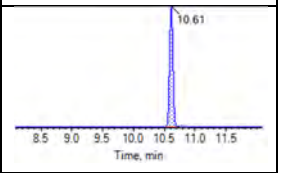
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1100000	N/A	N/A	N/A	953.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	111400	13C2_8:2 FTS	26780	N/A	807.2	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	106100	13C2_8:2 FTS	26780	N/A	793.5	N/A	0.95/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	1084000	13C8_PFOS	69290	N/A	991.3	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	200700	13C8_PFOS	69290	N/A	1007.4	N/A	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	603500	13C7_PFUdA	195000	N/A	868.9	N/A	1.00/ 1.00		

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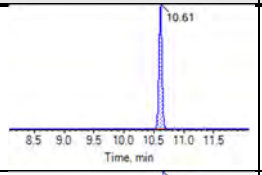
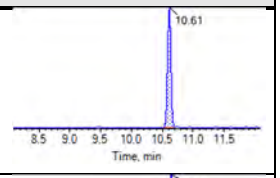
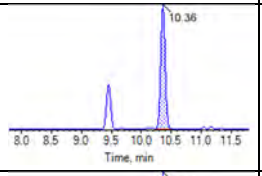
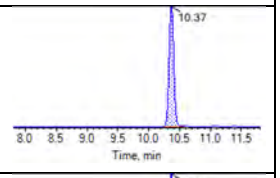
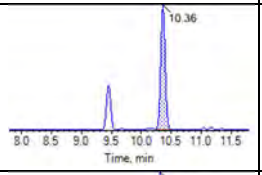
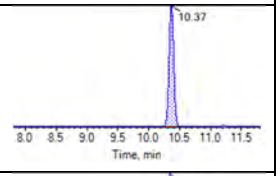
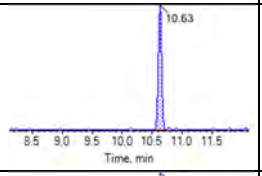
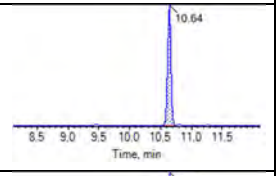
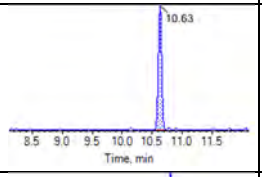
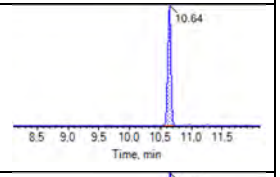
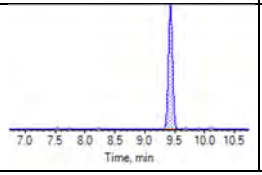
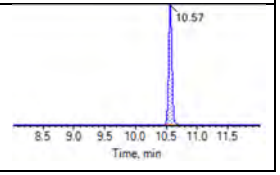
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.61 (10.62)	95590	13C7_PFUdA	195000	N/A	1155.1	N/A	0.16/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	182200	d3-N-MeFOSAA	49380	N/A	930.2	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.37 (10.37)	84630	d3-N-MeFOSAA	49380	N/A	877.3	N/A	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	170400	d5-N-EtFOSAA	50590	N/A	829.6	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	95500	d5-N-EtFOSAA	50590	N/A	978.5	N/A	0.56/ 0.48		
PFDS	599.0 / 80.0	10.57 (10.93)	1231000	13C8_PFOS	69290	N/A	922.4	N/A	1.00/ 1.00		

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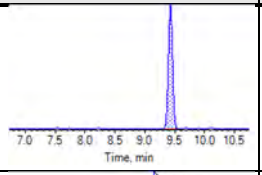
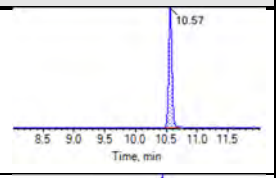
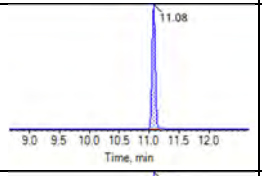
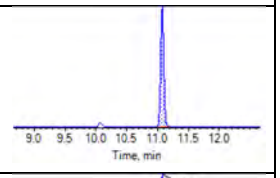
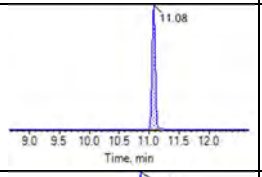
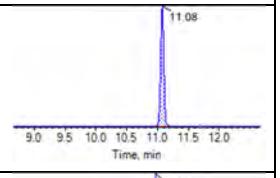
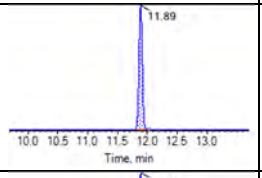
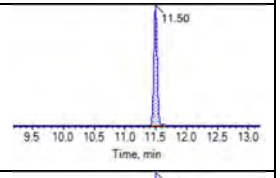
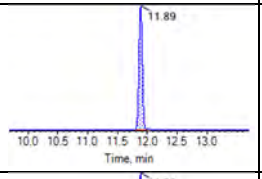
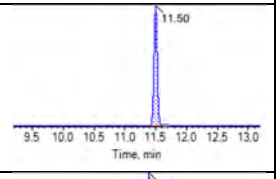
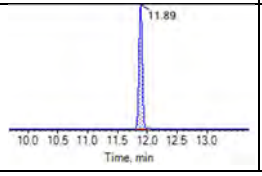
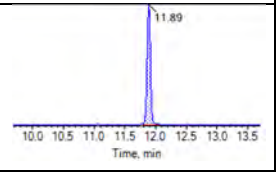
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.57 (10.93)	302200	13C8_PFOS	69290	N/A	850.5	N/A	0.25/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	655400	13C2_PFDoA	167300	N/A	1040.0	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	111400	13C2_PFDoA	167300	N/A	1081.7	N/A	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	539700	13C2_PFTeDA	126100	N/A	870.2	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	124100	13C2_PFTeDA	126100	N/A	904.8	N/A	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	406200	13C2_PFTeDA	126100	N/A	894.1	N/A	1.00/ 1.00		

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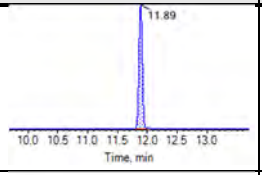
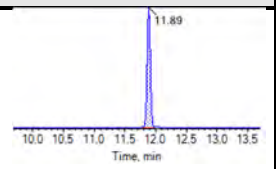
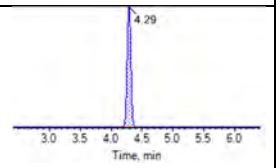
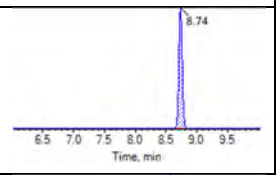
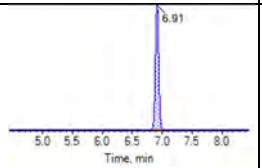
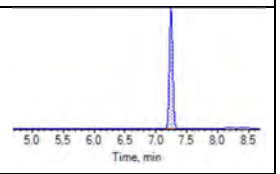
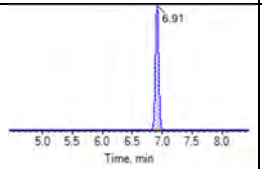
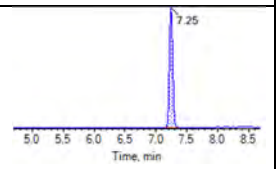
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	95100	13C2_PFTeDA	126100	N/A	950.7	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1712000	N/A	N/A	N/A	989.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1243000	N/A	N/A	N/A	1010.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	770200	13C5_PFHxA	326600	N/A	948.1	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	604700	13C5_PFHxA	326600	N/A	989.3	N/A	0.79/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**1203908644**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**16MW06_1017MS**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 02:45**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**266.33 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117096.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0196	ug/L	0.00124	0.0025	0.00375
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0153	ug/L	0.00124	0.0025	0.00375
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0166	ug/L	0.00062	0.00126	0.00167
335-76-2	Perfluorodecanoic acid (PFDA)		0.0178	ug/L	0.000732	0.00126	0.00188
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0185	ug/L	0.00062	0.00126	0.00188
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0205	ug/L	0.00062	0.00126	0.00188
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0213	ug/L	0.00062	0.00115	0.00171
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0217	ug/L	0.00062	0.00126	0.00188
375-95-1	Perfluorononanoic acid (PFNA)		0.0191	ug/L	0.00062	0.00124	0.00188
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0466	ug/L	0.00062	0.00124	0.00188
335-67-1	Perfluorooctanoic acid (PFOA)		0.0287	ug/L	0.000657	0.00124	0.00188
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0169	ug/L	0.00062	0.00124	0.00188
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0168	ug/L	0.00062	0.00124	0.00188
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0173	ug/L	0.00062	0.00124	0.00188

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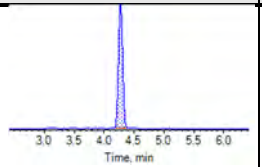
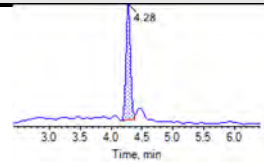
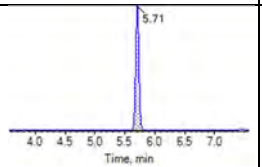
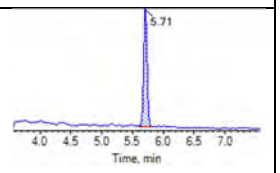
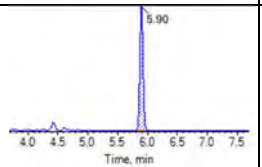
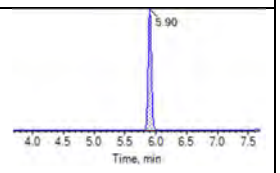
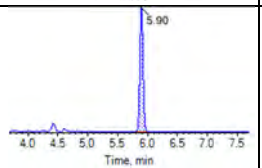
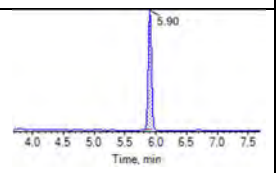
PFC103117096.wiff			
Sample Name	1203908644	**Injection Vial**	31
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117096.wiff
Acquisition Date	11/2/2017 02:45:18	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117096.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	1093000	13C4_PFBA	131800	N/A	1176.5	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	1093000	13C5_PFPeA	243700	N/A	1042.9	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1442000	13C3_PFBS	165000	N/A	886.5	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	629900	13C3_PFBS	165000	N/A	862.6	N/A	0.44/ 0.45		

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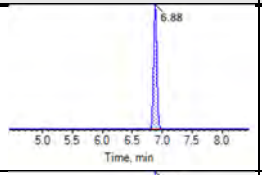
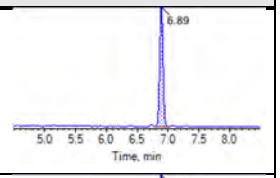
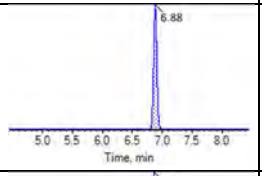
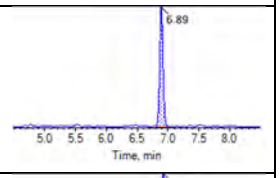
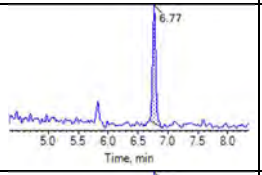
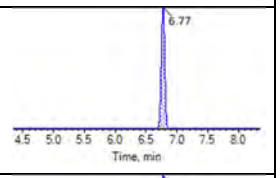
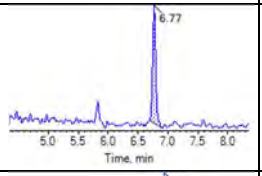
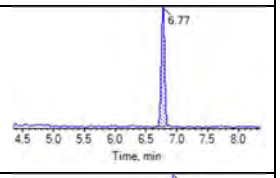
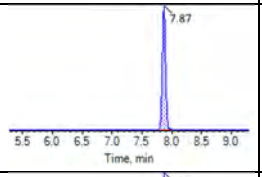
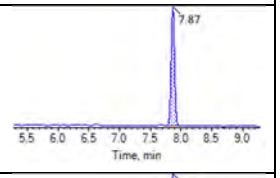
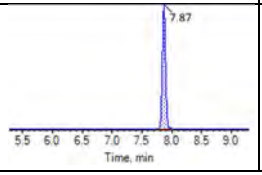
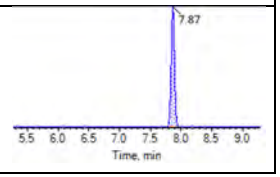
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.89 (6.92)	1228000	13C5_PFHxA	280600	N/A	1153.4	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	99910	13C5_PFHxA	280600	N/A	1326.9	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.77 (6.80)	273700	13C2_4:2 FTS	45620	N/A	1002.1	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.77 (6.80)	204100	13C2_4:2 FTS	45620	N/A	1039.9	N/A	0.75/ 0.72		
PFHpA	363.0 / 319.0	7.87 (7.93)	1131000	13C4_PFHpA	247500	N/A	1092.4	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.87 (7.93)	284300	13C4_PFHpA	247500	N/A	1050.3	N/A	0.25/ 0.26		

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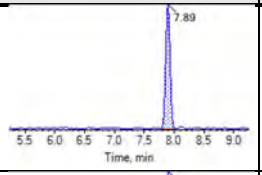
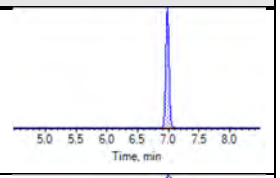
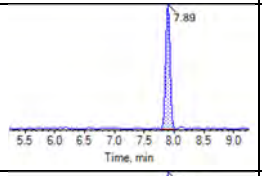
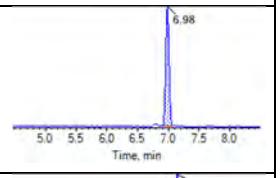
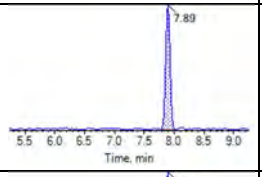
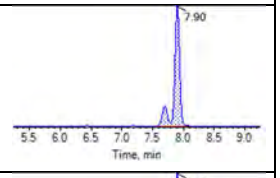
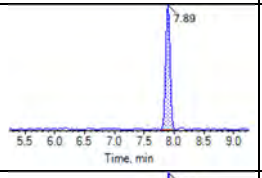
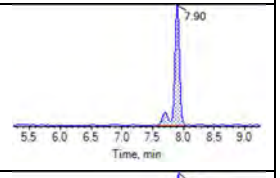
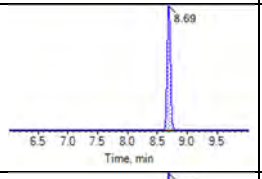
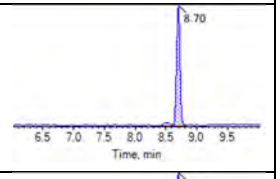
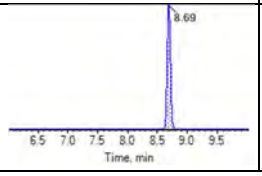
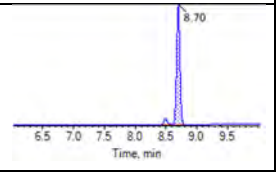
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.98 (7.02)	1502000	13C3_PFHxS	74140	N/A	967.4	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.98 (7.02)	513800	13C3_PFHxS	74140	N/A	947.4	N/A	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.90 (7.96)	1624000	13C3_PFHxS	74140	N/A	1135.5	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.90 (7.96)	451800	13C3_PFHxS	74140	N/A	1251.1	N/A	0.28/ 0.25		
PFOA	413.0 / 369.0	8.70 (8.75)	1581000	13C8_PFOA	244800	N/A	1530.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.70 (8.75)	639800	13C8_PFOA	244800	N/A	1659.9	N/A	0.40/ 0.37		

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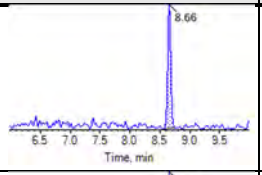
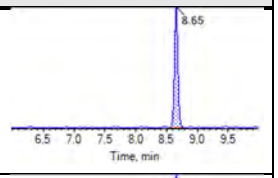
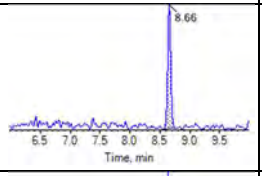
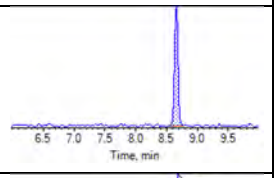
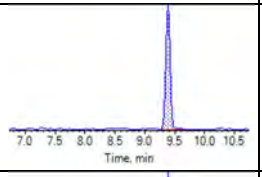
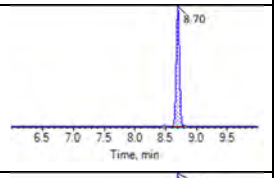
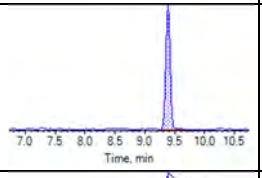
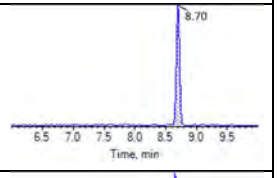
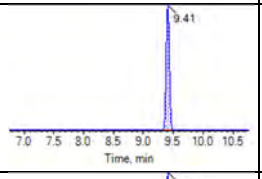
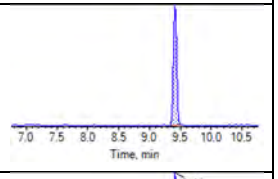
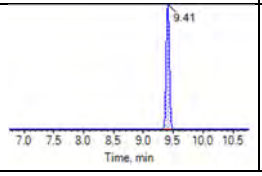
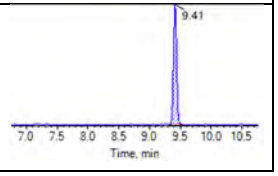
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.65 (8.72)	169900	13C2_6:2 FTS	37250	N/A	865.1	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	136300	13C2_6:2 FTS	37250	N/A	772.7	N/A	0.80/ 0.91		
PFHpS	449.0 / 80.0	8.70 (8.76)	1127000	13C8_PFOS	54700	N/A	1056.9	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.70 (8.76)	240400	13C8_PFOS	54700	N/A	1119.6	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.41 (9.47)	787500	13C9_PFNA	229900	N/A	1019.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.41 (9.47)	193600	13C9_PFNA	229900	N/A	1039.5	N/A	0.25/ 0.24		

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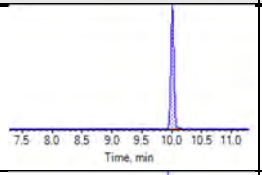
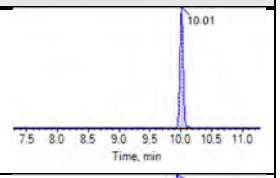
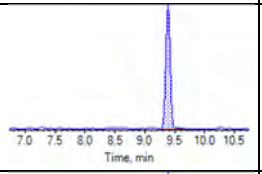
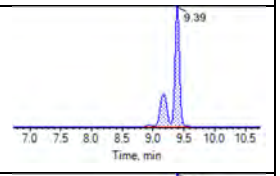
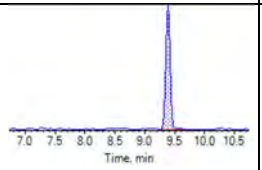
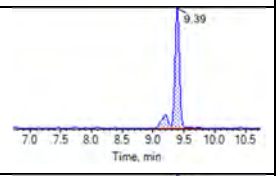
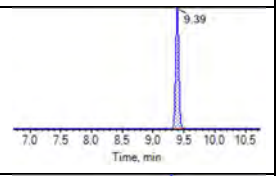
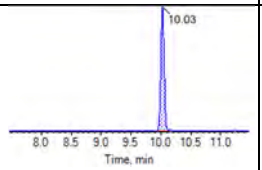
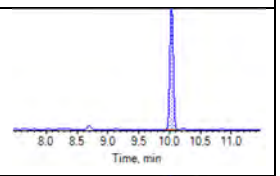
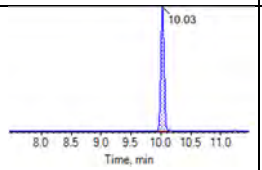
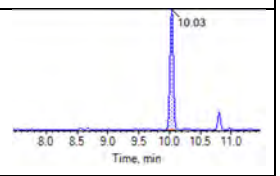
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.01 (10.04)	1383000	13C8_PFOSA	435800	N/A	848.3	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	2206000	13C8_PFOS	54700	N/A	2482.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	325700	13C8_PFOS	54700	N/A	2481.5	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1581000	N/A	N/A	N/A	942.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.03 (10.08)	620400	13C6_PFDA	126700	N/A	950.3	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	78630	13C6_PFDA	126700	N/A	961.5	N/A	0.13/ 0.13		

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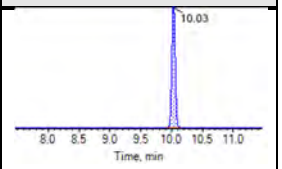
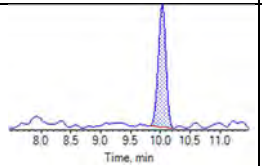
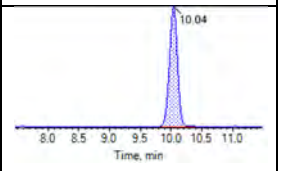
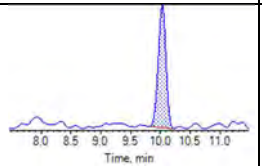
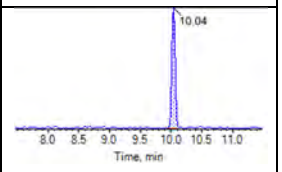
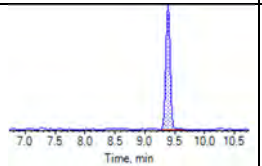
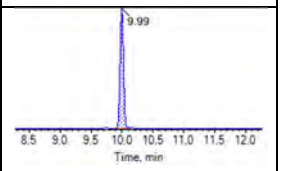
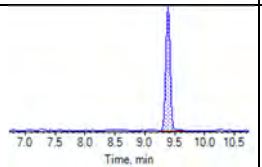
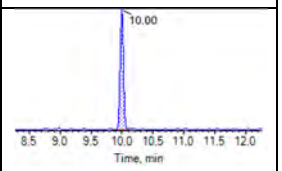
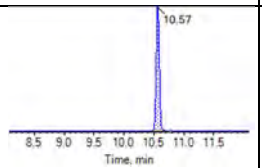
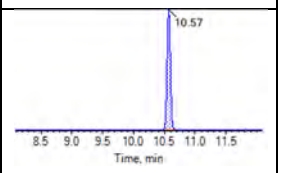
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.03 (10.02)	1004000	N/A	N/A	N/A	869.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.04 (10.09)	105200	13C2_8:2 FTS	25200	N/A	809.8	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	98010	13C2_8:2 FTS	25200	N/A	778.6	N/A	0.93/ 0.96		
PFNS	549.0 / 80.0	9.99 (10.49)	856600	13C8_PFOS	54700	N/A	992.1	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	176900	13C8_PFOS	54700	N/A	1124.8	N/A	0.21/ 0.18		
PFUdA	563.0 / 519.0	10.57 (10.62)	557500	13C7_PFUdA	169700	N/A	922.2	N/A	1.00/ 1.00		

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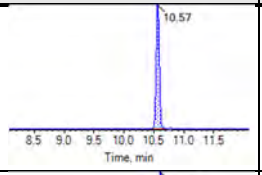
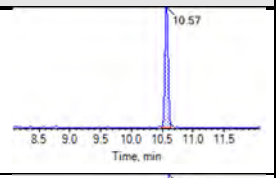
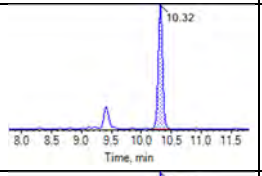
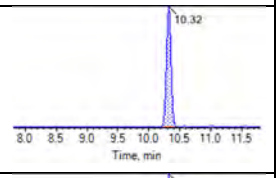
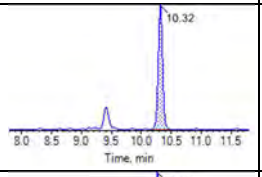
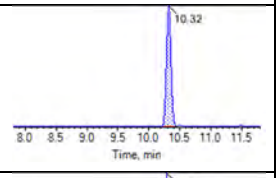
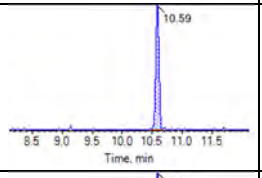
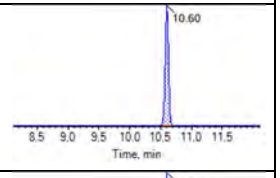
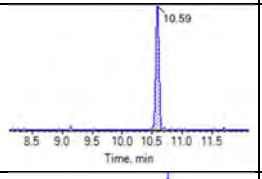
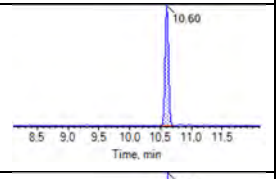
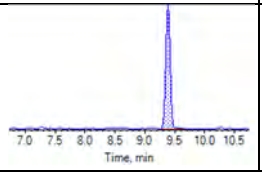
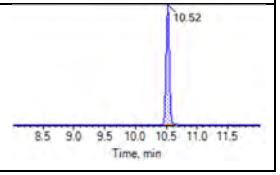
PFUdA_2	563.0 / 169.0	10.57 (10.62)	82550	13C7_PFUdA	169700	N/A	1146.0	N/A	0.15/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.32 (10.37)	145700	d3-N-MeFOSAA	45210	N/A	812.6	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.32 (10.37)	77670	d3-N-MeFOSAA	45210	N/A	879.4	N/A	0.53/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.60 (10.64)	155600	d5-N-EtFOSAA	36660	N/A	1045.7	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.60 (10.64)	83010	d5-N-EtFOSAA	36660	N/A	1173.6	N/A	0.53/ 0.48		
PFDS	599.0 / 80.0	10.52 (10.93)	960500	13C8_PFOS	54700	N/A	912.0	N/A	1.00/ 1.00		

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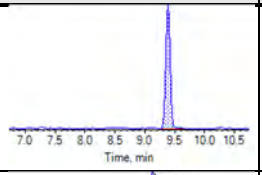
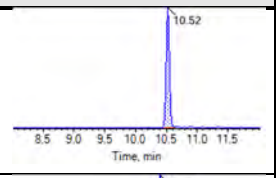
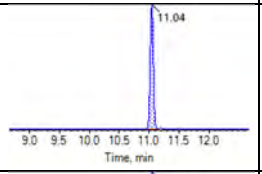
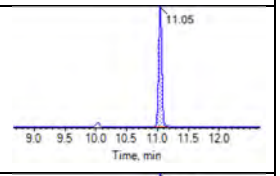
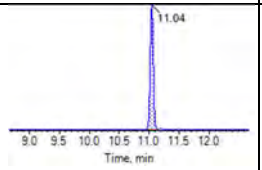
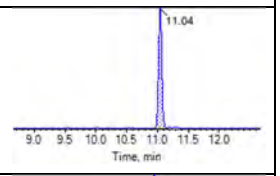
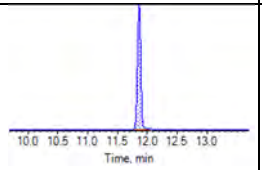
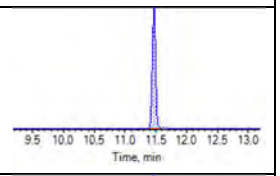
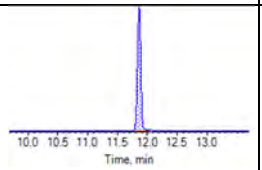
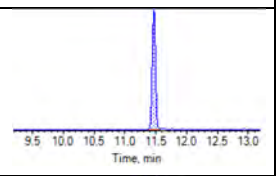
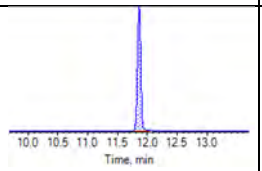
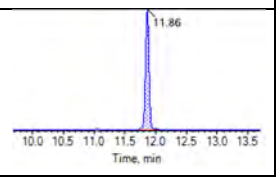
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.52 (10.93)	268800	13C8_PFOS	54700	N/A	958.2	N/A	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	527300	13C2_PFDoA	141800	N/A	987.3	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.04 (11.09)	95320	13C2_PFDoA	141800	N/A	1091.9	N/A	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	443500	13C2_PFTeDA	101000	N/A	893.4	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	104600	13C2_PFTeDA	101000	N/A	953.1	N/A	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.86 (11.91)	327100	13C2_PFTeDA	101000	N/A	899.7	N/A	1.00/ 1.00		

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LCMSMS#6

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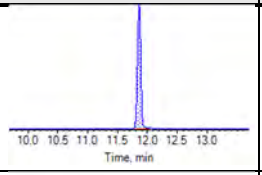
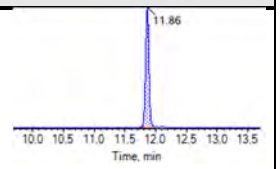
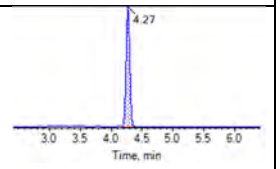
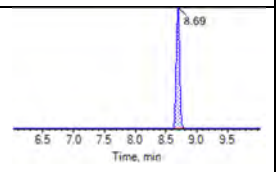
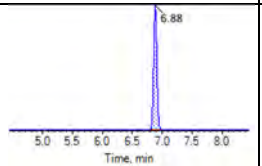
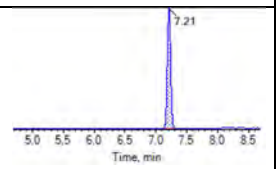
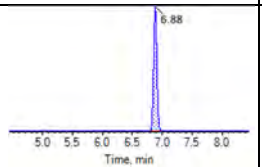
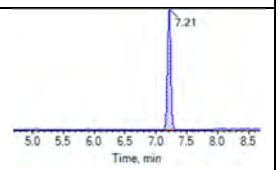
PFC103117096.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.86 (11.91)	76520	13C2_PFTeDA	101000	N/A	955.7	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1414000	N/A	N/A	N/A	817.2	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1138000	N/A	N/A	N/A	925.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.21 (7.26)	838900	13C5_PFHxA	280600	N/A	1202.2	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.21 (7.26)	563700	13C5_PFHxA	280600	N/A	1073.7	N/A	0.67/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**436518**	**Date Collected:**	**10/26/2017 09:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**1203908646**	**Date Received:**	**10/27/2017 08:55**		
Client Sample:	**QC for batch 1714400**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**16MW06_1017MSD**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1714407**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/02/2017 03:06**	**Analyst:**	**JLS**		
Prep Date:	**10/31/2017 12:00**	**Aliquot:**	**274.66 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117097.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0156	ug/L	0.0012	0.00242	0.00364
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0151	ug/L	0.0012	0.00242	0.00364
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0151	ug/L	0.000601	0.00122	0.00162
335-76-2	Perfluorodecanoic acid (PFDA)		0.0171	ug/L	0.00071	0.00122	0.00182
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0202	ug/L	0.000601	0.00122	0.00182
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.018	ug/L	0.000601	0.00122	0.00182
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0172	ug/L	0.000601	0.00111	0.00166
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0194	ug/L	0.000601	0.00122	0.00182
375-95-1	Perfluorononanoic acid (PFNA)		0.0184	ug/L	0.000601	0.0012	0.00182
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0458	ug/L	0.000601	0.0012	0.00182
335-67-1	Perfluorooctanoic acid (PFOA)		0.0251	ug/L	0.000637	0.0012	0.00182
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0169	ug/L	0.000601	0.0012	0.00182
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0171	ug/L	0.000601	0.0012	0.00182
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0195	ug/L	0.000601	0.0012	0.00182

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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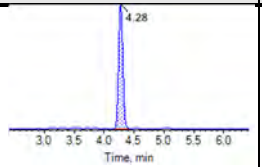
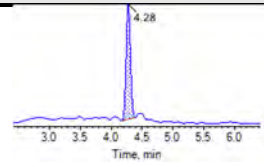
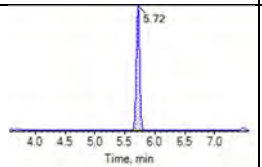
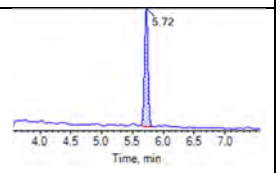
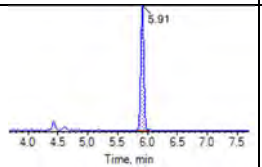
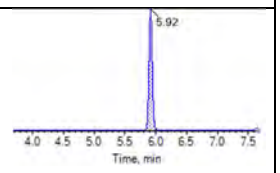
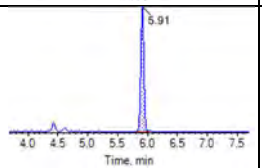
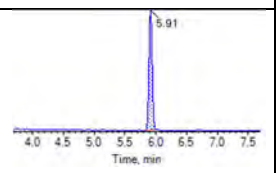
PFC103117097.wiff			
Sample Name	1203908646	**Injection Vial**	32
Batch|Dilution|Analyst	1714407|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117097.wiff
Acquisition Date	11/2/2017 03:06:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117097.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.28 (4.25)	1038000	13C4_PFBA	133300	N/A	1105.1	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.72 (5.69)	1058000	13C5_PFPeA	237500	N/A	1035.7	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	5.92 (5.89)	1349000	13C3_PFBS	164500	N/A	832.0	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	615300	13C3_PFBS	164500	N/A	845.4	N/A	0.46/ 0.45		

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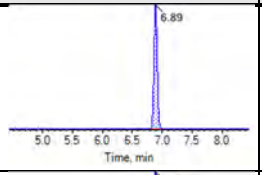
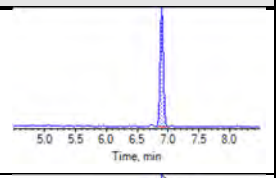
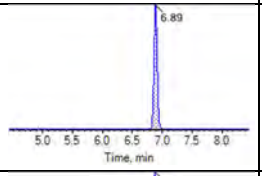
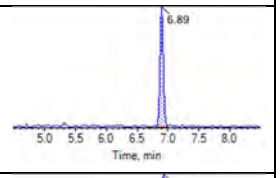
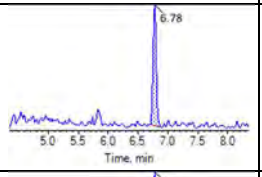
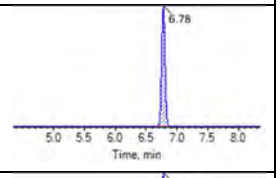
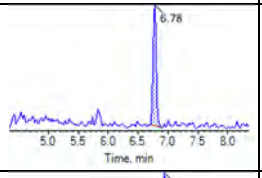
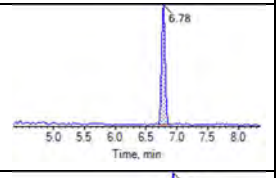
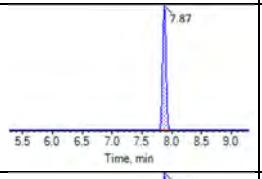
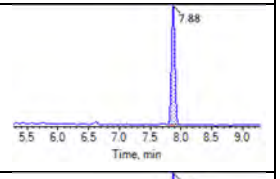
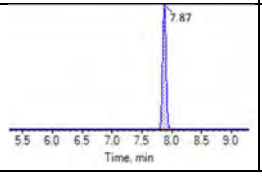
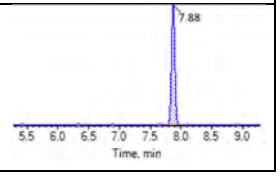
PFC103117097.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.90 (6.92)	1210000	13C5_PFHxA	298800	N/A	1066.8	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.89 (6.92)	83230	13C5_PFHxA	298800	N/A	1037.8	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.78 (6.80)	278800	13C2_4:2 FTS	52400	N/A	888.8	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	176700	13C2_4:2 FTS	52400	N/A	784.1	N/A	0.63/ 0.72		
PFHpA	363.0 / 319.0	7.88 (7.93)	1085000	13C4_PFHpA	261800	N/A	990.9	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.88 (7.93)	280800	13C4_PFHpA	261800	N/A	981.0	N/A	0.26/ 0.26		

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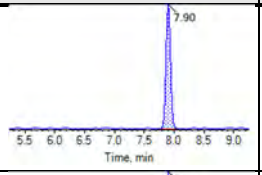
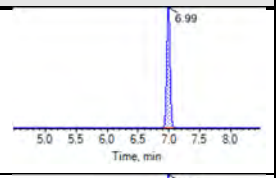
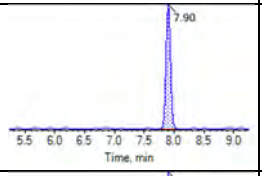
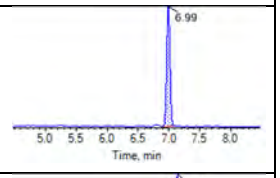
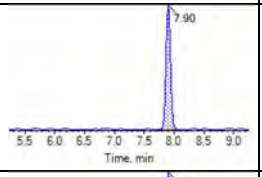
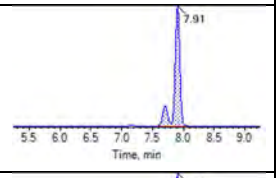
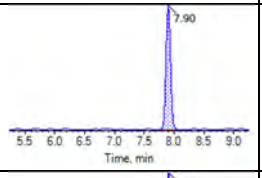
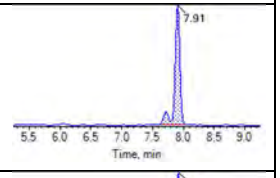
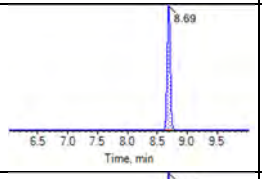
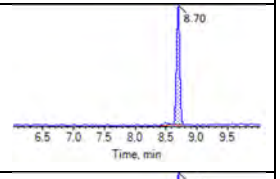
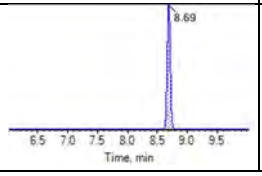
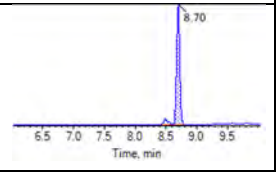
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.99 (7.02)	1423000	13C3_PFHxS	84340	N/A	806.0	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.99 (7.02)	511900	13C3_PFHxS	84340	N/A	829.8	N/A	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.91 (7.96)	1539000	13C3_PFHxS	84340	N/A	946.3	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.91 (7.96)	413700	13C3_PFHxS	84340	N/A	1007.0	N/A	0.27/ 0.25		
PFOA	413.0 / 369.0	8.70 (8.75)	1435000	13C8_PFOA	246800	N/A	1378.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.70 (8.75)	584100	13C8_PFOA	246800	N/A	1503.4	N/A	0.41/ 0.37		

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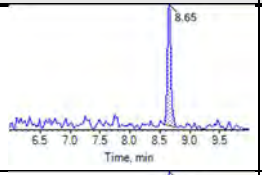
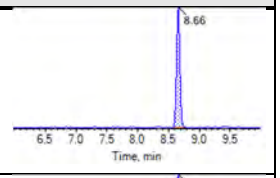
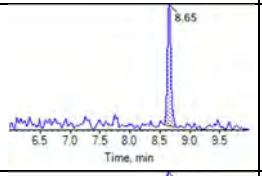
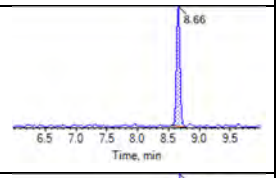
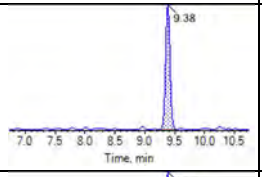
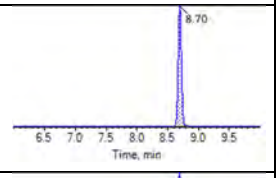
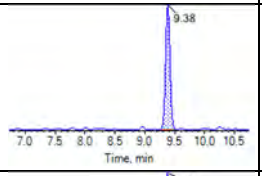
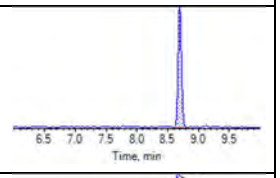
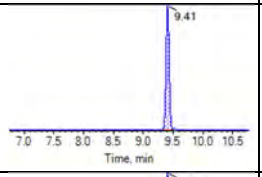
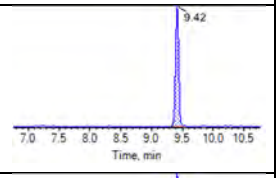
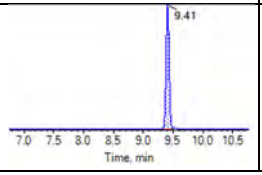
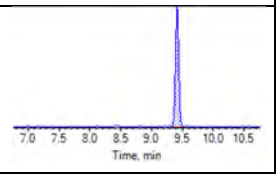
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.66 (8.72)	184100	13C2_6:2 FTS	37790	N/A	923.8	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.66 (8.72)	163000	13C2_6:2 FTS	37790	N/A	910.6	N/A	0.89/ 0.91		
PFHpS	449.0 / 80.0	8.70 (8.76)	1129000	13C8_PFOS	54430	N/A	1064.1	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.69 (8.76)	215000	13C8_PFOS	54430	N/A	1006.2	N/A	0.19/ 0.20		
PFNA	463.0 / 419.0	9.42 (9.47)	760800	13C9_PFNA	224500	N/A	1008.3	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.42 (9.47)	183500	13C9_PFNA	224500	N/A	1008.6	N/A	0.24/ 0.24		

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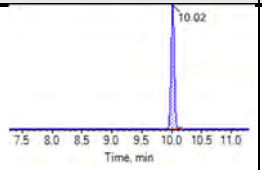
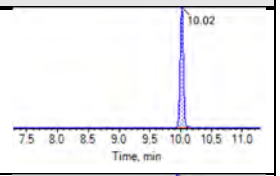
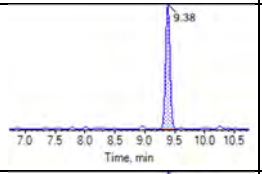
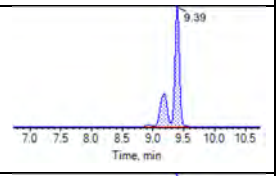
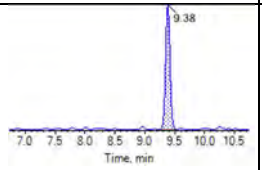
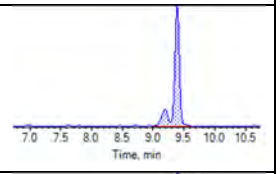
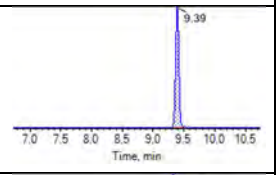
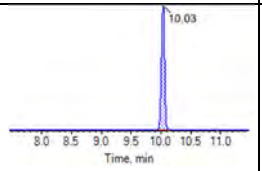
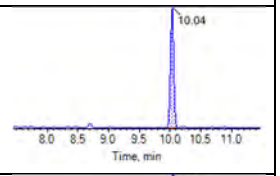
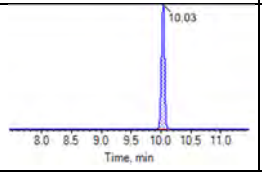
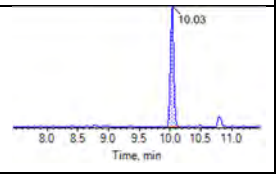
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.02 (10.04)	1339000	13C8_PFOSA	446300	N/A	801.9	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.39 (9.45)	2223000	13C8_PFOS	54430	N/A	2514.5	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.39 (9.45)	331400	13C8_PFOS	54430	N/A	2537.5	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.39 (9.45)	1521000	N/A	N/A	N/A	906.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.04 (10.08)	644300	13C6_PFDA	132700	N/A	941.9	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.03 (10.08)	74670	13C6_PFDA	132700	N/A	871.5	N/A	0.12/ 0.13		

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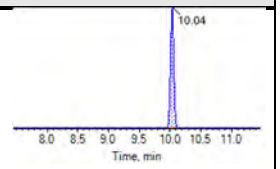
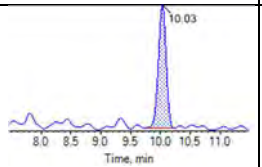
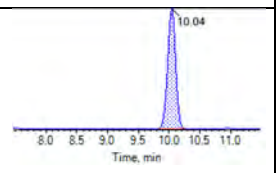
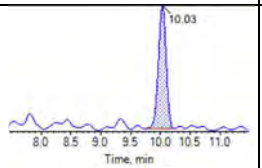
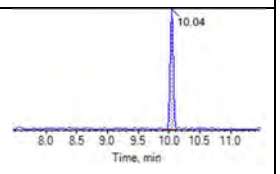
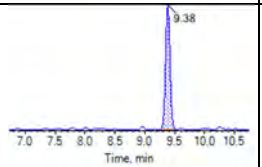
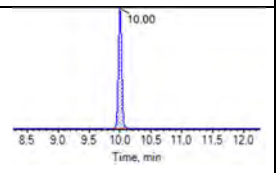
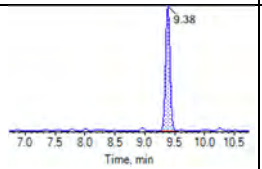
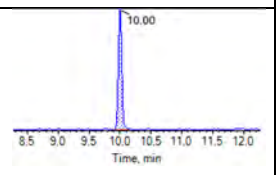
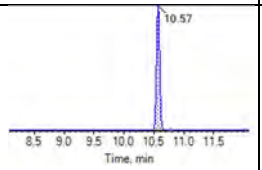
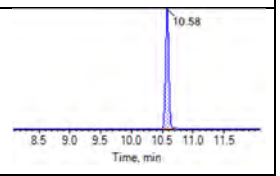
13C2_PFDA	515.0 / 470.0	10.04 (10.02)	1063000	N/A	N/A	N/A	921.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.04 (10.09)	103600	13C2_8:2 FTS	25040	N/A	802.7	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.04 (10.09)	81330	13C2_8:2 FTS	25040	N/A	650.1	N/A	0.78/ 0.96		
PFNS	549.0 / 80.0	10.00 (10.49)	836600	13C8_PFOS	54430	N/A	973.9	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.00 (10.49)	168200	13C8_PFOS	54430	N/A	1075.1	N/A	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.58 (10.62)	635000	13C7_PFUdA	166100	N/A	1073.8	N/A	1.00/ 1.00		

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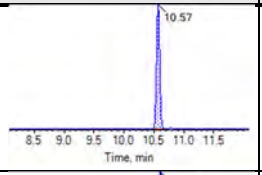
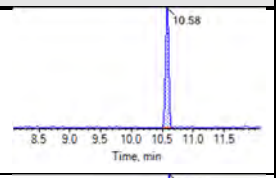
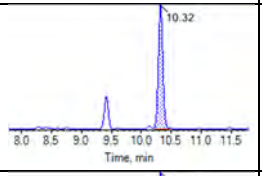
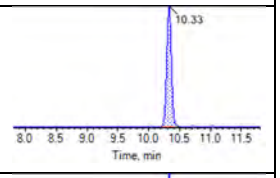
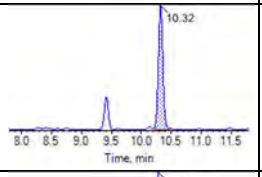
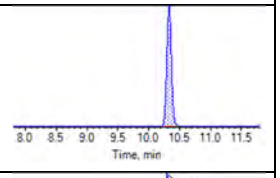
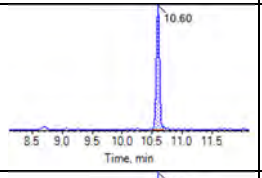
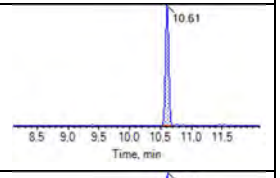
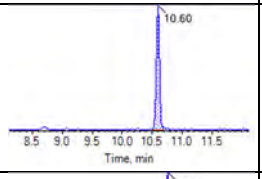
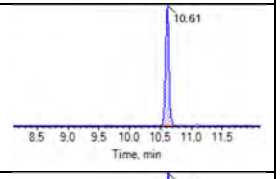
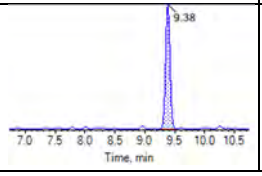
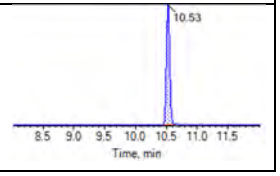
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.58 (10.62)	83090	13C7_PFUdA	166100	N/A	1179.1	N/A	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.33 (10.37)	154000	d3-N-MeFOSAA	46700	N/A	831.3	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.33 (10.37)	75000	d3-N-MeFOSAA	46700	N/A	822.1	N/A	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.61 (10.64)	161300	d5-N-EtFOSAA	46350	N/A	857.3	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.61 (10.64)	78990	d5-N-EtFOSAA	46350	N/A	883.3	N/A	0.49/ 0.48		
PFDS	599.0 / 80.0	10.53 (10.93)	997600	13C8_PFOS	54430	N/A	952.1	N/A	1.00/ 1.00		

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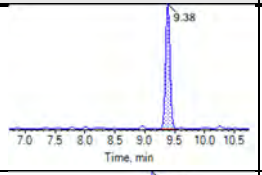
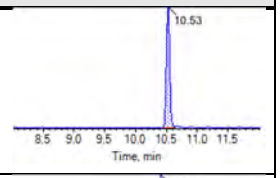
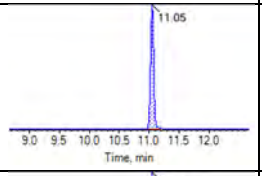
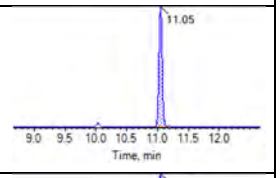
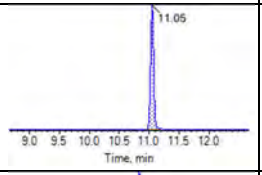
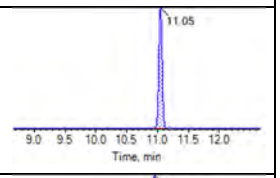
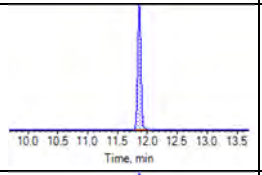
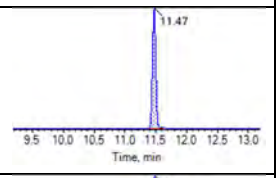
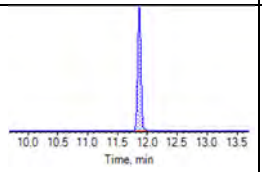
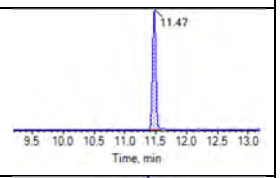
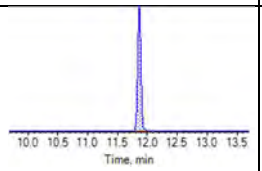
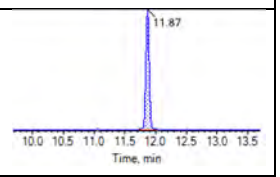
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.53 (10.93)	248600	13C8_PFOS	54430	N/A	890.6	N/A	0.25/ 0.27		
PFDoA	613.0 / 569.0	11.05 (11.09)	573600	13C2_PFDoA	137000	N/A	1111.5	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.05 (11.09)	96920	13C2_PFDoA	137000	N/A	1149.0	N/A	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	481900	13C2_PFTeDA	104300	N/A	939.4	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	103300	13C2_PFTeDA	104300	N/A	910.1	N/A	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.87 (11.91)	349500	13C2_PFTeDA	104300	N/A	929.9	N/A	1.00/ 1.00		

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LCMSMS#6

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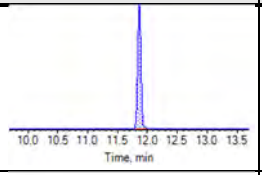
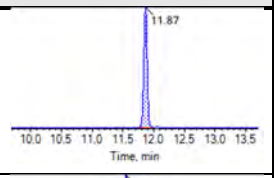
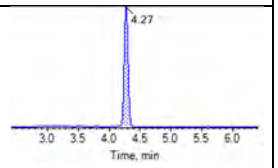
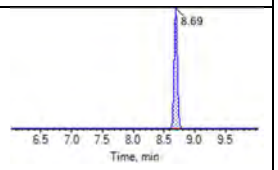
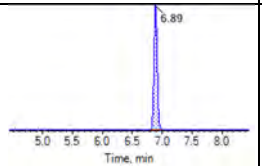
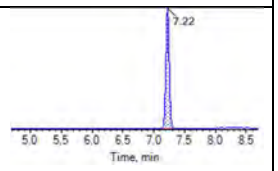
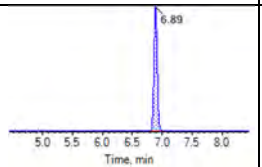
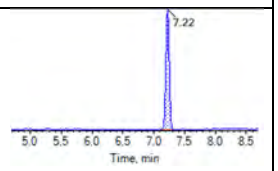
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.87 (11.91)	76610	13C2_PFTeDA	104300	N/A	925.7	N/A	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.27 (4.60)	1429000	N/A	N/A	N/A	826.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.69 (8.75)	1285000	N/A	N/A	N/A	1044.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.22 (7.26)	778500	13C5_PFHxA	298800	N/A	1047.5	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.22 (7.26)	498800	13C5_PFHxA	298800	N/A	892.0	N/A	0.64/ 0.75		

Initial Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 16:34

Data File: PFC103117002.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID ICB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

GC
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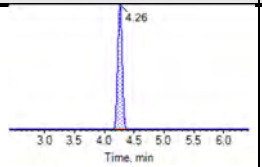
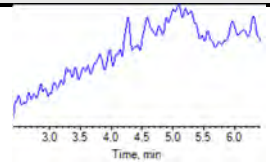
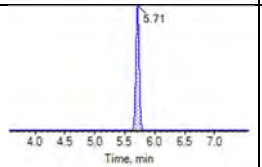
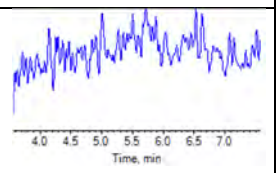
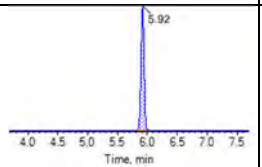
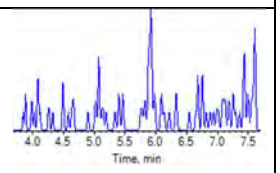
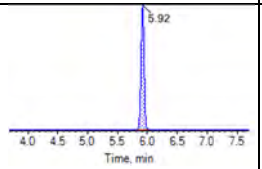
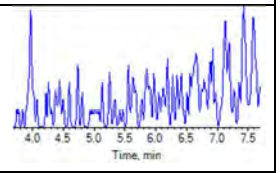
PFC103117002.wiff			
Sample Name	PFCIBLK01	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117002.wiff
Acquisition Date	10/31/2017 16:34:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117002.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	167800	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	266600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 0.45		

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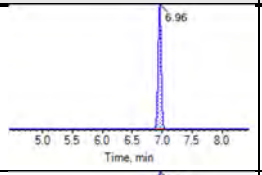
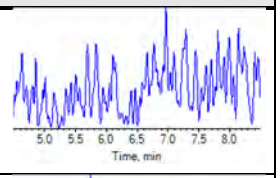
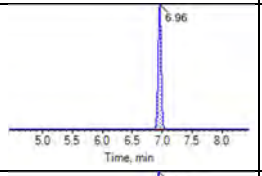
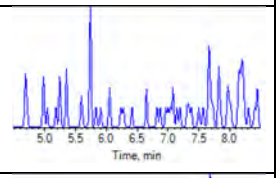
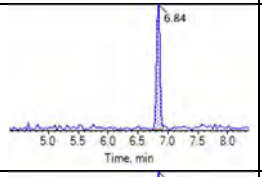
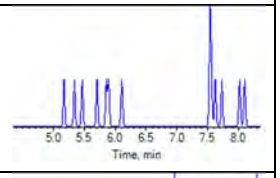
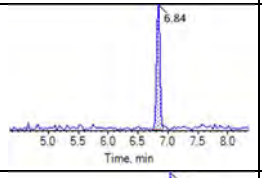
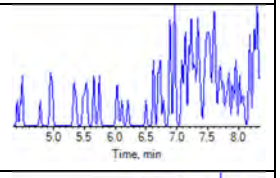
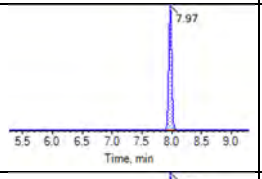
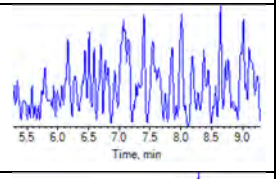
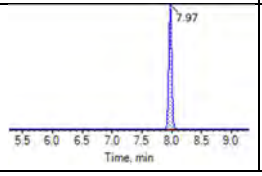
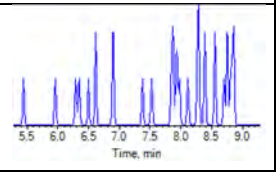
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 0.26		

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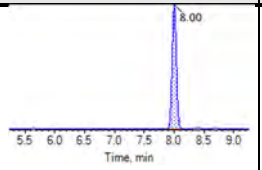
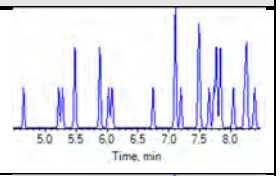
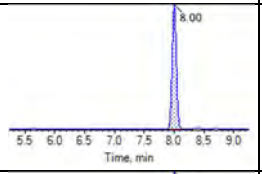
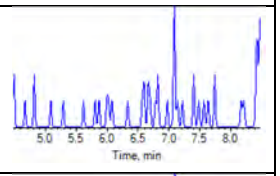
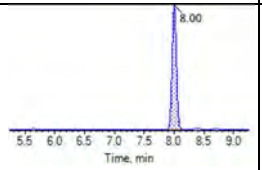
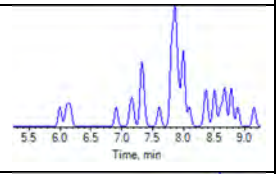
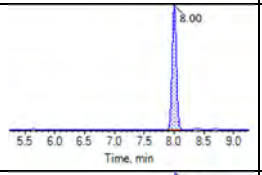
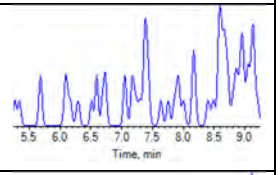
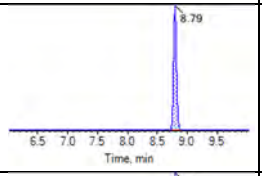
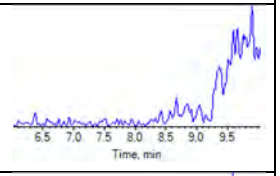
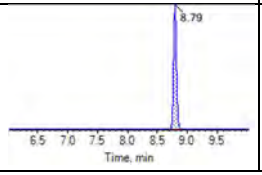
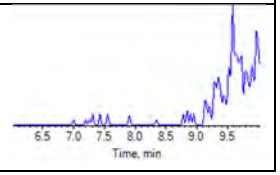
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 0.37		

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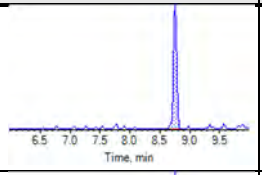
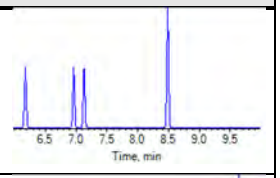
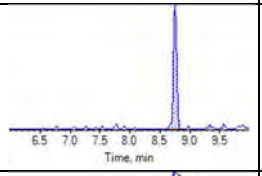
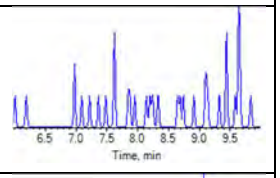
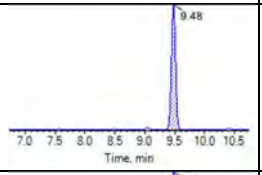
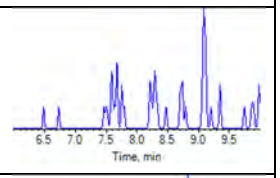
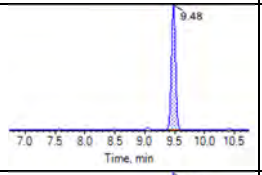
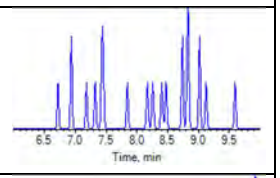
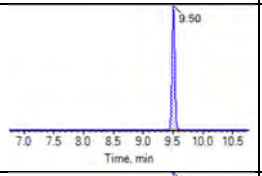
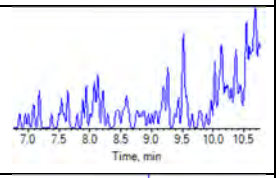
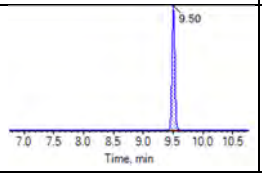
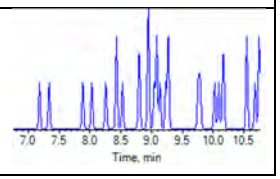
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 0.24		

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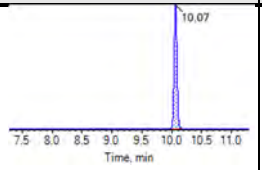
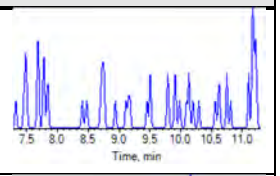
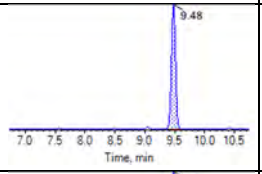
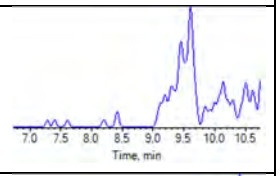
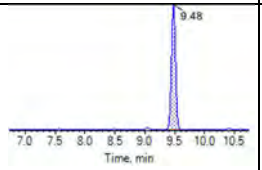
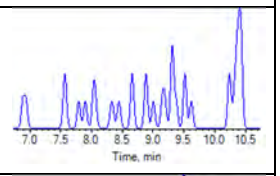
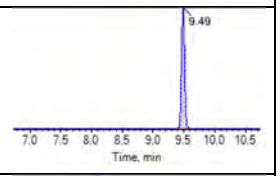
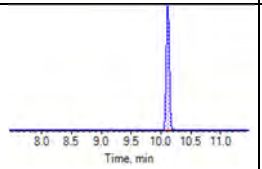
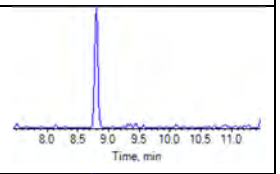
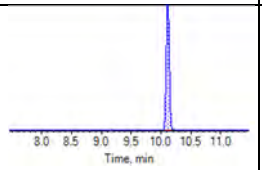
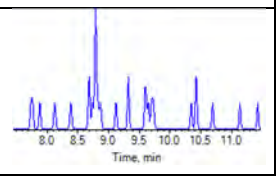
PFC103117002.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	601400	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.49 (9.45)	1652000	N/A	N/A	N/A	985.1	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 0.13		

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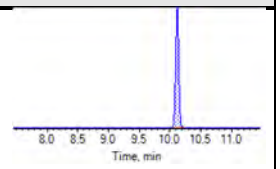
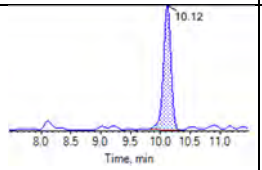
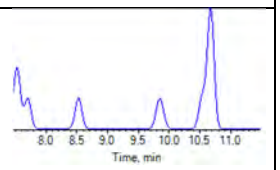
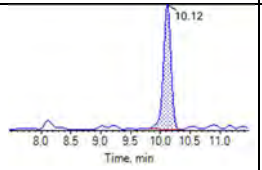
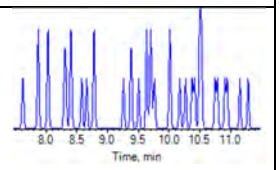
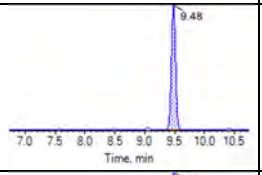
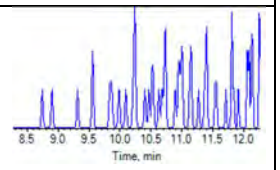
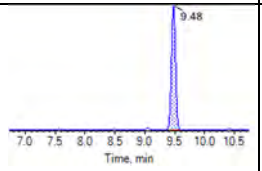
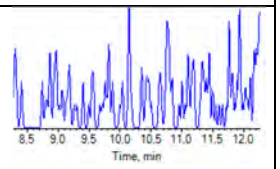
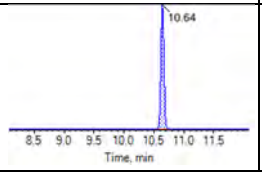
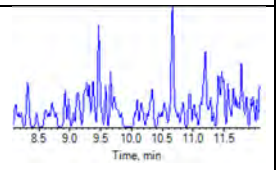
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.12 (10.02)	1236000	N/A	N/A	N/A	1071.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 1.00		

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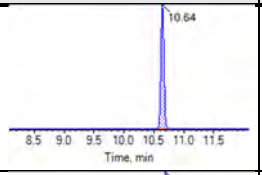
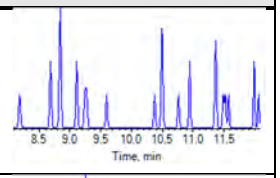
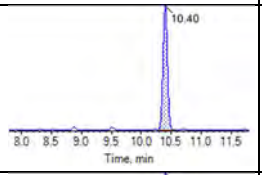
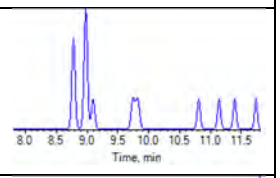
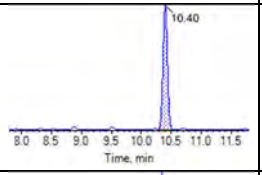
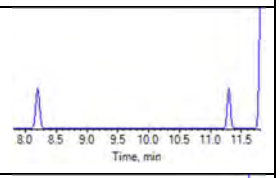
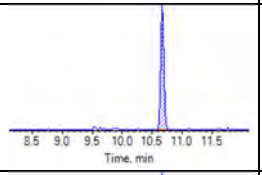
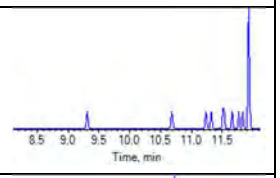
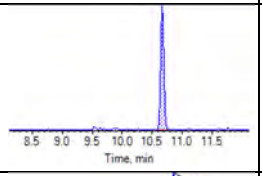
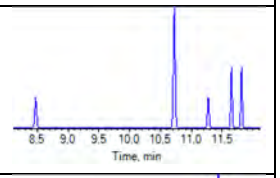
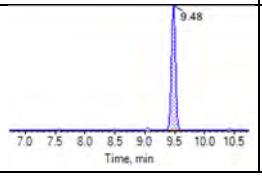
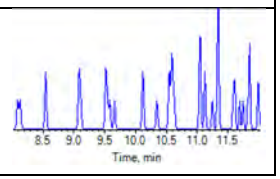
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		

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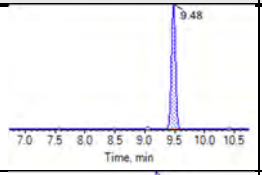
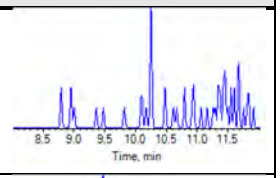
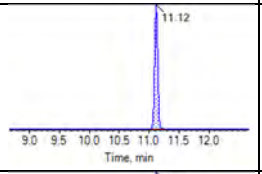
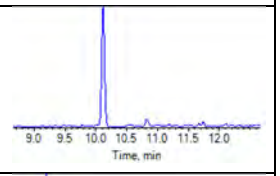
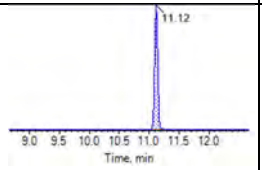
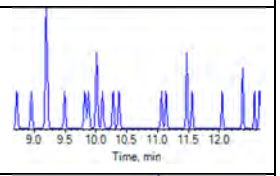
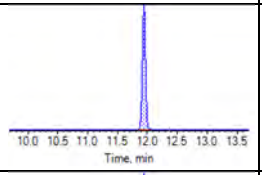
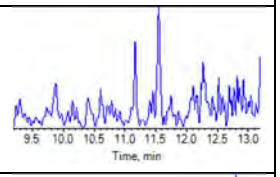
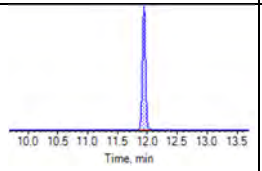
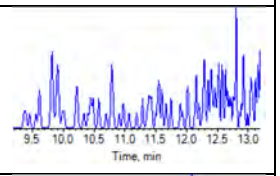
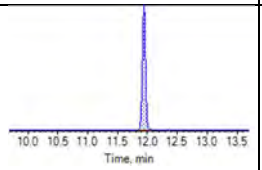
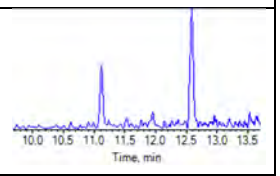
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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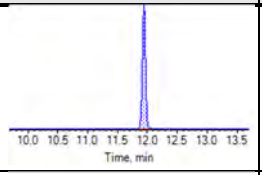
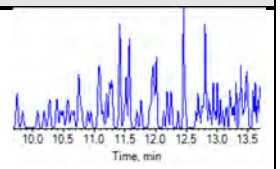
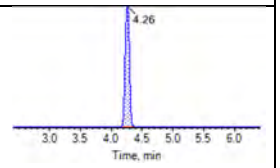
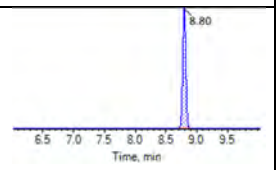
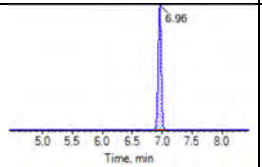
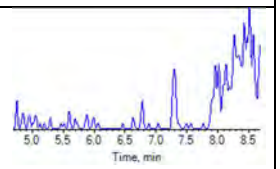
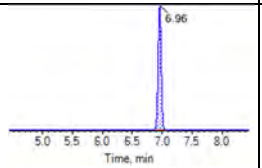
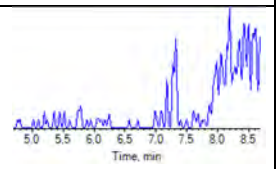
PFC103117002.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1805000	N/A	N/A	N/A	1043.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.80 (8.75)	1241000	N/A	N/A	N/A	1008.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 21:12

Data File: PFC103117015.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

GC
11/06/2017

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LCMSMS#6

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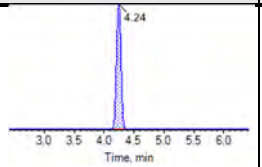
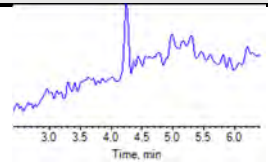
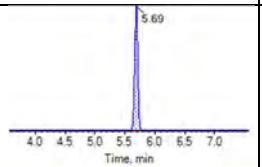
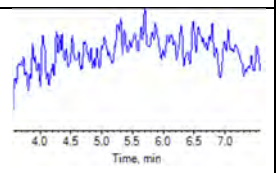
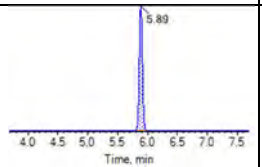
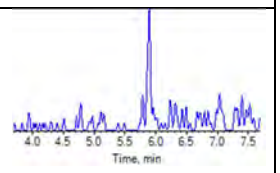
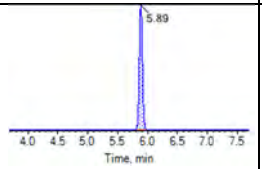
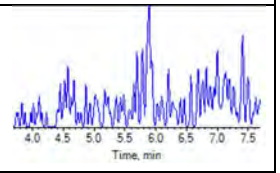
PFC103117015.wiff			
Sample Name	PFCIBLK02	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117015.wiff
Acquisition Date	10/31/2017 21:12:40	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117015.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	173300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	262000	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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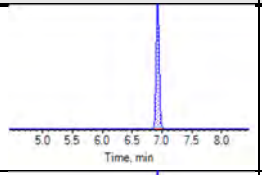
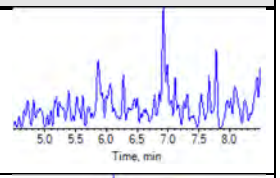
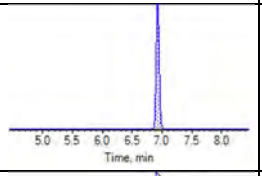
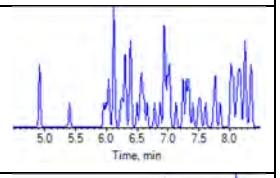
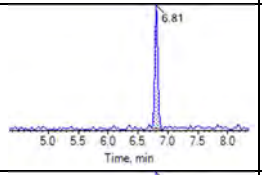
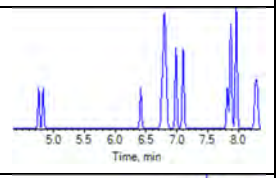
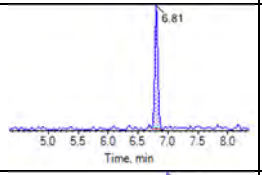
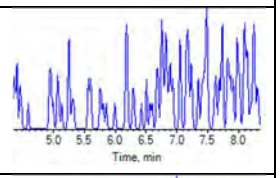
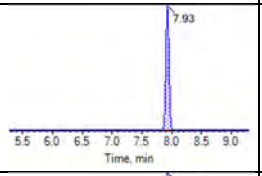
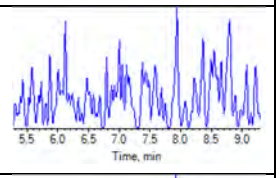
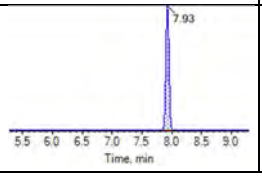
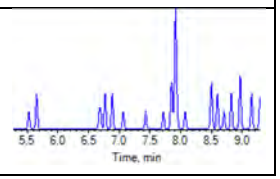
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 0.26		

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LCMSMS#6

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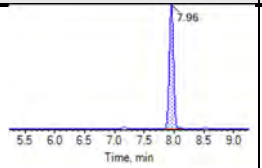
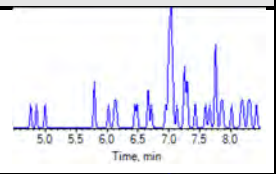
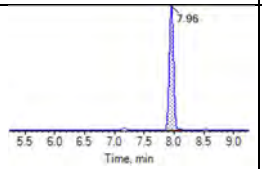
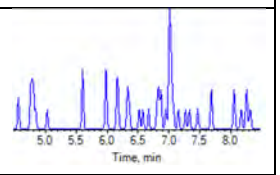
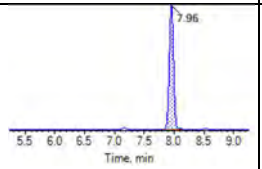
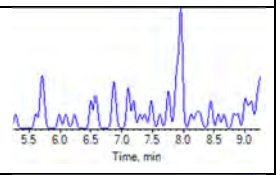
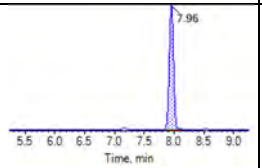
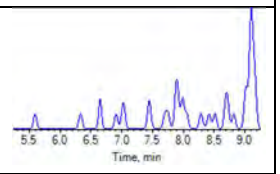
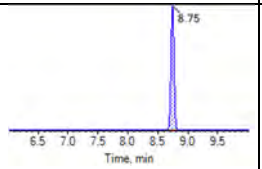
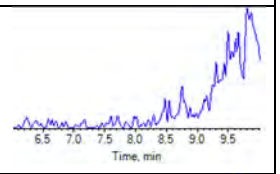
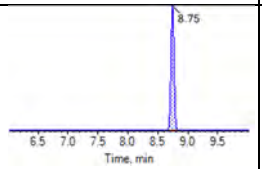
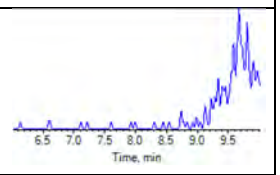
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 0.37		

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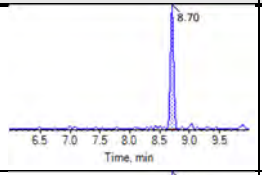
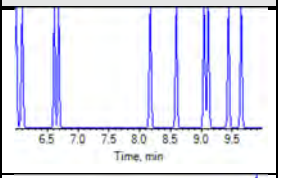
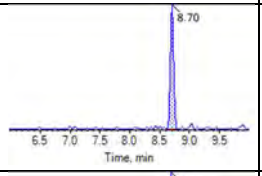
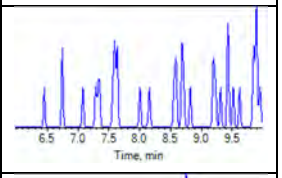
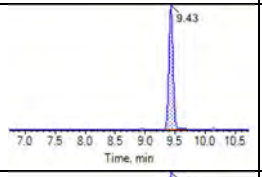
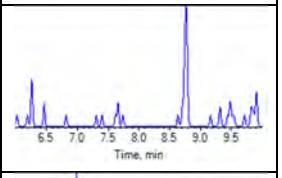
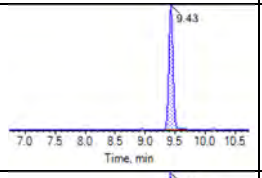
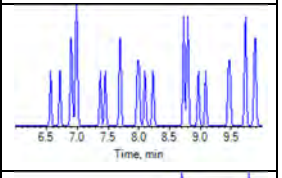
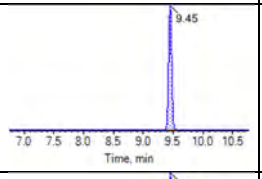
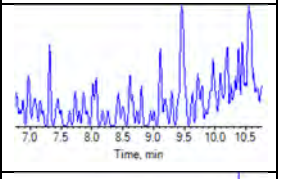
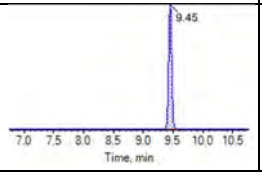
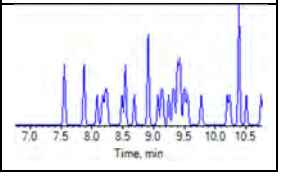
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 0.24		

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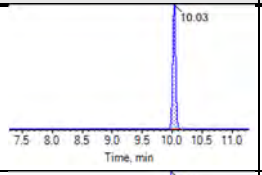
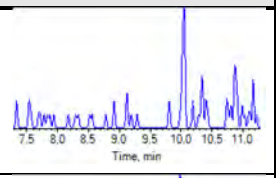
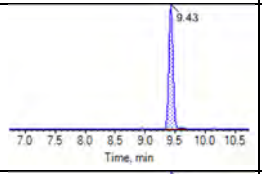
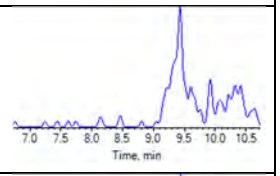
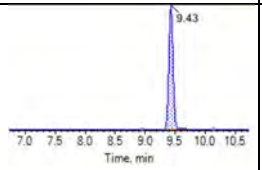
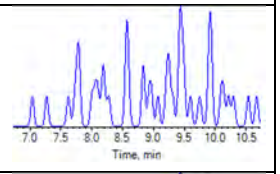
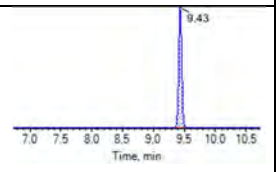
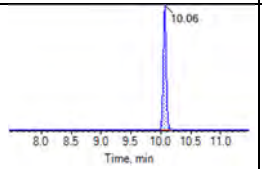
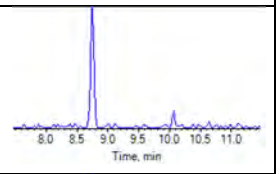
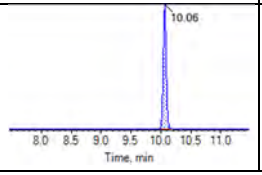
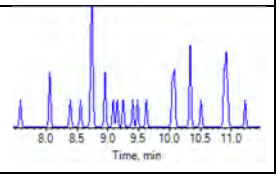
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	654800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1945000	N/A	N/A	N/A	1159.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.07)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 0.13		

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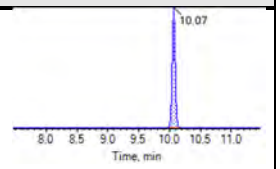
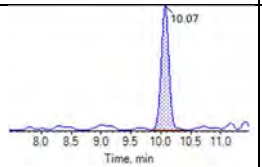
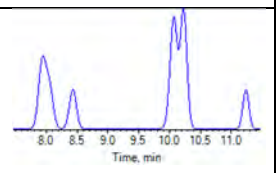
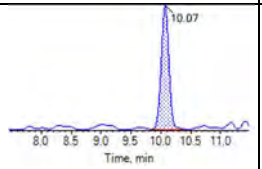
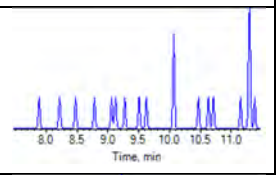
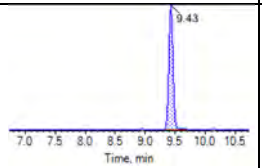
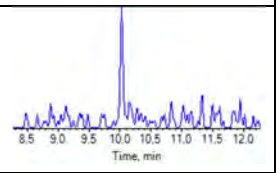
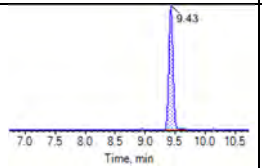
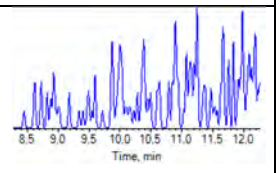
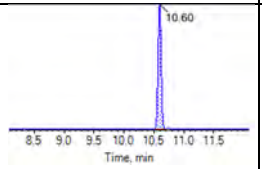
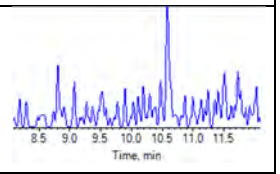
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1255000	N/A	N/A	N/A	1087.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 1.00		

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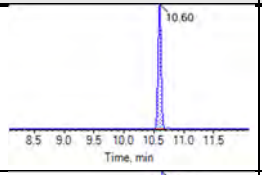
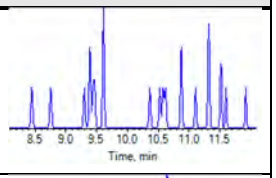
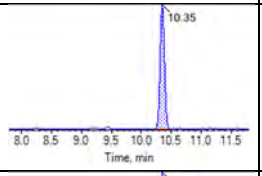
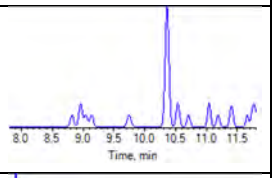
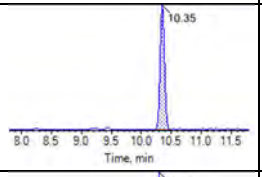
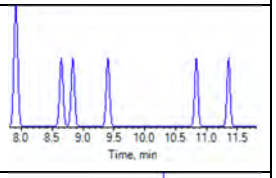
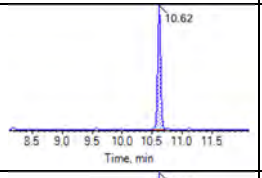
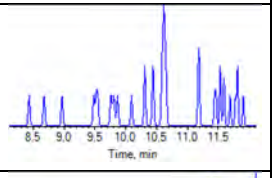
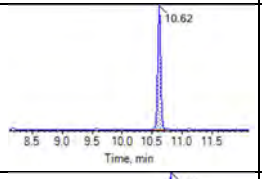
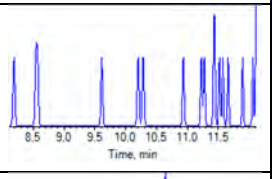
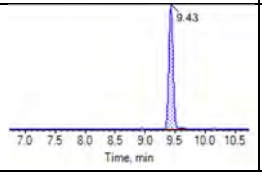
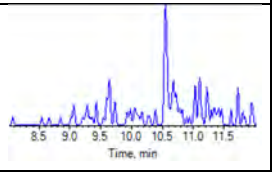
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		

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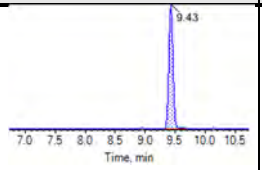
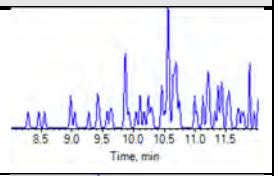
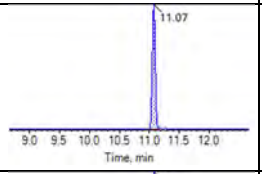
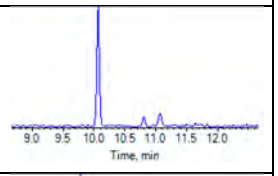
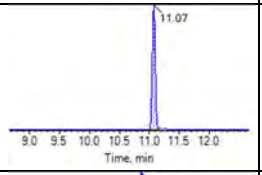
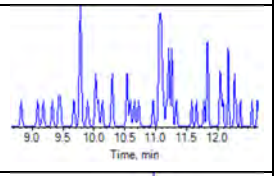
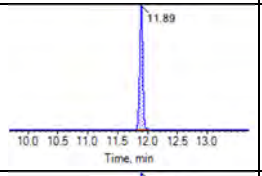
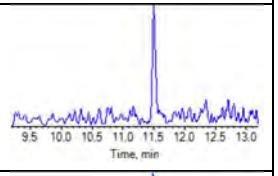
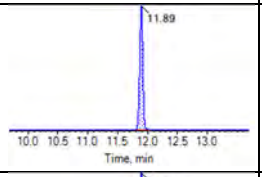
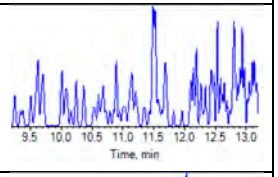
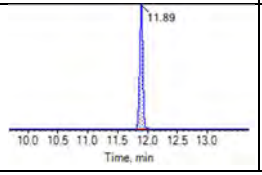
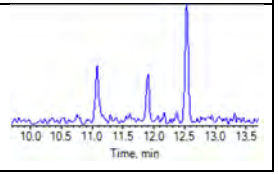
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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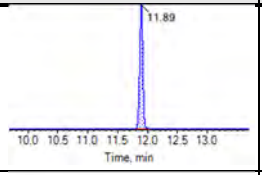
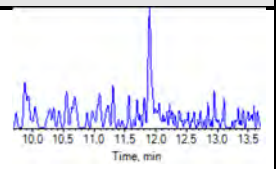
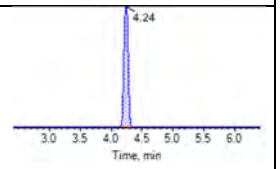
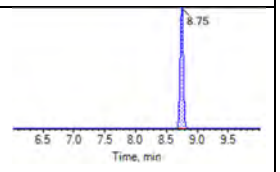
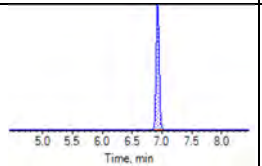
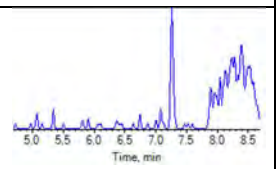
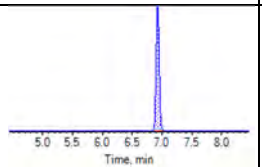
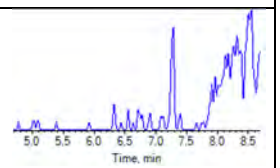
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1915000	N/A	N/A	N/A	1107.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1426000	N/A	N/A	N/A	1159.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.28)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 01-NOV-17 23:32

Data File: PFC103117087.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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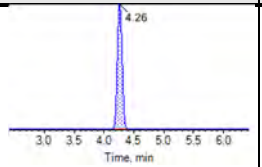
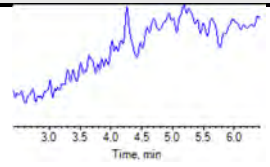
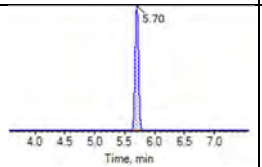
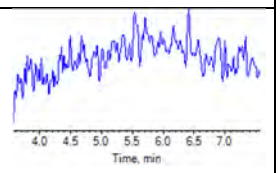
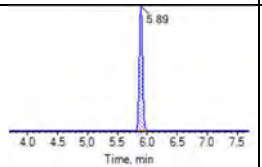
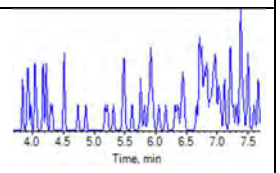
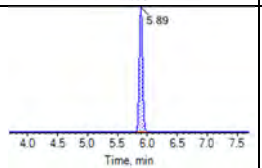
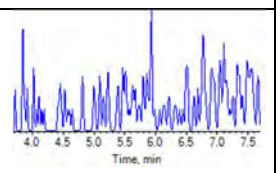
PFC103117087.wiff			
Sample Name	PFCIBLK10	**Injection Vial**	22
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117087.wiff
Acquisition Date	11/1/2017 23:32:45	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117087.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	139100	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	214600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	147900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	147900	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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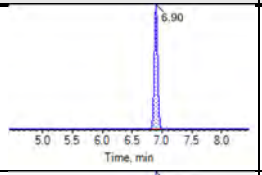
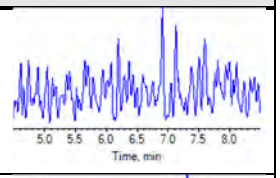
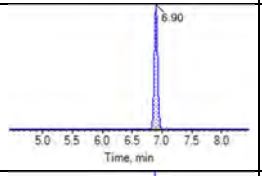
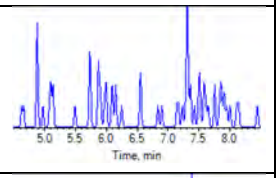
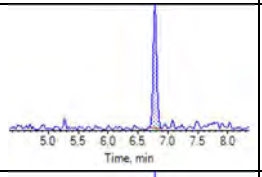
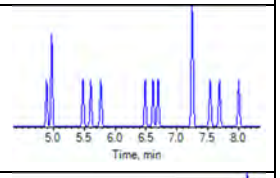
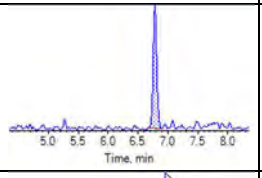
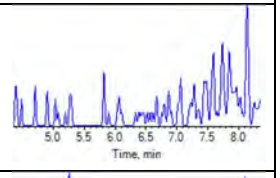
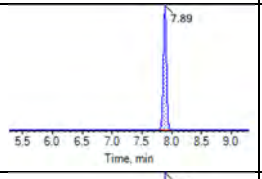
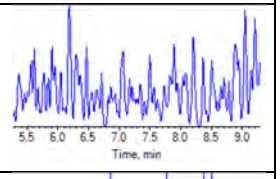
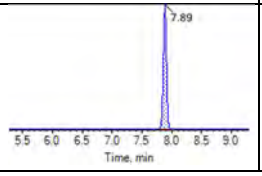
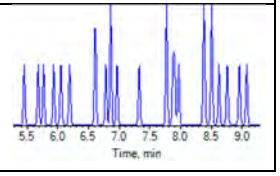
PFC103117087.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	27900	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	27900	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	242600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	242600	N/A	N/A	N/A	N/A/ 0.26		

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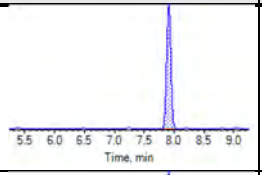
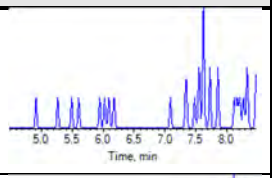
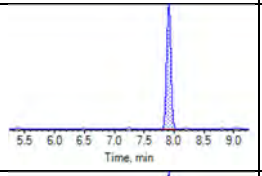
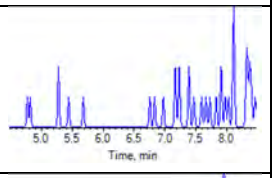
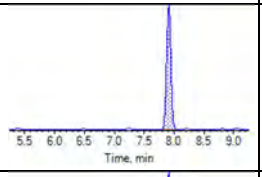
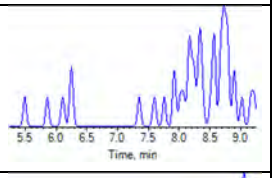
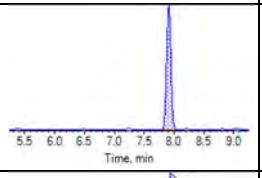
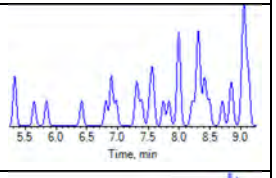
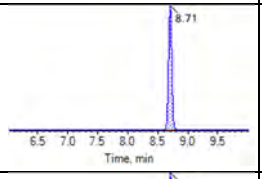
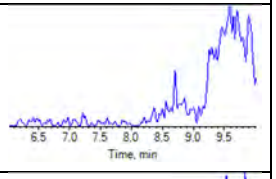
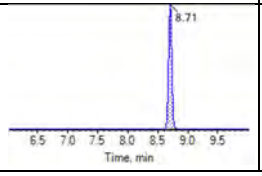
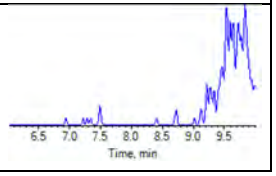
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	77320	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	240100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	240100	N/A	N/A	N/A	N/A/ 0.37		

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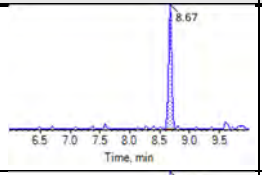
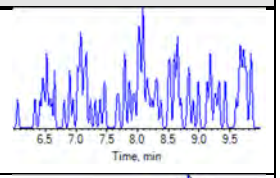
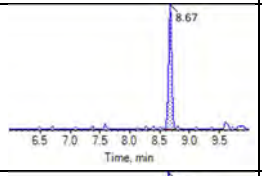
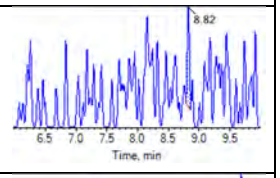
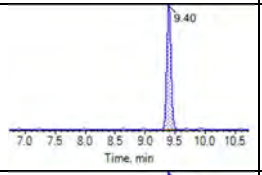
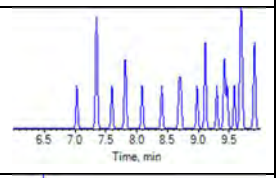
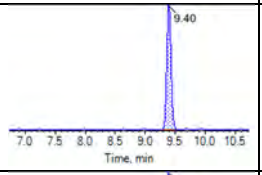
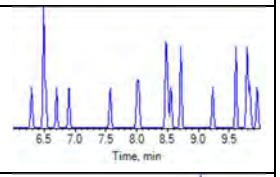
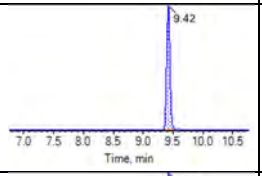
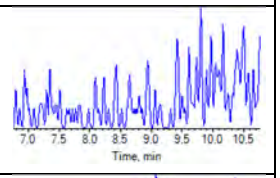
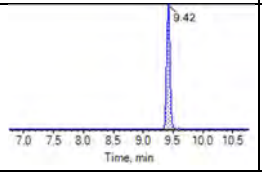
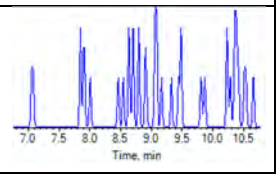
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	36410	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.82 (8.72)	1330	13C2_6:2 FTS	36410	N/A	7.7	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	205900	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	205900	N/A	N/A	N/A	N/A/ 0.24		

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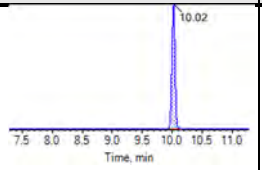
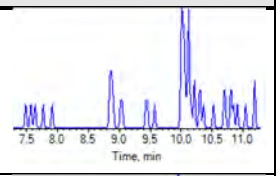
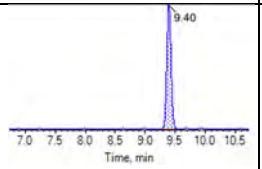
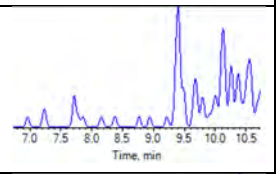
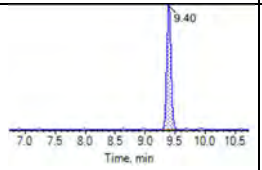
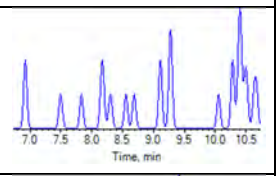
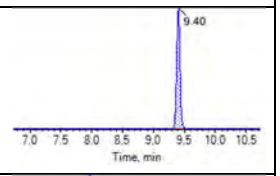
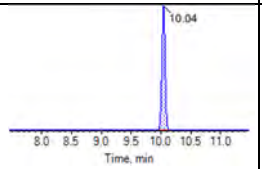
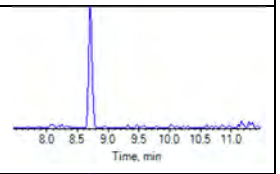
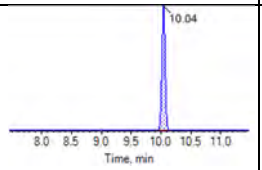
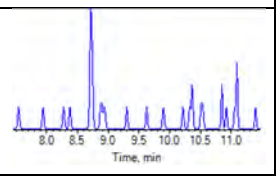
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	521100	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.40 (9.45)	1494000	N/A	N/A	N/A	890.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	154700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	154700	N/A	N/A	N/A	N/A/ 0.13		

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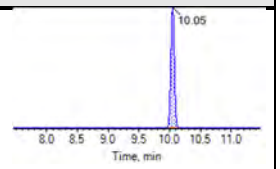
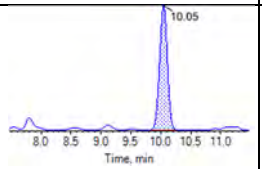
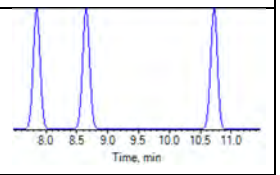
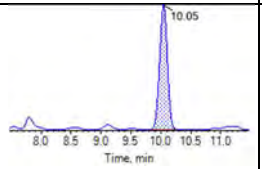
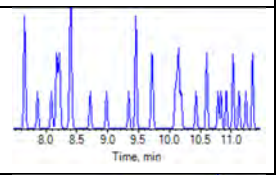
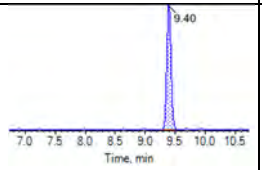
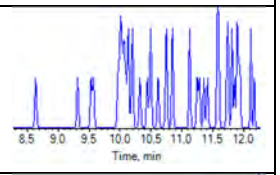
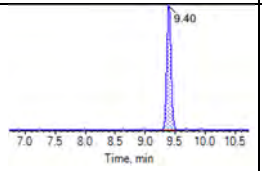
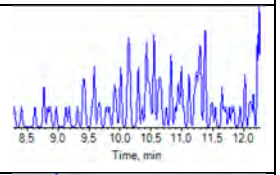
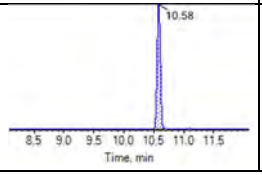
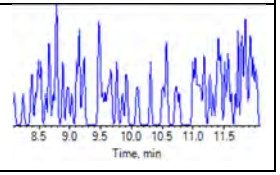
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	1110000	N/A	N/A	N/A	962.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24540	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24540	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	176100	N/A	N/A	N/A	N/A/ 1.00		

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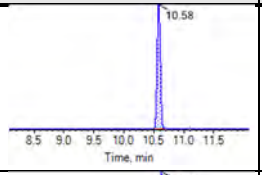
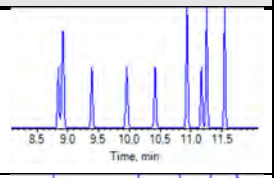
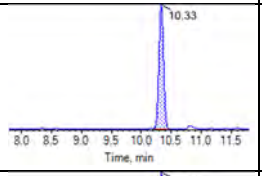
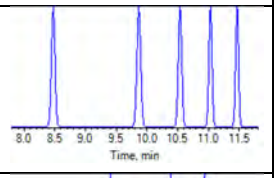
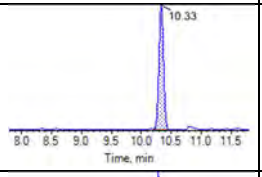
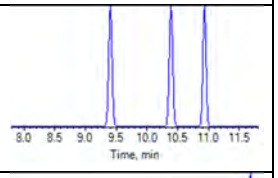
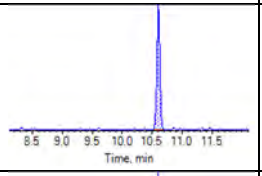
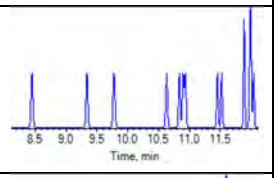
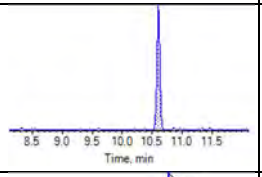
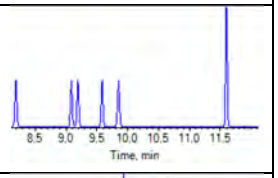
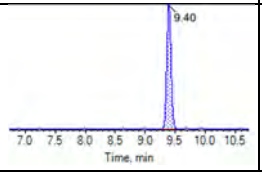
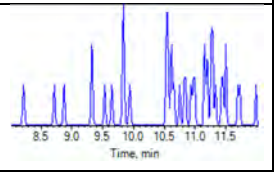
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	176100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50390	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50390	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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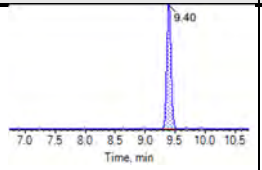
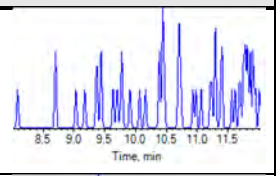
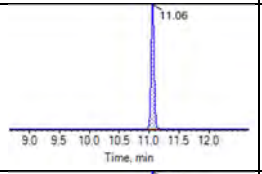
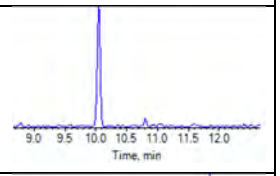
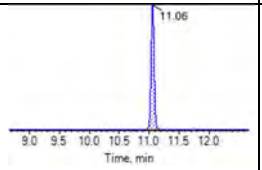
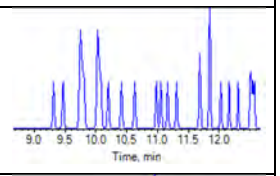
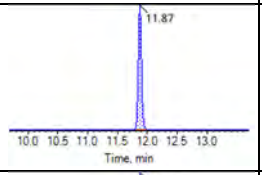
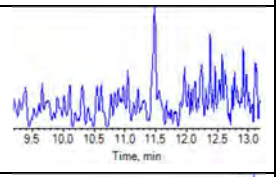
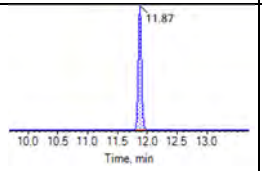
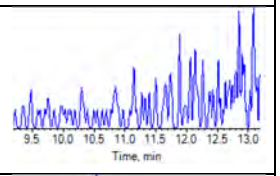
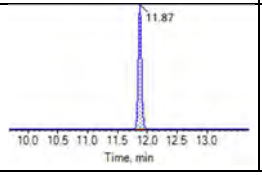
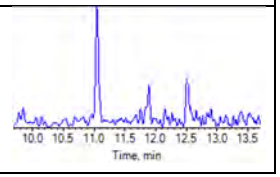
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	61540	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	168300	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	168300	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 1.00		

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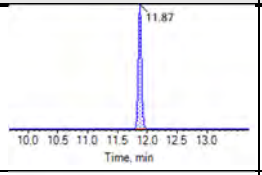
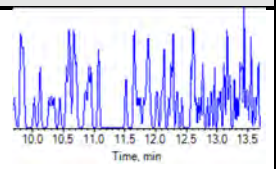
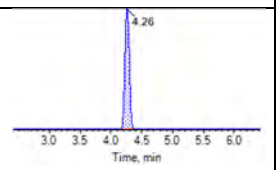
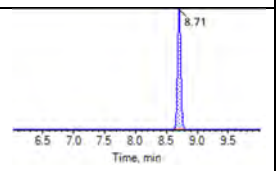
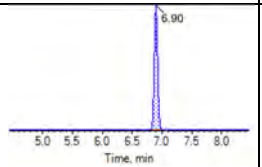
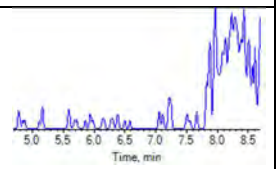
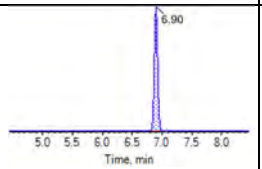
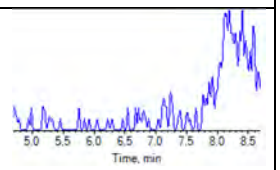
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	132100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1556000	N/A	N/A	N/A	899.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.71 (8.75)	1172000	N/A	N/A	N/A	952.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	246800	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 03:49

Data File: PFC103117099.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

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LCMSMS#6

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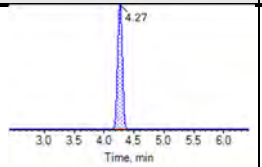
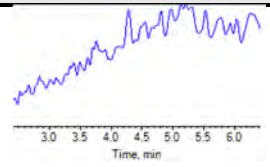
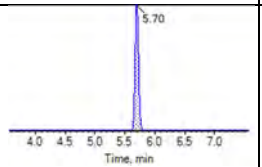
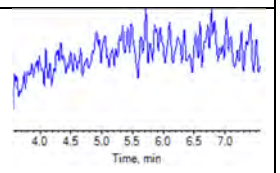
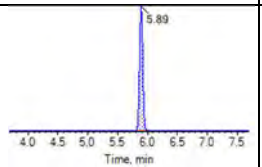
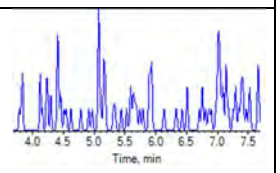
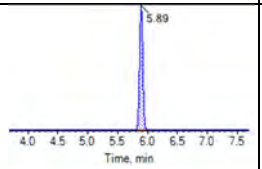
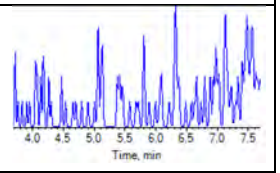
PFC103117099.wiff			
Sample Name	PFCIBLK11	**Injection Vial**	22
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117099.wiff
Acquisition Date	11/2/2017 03:49:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117099.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	149000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	240600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	149400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	149400	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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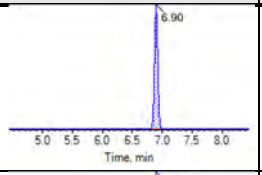
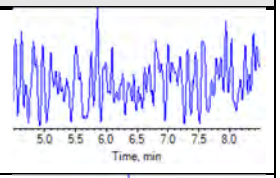
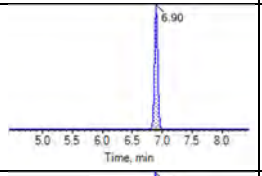
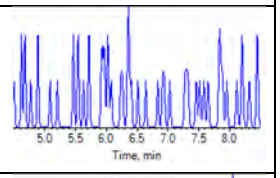
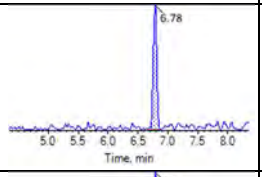
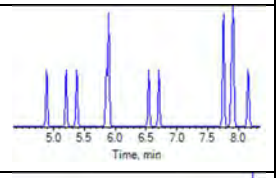
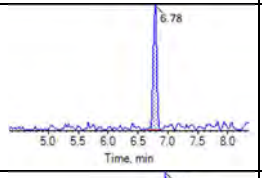
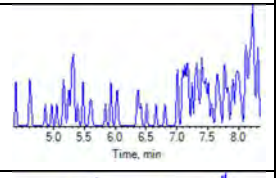
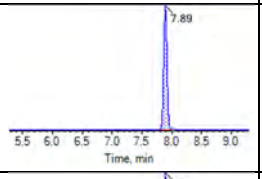
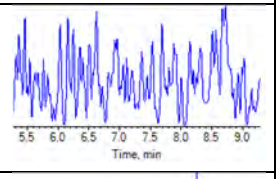
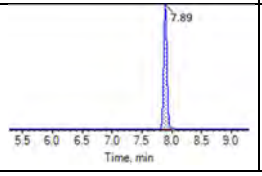
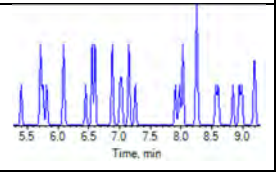
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	27420	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	27420	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	255000	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	255000	N/A	N/A	N/A	N/A/ 0.26		

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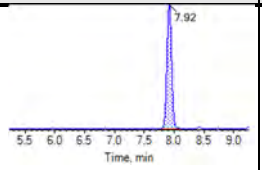
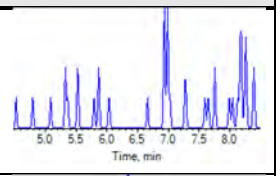
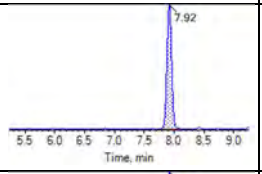
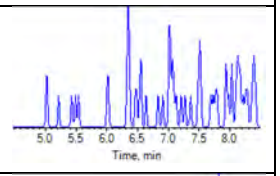
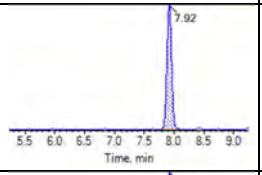
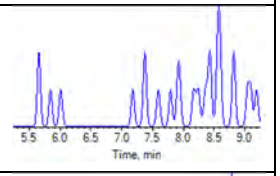
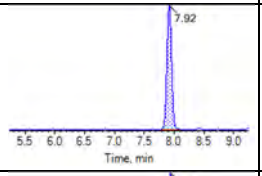
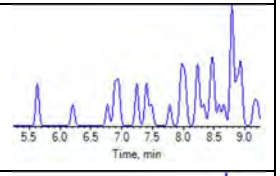
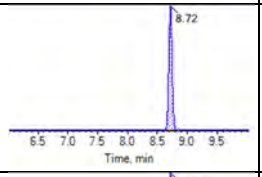
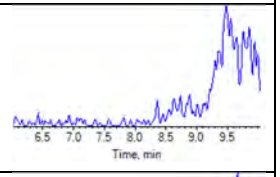
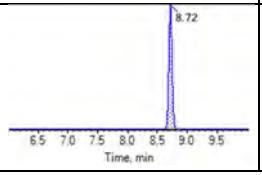
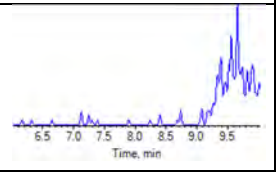
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	73360	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	225000	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	225000	N/A	N/A	N/A	N/A/ 0.37		

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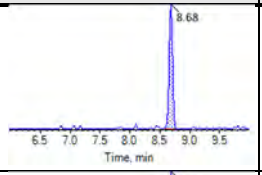
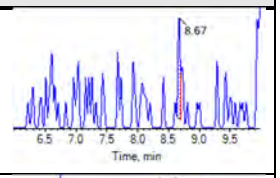
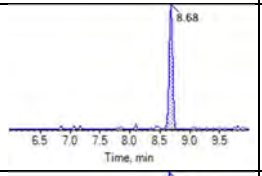
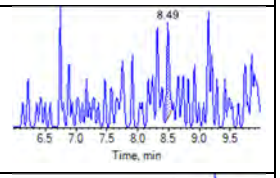
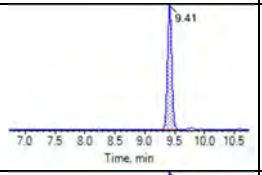
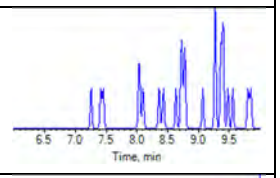
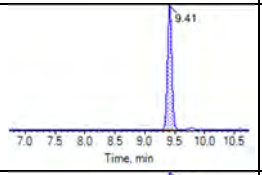
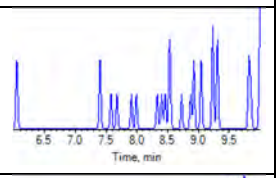
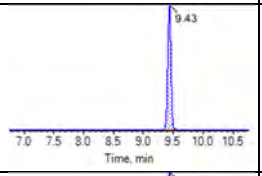
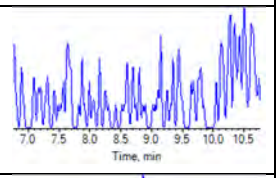
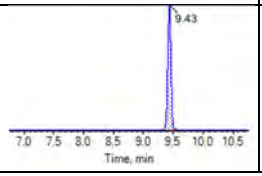
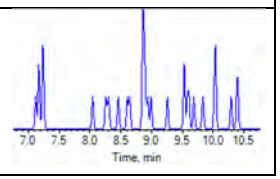
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.67 (8.72)	1321	13C2_6:2 FTS	40100	N/A	6.2	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.49 (8.72)	1481	13C2_6:2 FTS	40100	N/A	7.8	N/A	1.12/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	241000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	241000	N/A	N/A	N/A	N/A/ 0.24		

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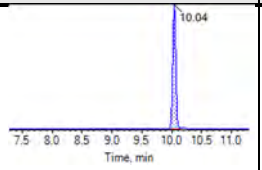
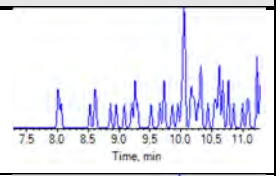
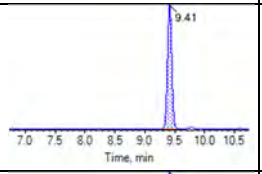
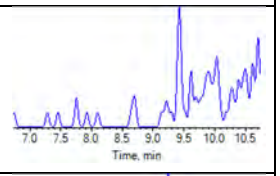
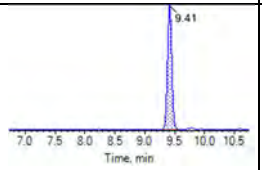
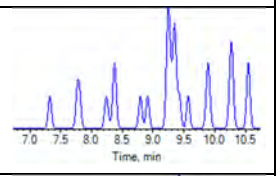
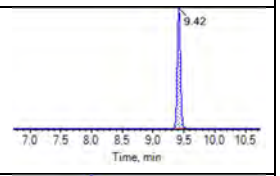
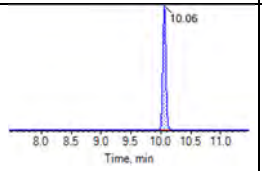
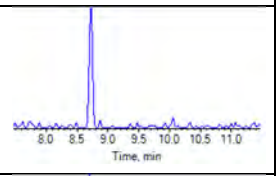
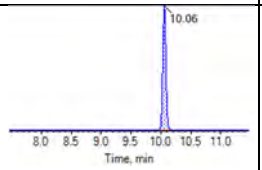
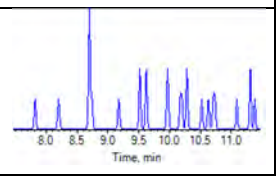
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	527300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1552000	N/A	N/A	N/A	925.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	139200	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	139200	N/A	N/A	N/A	N/A/ 0.13		

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GEL SOP GL-OA-E-076, EPA 537-Modified
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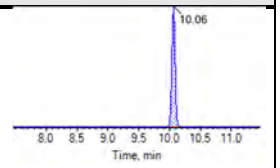
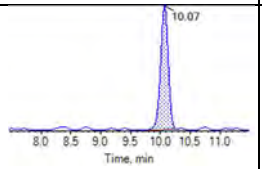
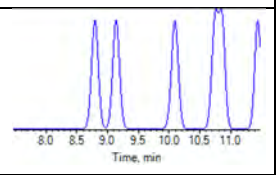
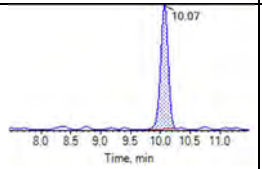
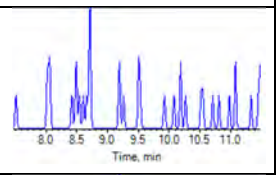
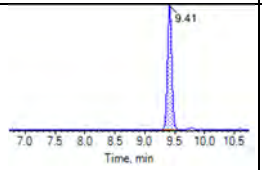
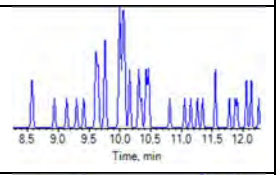
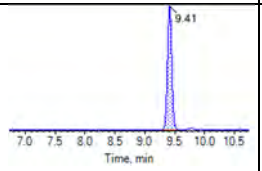
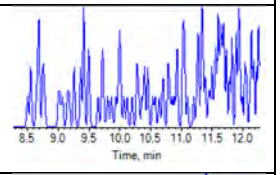
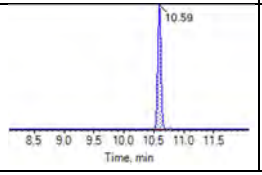
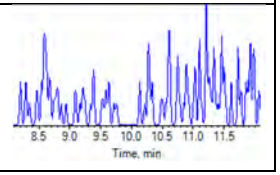
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1065000	N/A	N/A	N/A	923.2	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	22370	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	22370	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	199900	N/A	N/A	N/A	N/A/ 1.00		

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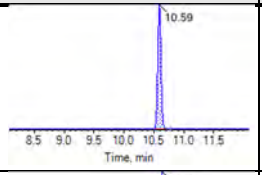
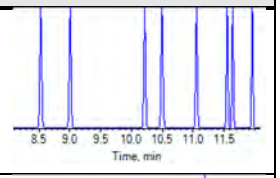
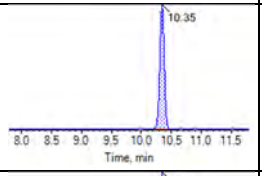
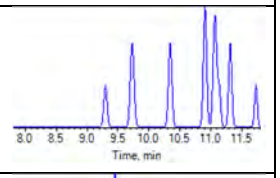
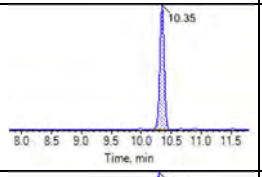
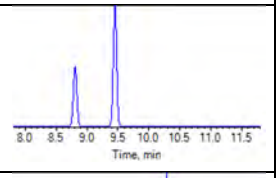
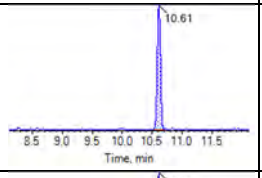
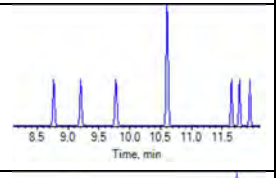
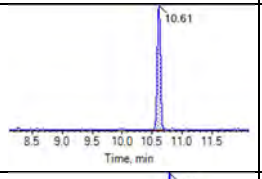
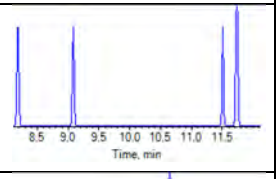
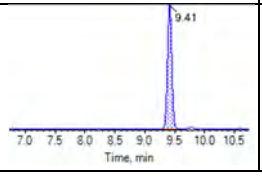
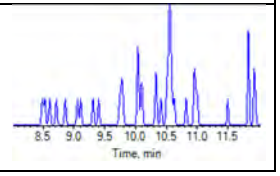
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	199900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50620	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50620	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49450	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	49450	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 1.00		

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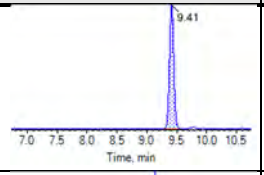
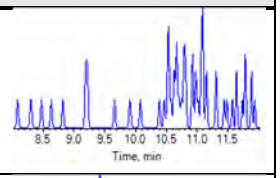
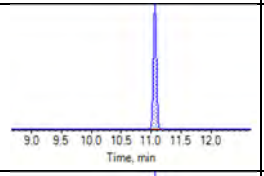
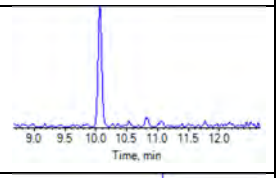
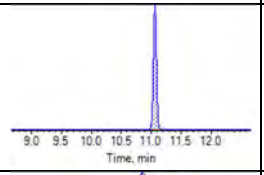
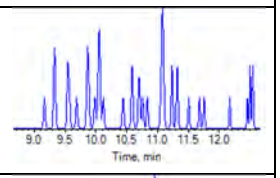
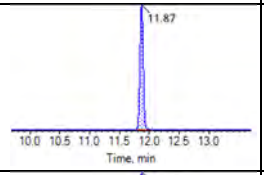
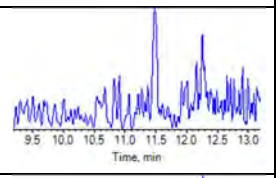
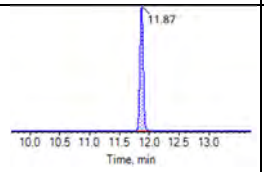
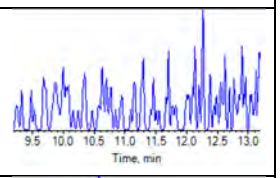
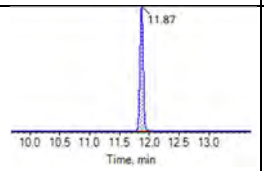
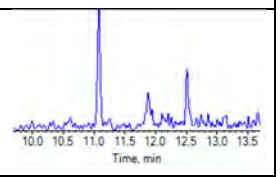
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	68000	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	176500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	176500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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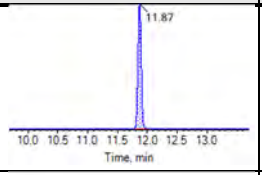
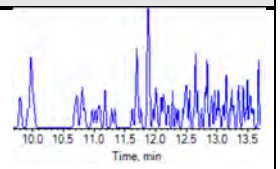
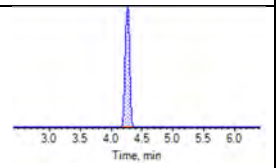
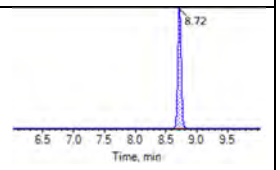
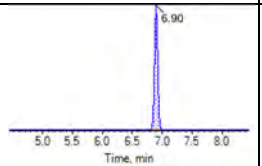
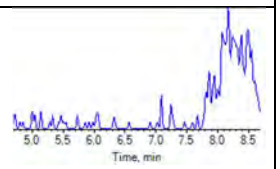
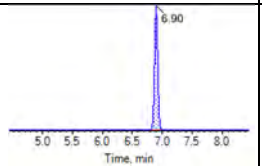
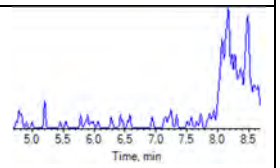
PFC103117099.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	120400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1647000	N/A	N/A	N/A	951.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.72 (8.75)	1087000	N/A	N/A	N/A	883.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	302200	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 08:06

Data File: PFC103117111.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

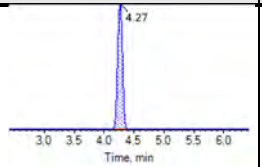
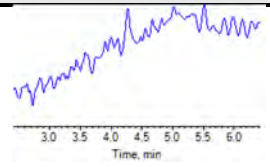
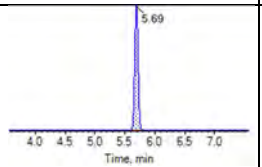
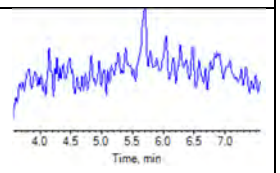
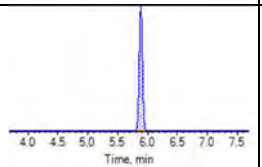
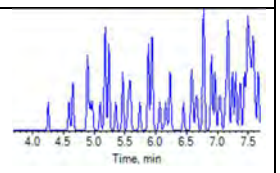
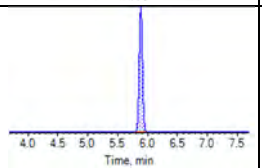
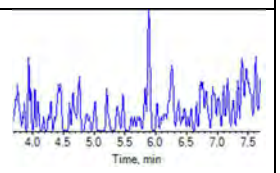
JISB GC
11/06/2017 11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:14:00

PFC103117111.wiff			
Sample Name	PFCIBLK12	**Injection Vial**	44
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117111.wiff
Acquisition Date	11/2/2017 08:06:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117111.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	144200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	223000	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	148900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	148900	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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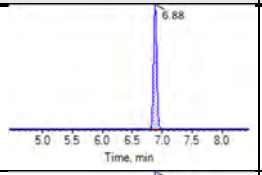
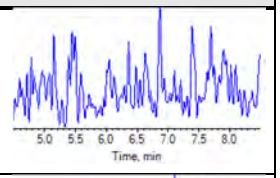
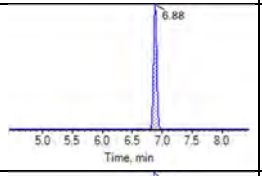
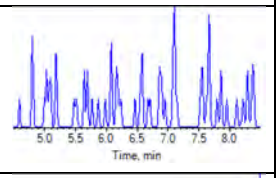
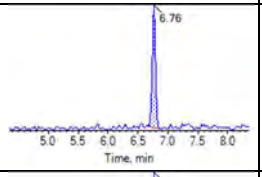
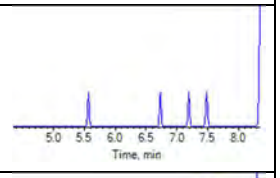
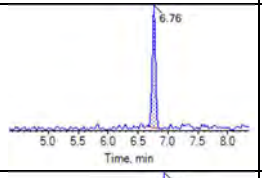
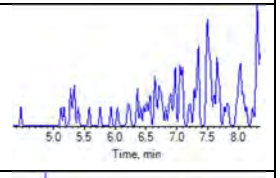
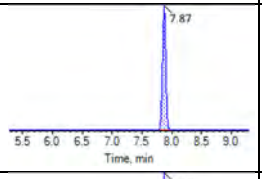
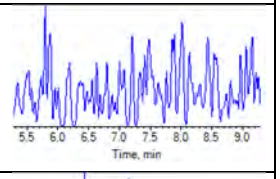
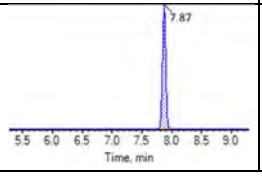
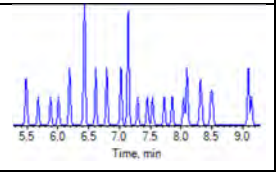
PFC103117111.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	34530	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	34530	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	241500	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	241500	N/A	N/A	N/A	N/A/ 0.26		

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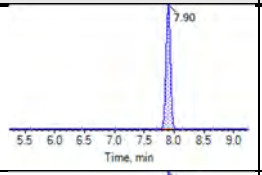
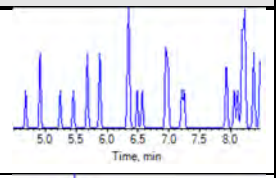
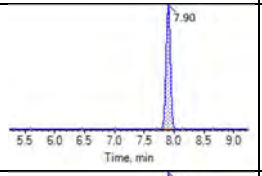
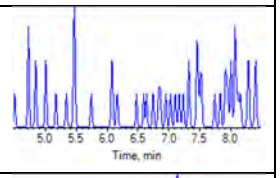
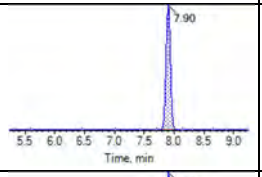
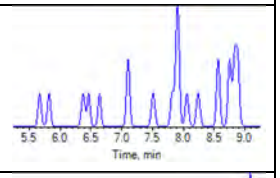
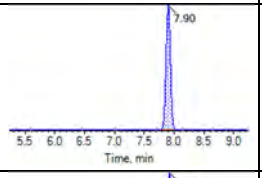
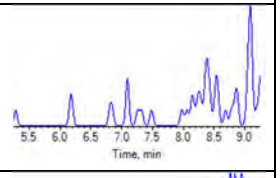
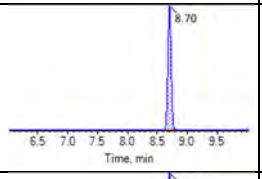
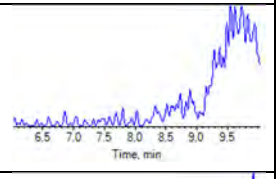
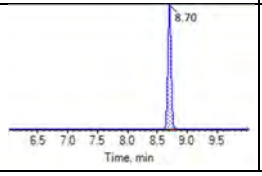
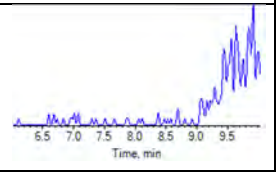
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	70360	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	228800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	228800	N/A	N/A	N/A	N/A/ 0.37		

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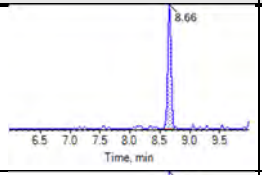
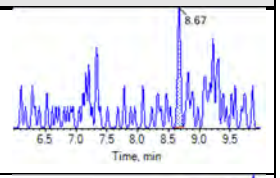
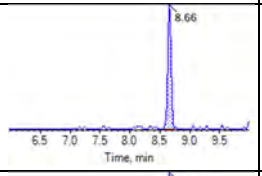
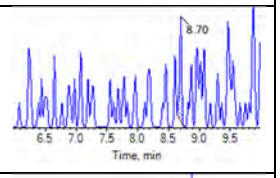
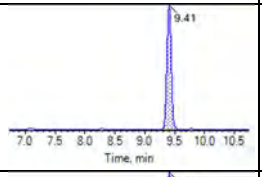
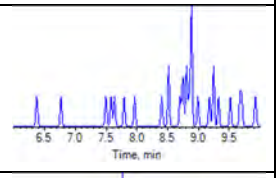
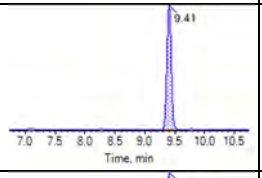
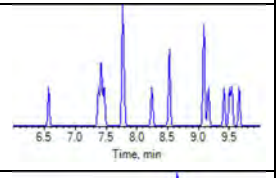
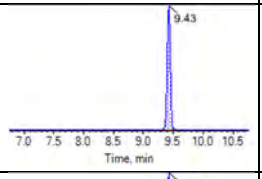
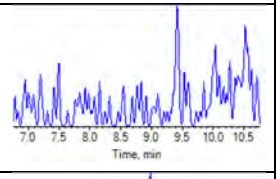
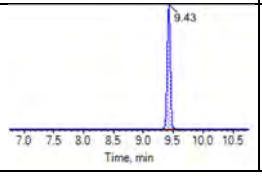
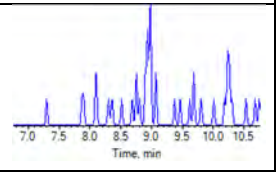
6:2 FTS	427.0 / 407.0	8.67 (8.72)	2686	13C2_6:2 FTS	33370	N/A	15.3	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.70 (8.72)	1387	13C2_6:2 FTS	33370	N/A	8.8	N/A	0.52/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	265600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	265600	N/A	N/A	N/A	N/A/ 0.24		

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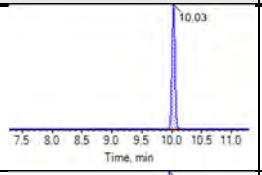
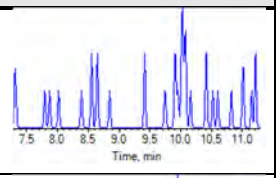
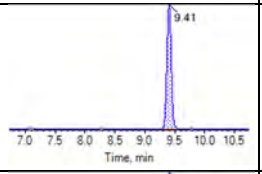
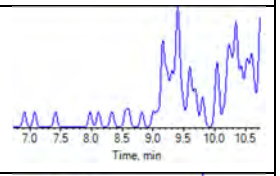
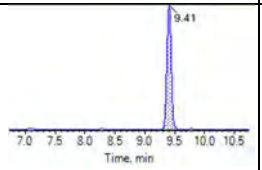
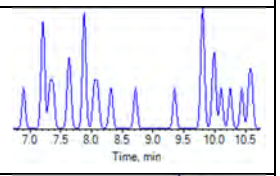
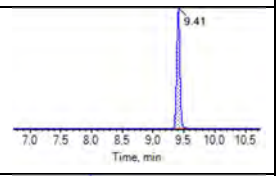
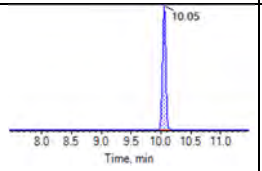
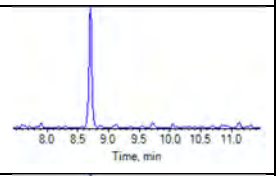
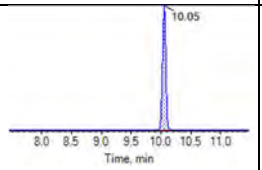
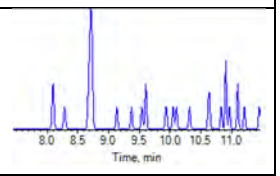
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	507200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.41 (9.45)	1704000	N/A	N/A	N/A	1015.8	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	134200	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	134200	N/A	N/A	N/A	N/A/ 0.13		

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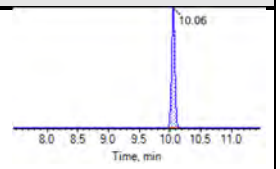
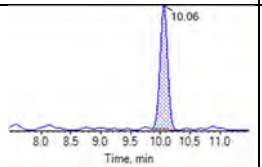
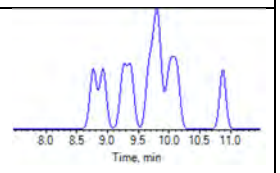
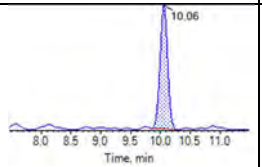
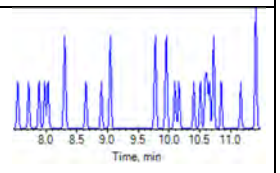
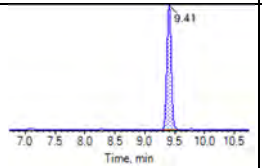
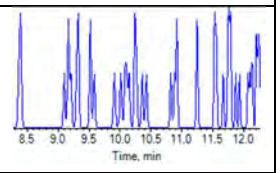
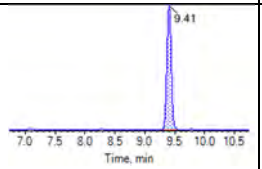
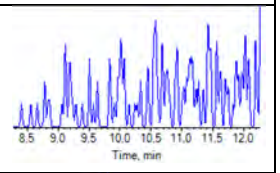
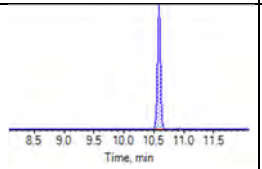
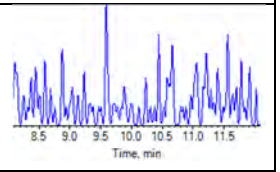
PFC103117111.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1181000	N/A	N/A	N/A	1023.5	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	22360	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	22360	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	170600	N/A	N/A	N/A	N/A/ 1.00		

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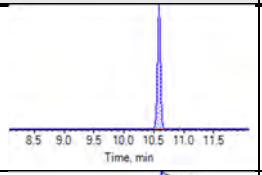
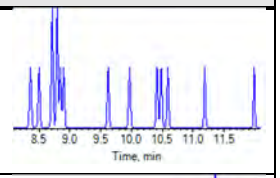
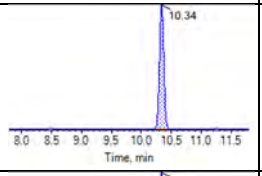
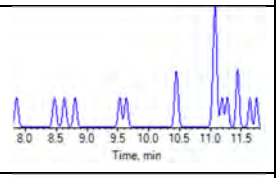
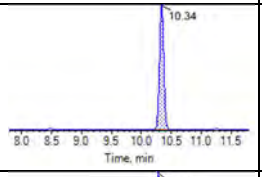
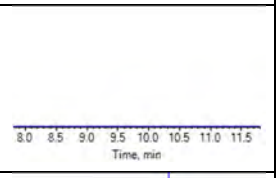
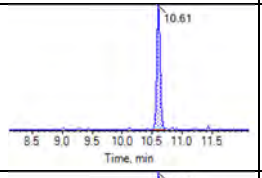
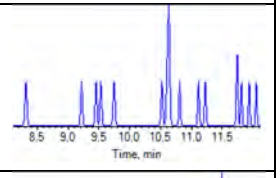
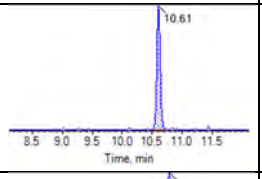
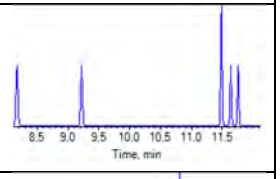
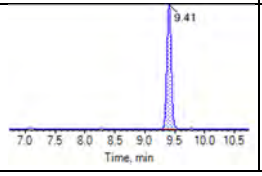
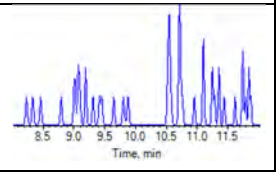
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	170600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	52500	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	52500	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53770	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53770	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 1.00		

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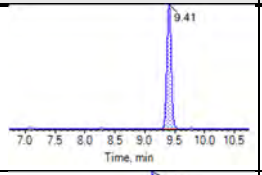
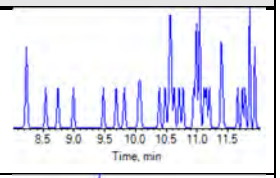
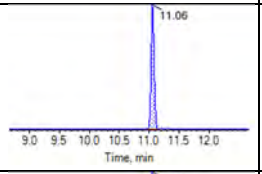
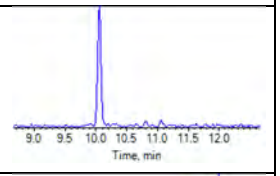
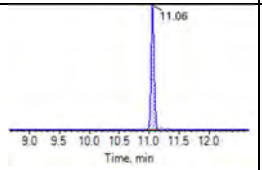
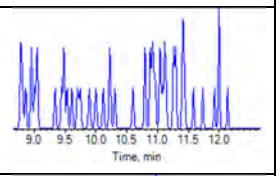
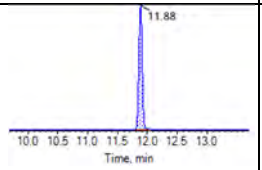
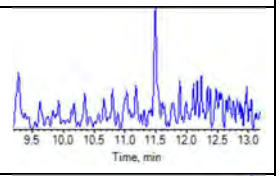
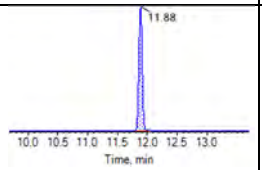
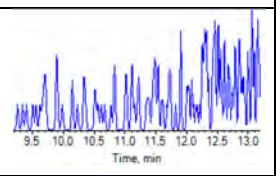
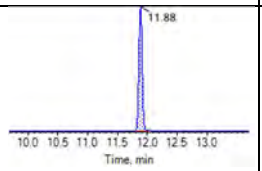
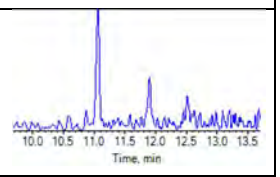
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	54040	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	168500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	168500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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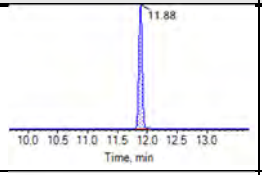
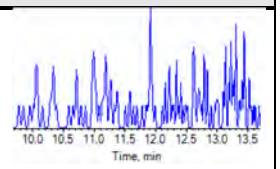
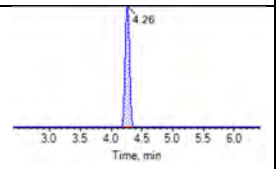
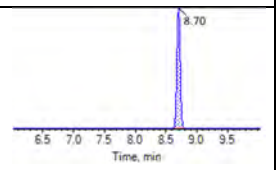
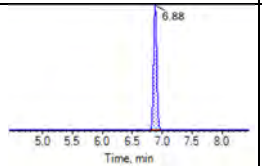
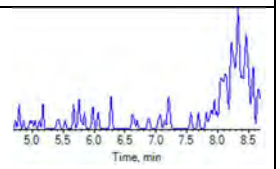
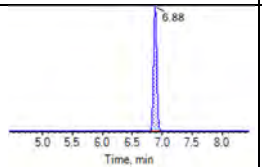
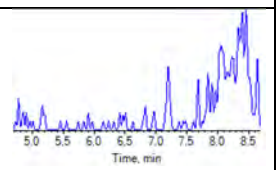
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	130400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1660000	N/A	N/A	N/A	959.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.70 (8.75)	1271000	N/A	N/A	N/A	1033.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	279000	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 12:01

Data File: PFC103117122.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JTSB
11/06/2017

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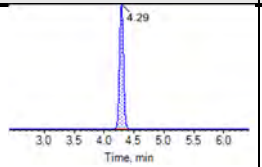
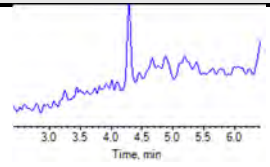
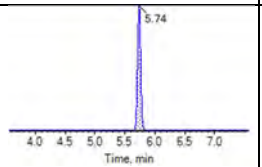
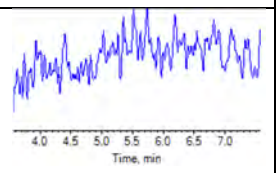
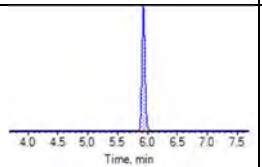
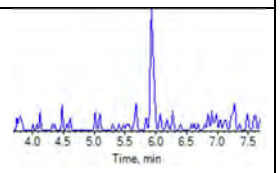
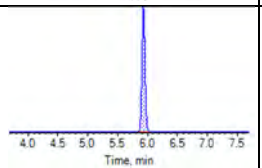
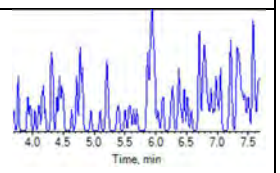
PFC103117122.wiff			
Sample Name	PFCIBLK13	**Injection Vial**	44
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117122.wiff
Acquisition Date	11/2/2017 12:01:22	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117122.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	111300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	169100	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	110200	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	110200	N/A	N/A	N/A	N/A/ 0.45		

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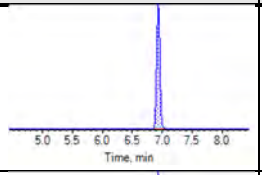
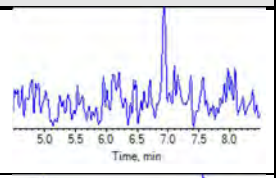
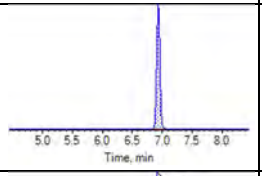
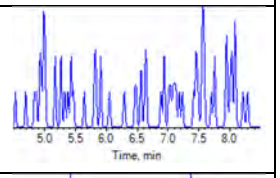
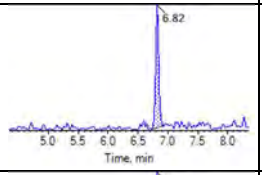
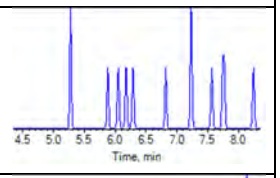
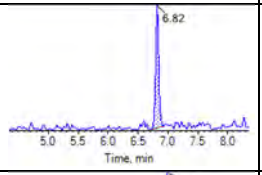
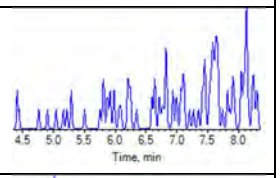
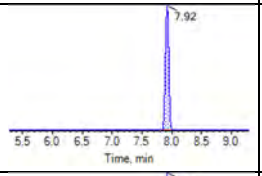
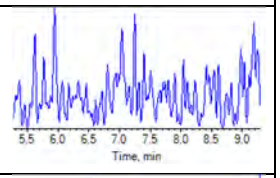
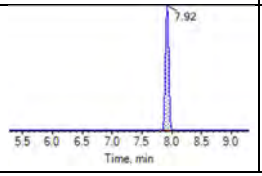
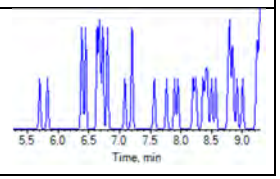
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	21820	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	21820	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	181600	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	181600	N/A	N/A	N/A	N/A/ 0.26		

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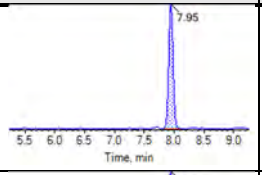
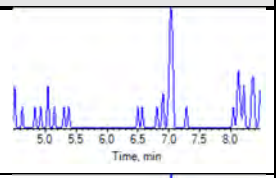
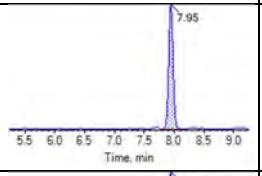
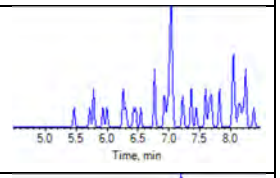
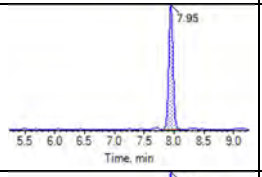
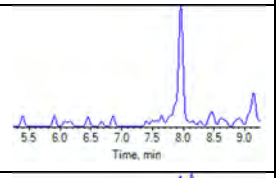
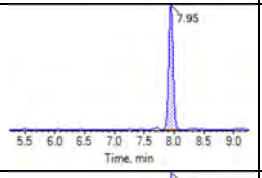
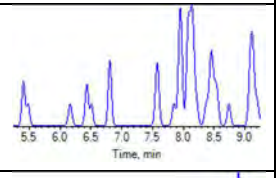
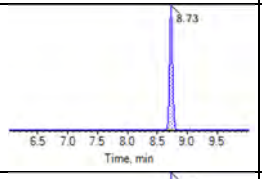
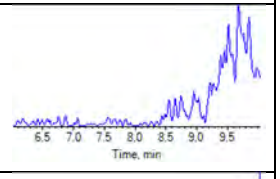
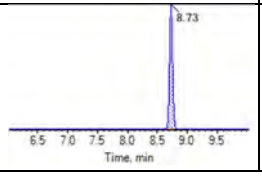
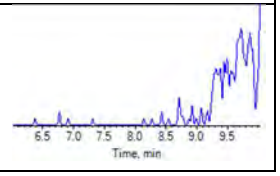
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	59090	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	171300	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	171300	N/A	N/A	N/A	N/A/ 0.37		

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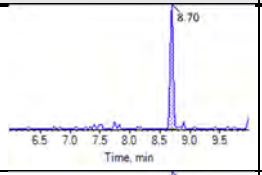
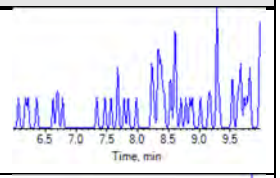
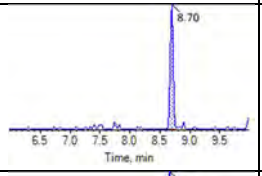
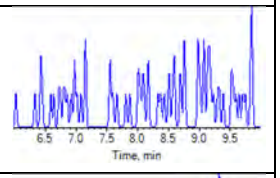
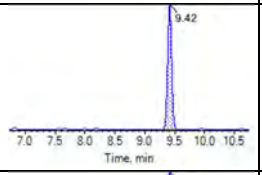
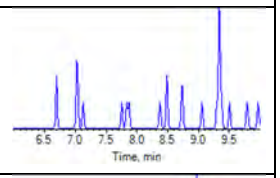
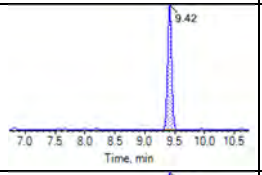
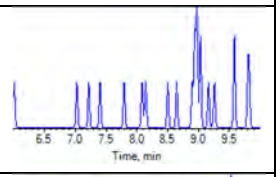
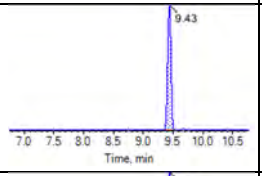
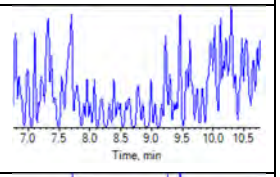
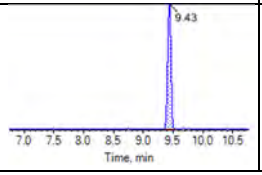
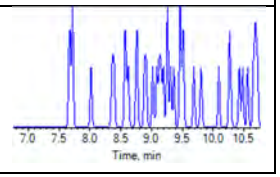
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	24200	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	24200	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	148200	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	148200	N/A	N/A	N/A	N/A/ 0.24		

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LCMSMS#6

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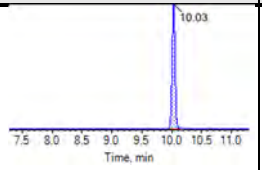
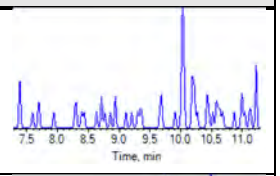
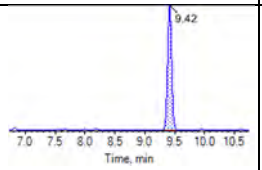
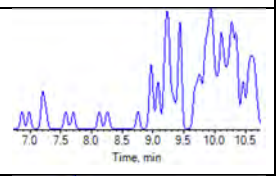
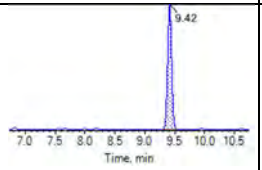
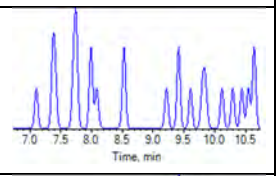
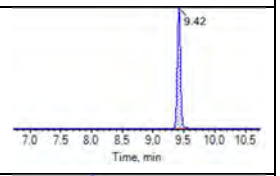
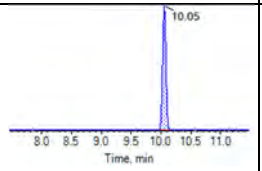
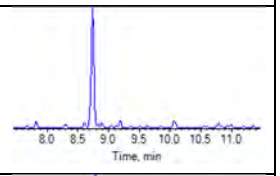
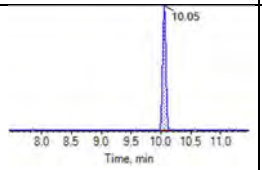
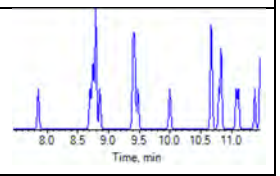
PFC103117122.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	340500	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.42 (9.45)	1121000	N/A	N/A	N/A	668.3	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	90500	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	90500	N/A	N/A	N/A	N/A/ 0.13		

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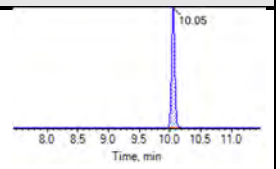
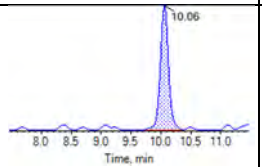
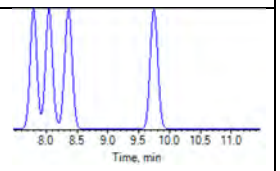
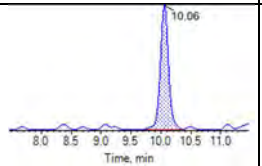
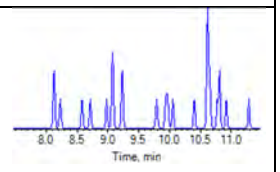
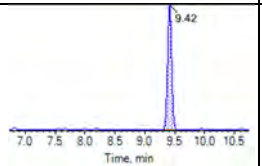
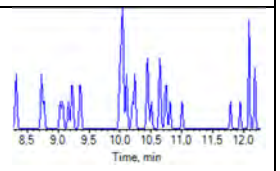
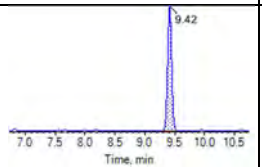
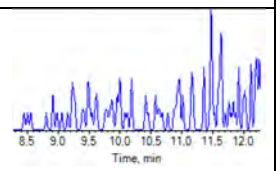
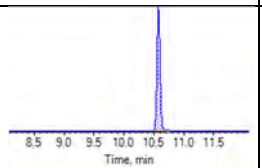
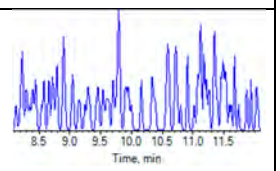
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.05 (10.02)	764700	N/A	N/A	N/A	662.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	14150	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	14150	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	124100	N/A	N/A	N/A	N/A/ 1.00		

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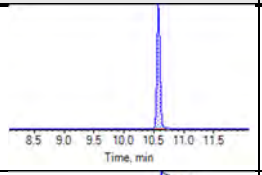
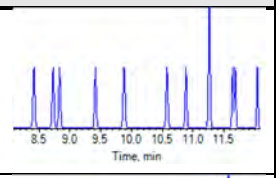
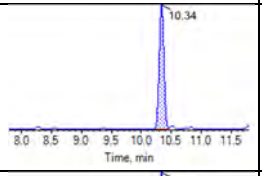
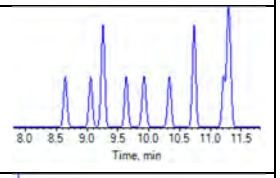
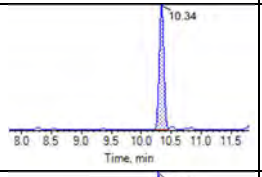
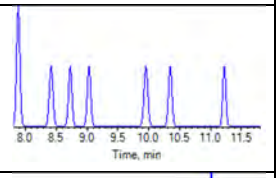
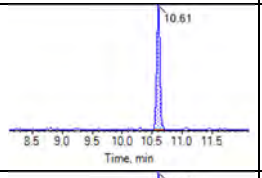
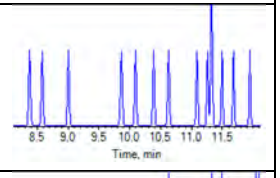
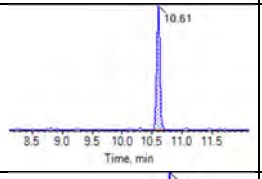
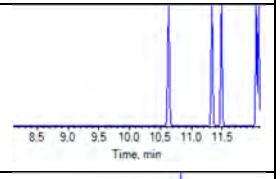
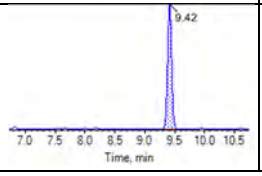
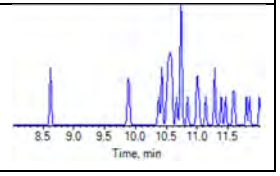
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	124100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37740	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37740	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	39810	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	39810	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 1.00		

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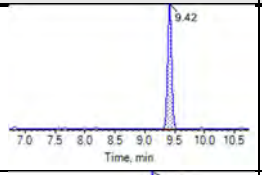
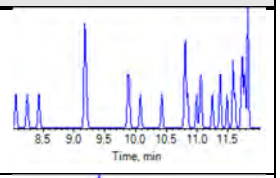
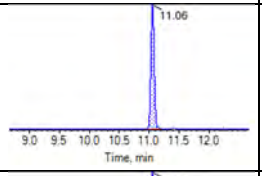
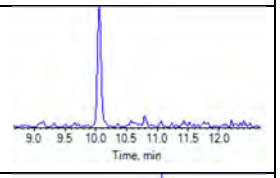
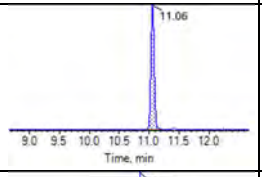
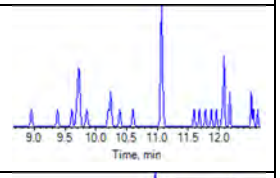
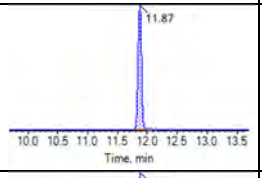
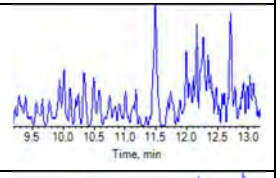
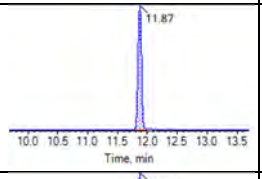
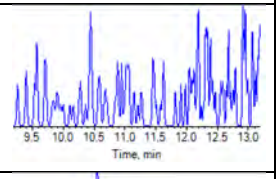
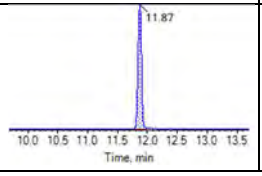
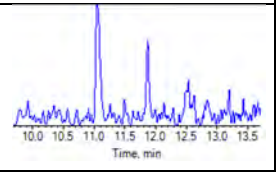
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	41900	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	121200	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	121200	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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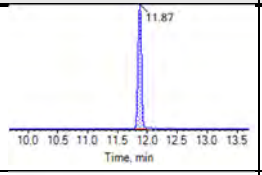
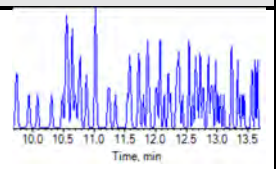
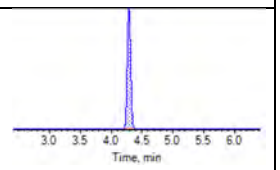
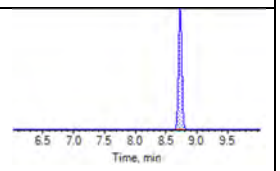
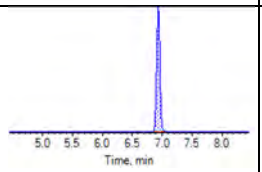
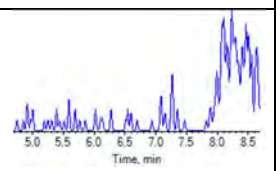
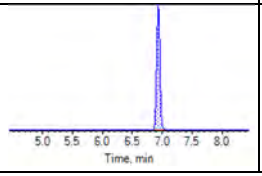
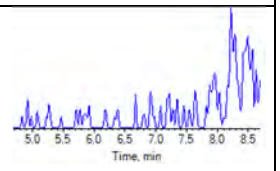
PFC103117122.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	81230	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1315000	N/A	N/A	N/A	760.2	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	841300	N/A	N/A	N/A	683.8	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	207000	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 16:18

Data File: PFC103117134.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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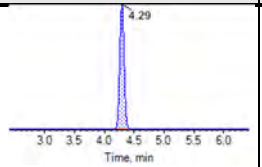
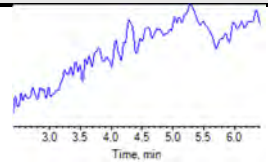
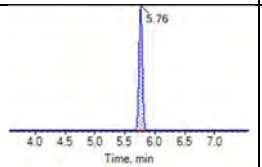
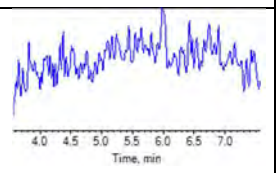
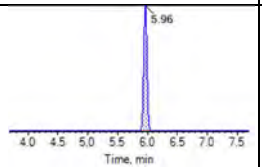
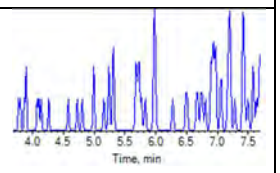
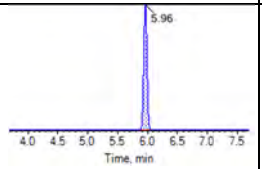
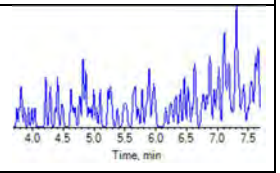
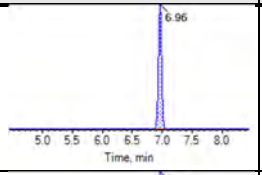
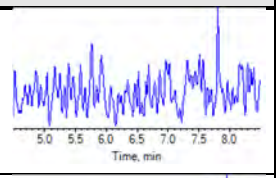
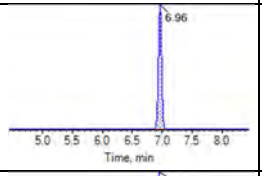
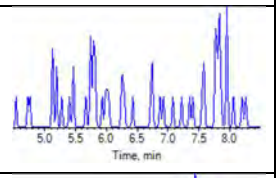
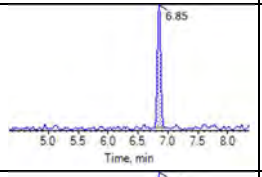
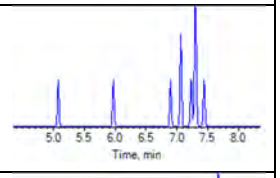
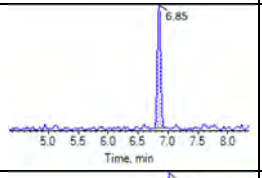
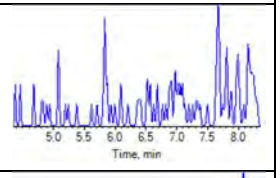
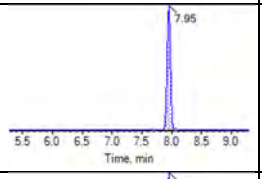
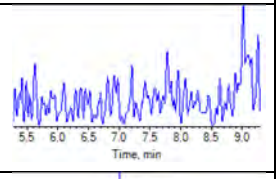
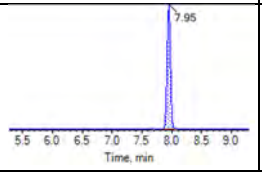
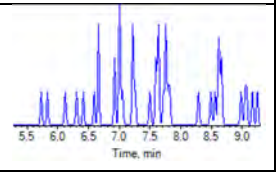
PFC103117134.wiff			
Sample Name	PFCIBLK14	**Injection Vial**	12
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117134.wiff
Acquisition Date	11/2/2017 16:18:07	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117134.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	160300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	253500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	167500	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	167500	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 12:32:00

PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	34510	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	34510	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	296000	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	296000	N/A	N/A	N/A	N/A/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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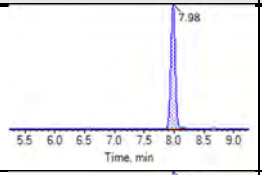
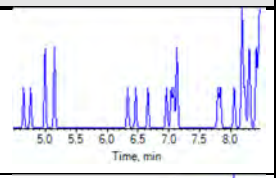
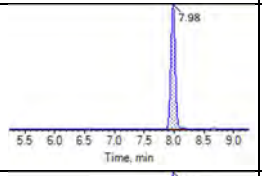
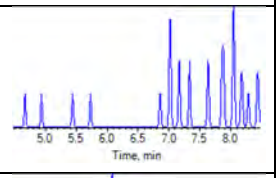
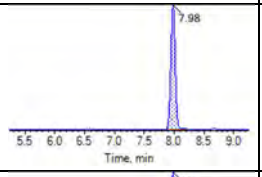
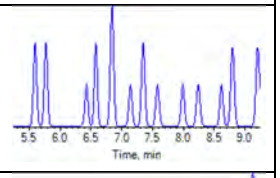
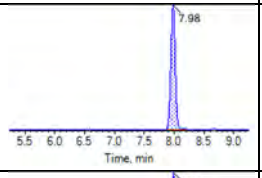
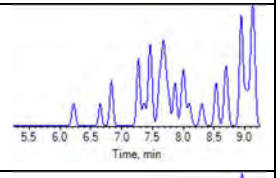
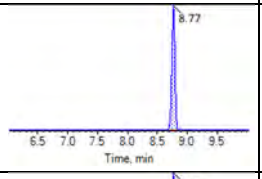
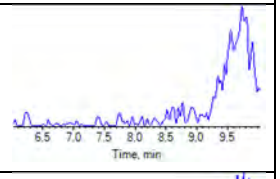
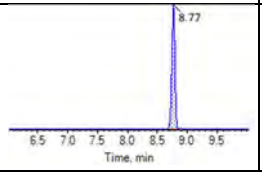
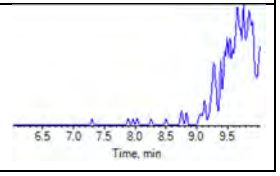
PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	82920	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	257100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	257100	N/A	N/A	N/A	N/A/ 0.37		

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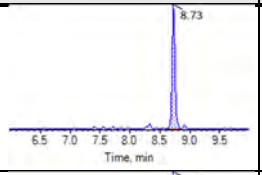
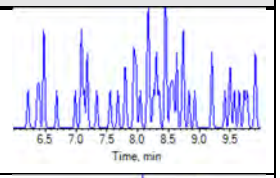
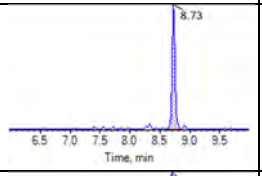
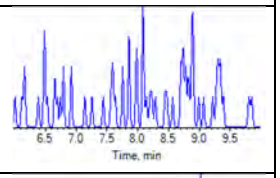
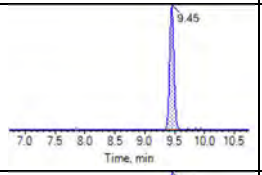
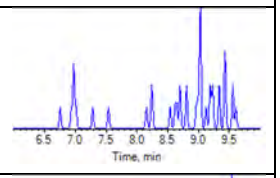
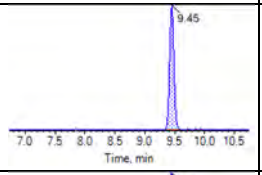
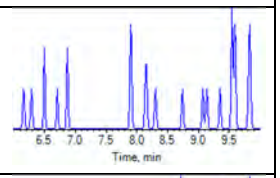
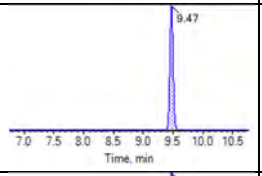
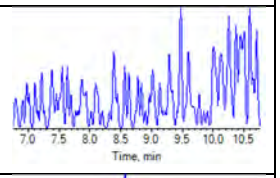
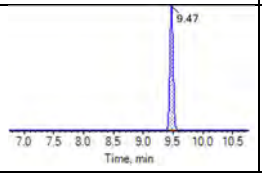
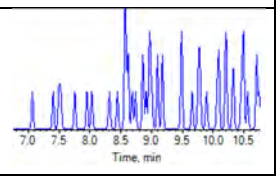
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	41640	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	41640	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	265000	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	265000	N/A	N/A	N/A	N/A/ 0.24		

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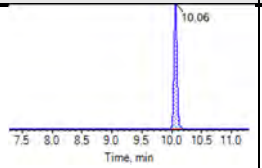
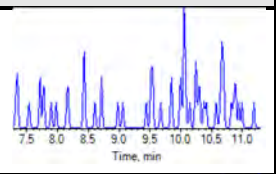
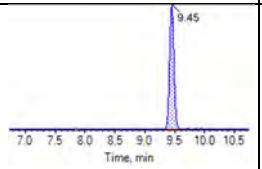
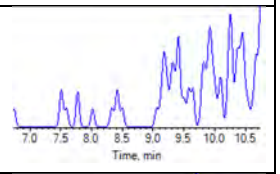
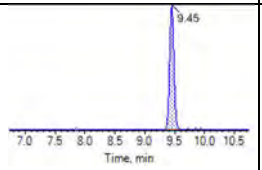
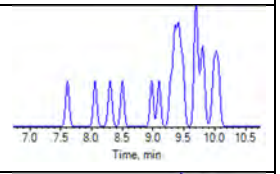
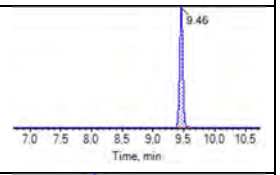
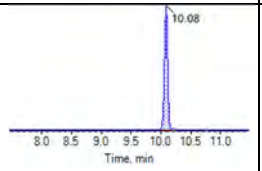
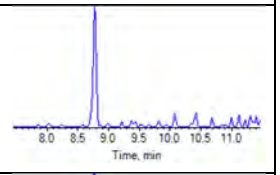
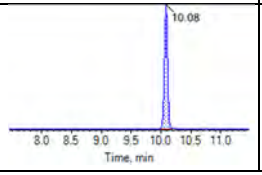
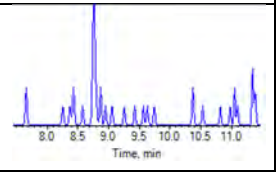
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	569200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1708000	N/A	N/A	N/A	1018.6	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	153600	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	153600	N/A	N/A	N/A	N/A/ 0.13		

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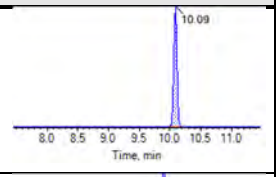
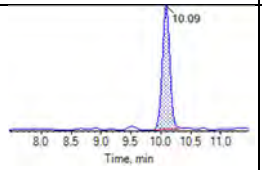
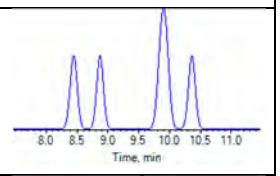
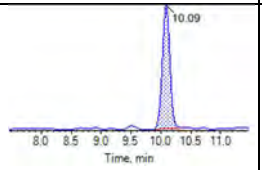
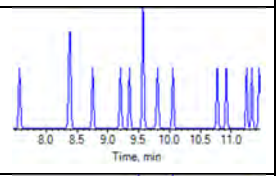
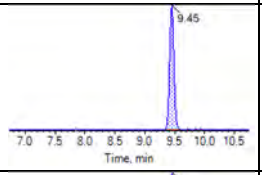
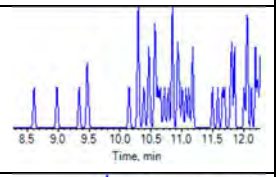
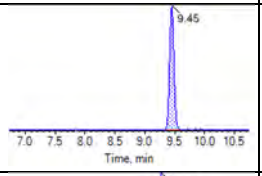
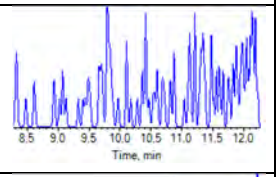
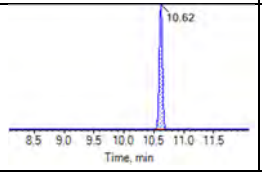
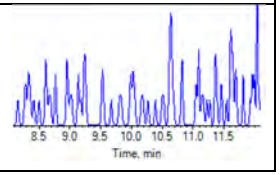
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1176000	N/A	N/A	N/A	1019.1	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	31330	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	31330	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	209500	N/A	N/A	N/A	N/A/ 1.00		

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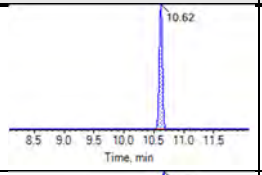
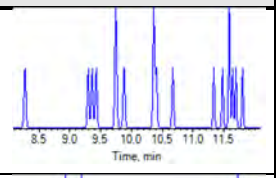
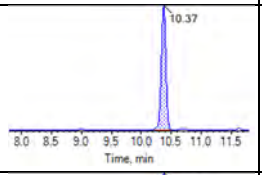
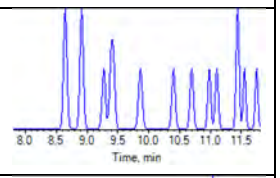
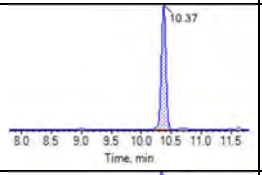
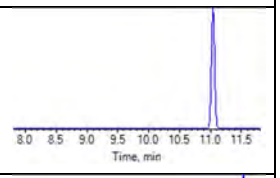
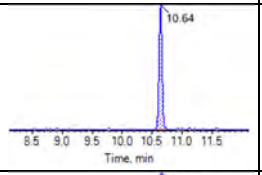
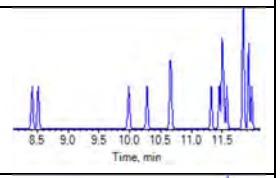
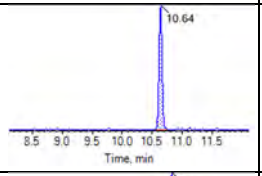
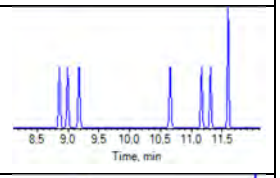
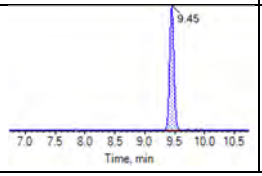
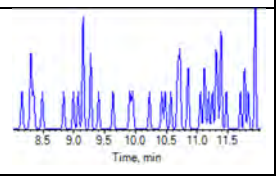
PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	209500	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59990	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59990	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	58240	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	58240	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 1.00		

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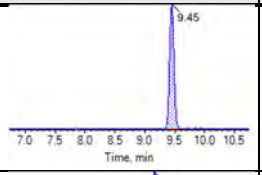
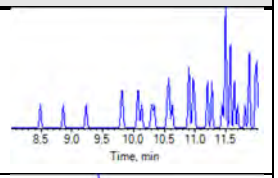
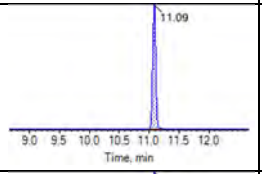
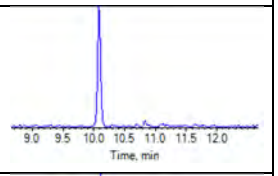
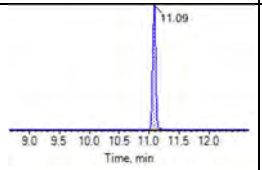
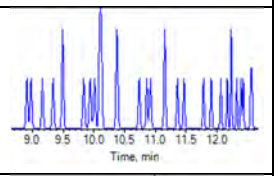
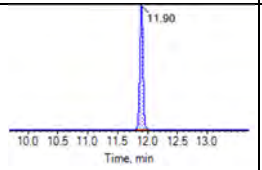
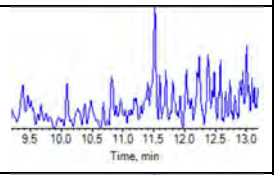
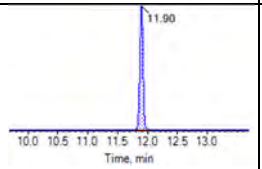
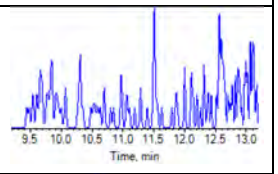
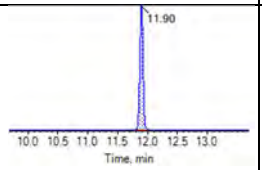
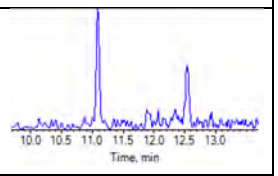
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	69920	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	189400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	189400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 1.00		

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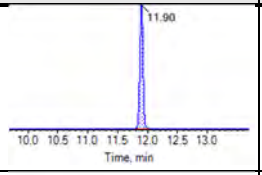
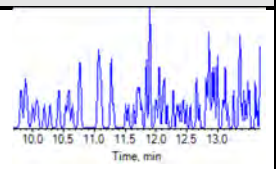
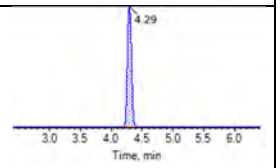
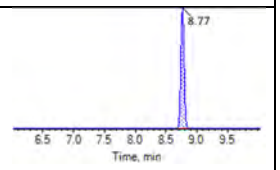
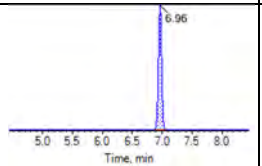
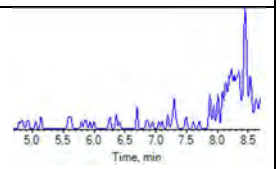
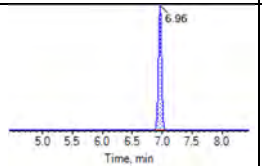
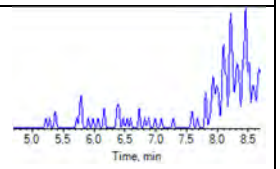
PFC103117134.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	136500	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1862000	N/A	N/A	N/A	1076.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1366000	N/A	N/A	N/A	1110.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	313400	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 02-NOV-17 20:13

Data File: PFC103117145.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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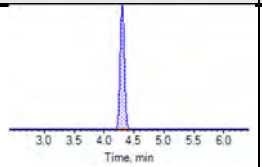
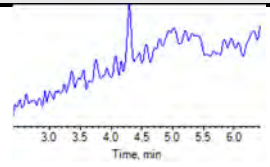
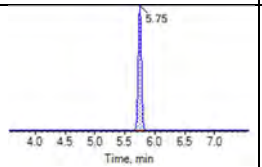
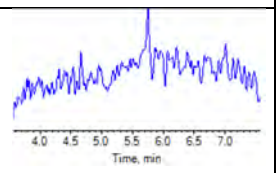
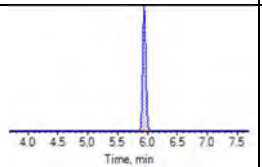
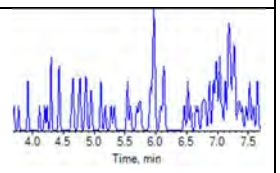
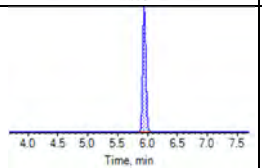
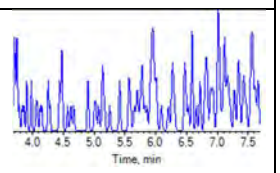
PFC103117145.wiff			
Sample Name	PFCIBLK15	**Injection Vial**	12
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117145.wiff
Acquisition Date	11/2/2017 20:13:29	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117145.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	151800	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	240100	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	163600	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	163600	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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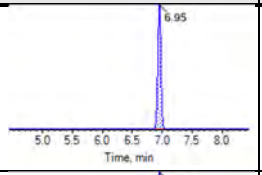
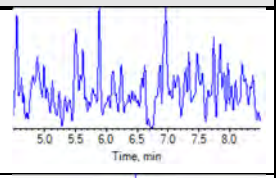
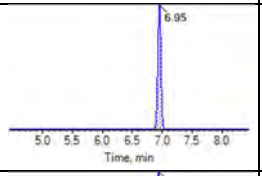
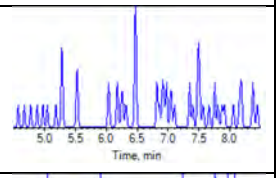
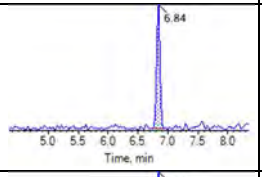
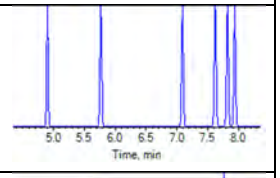
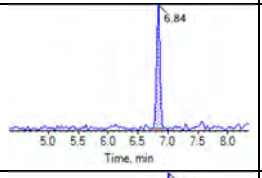
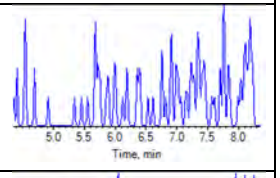
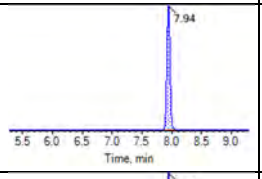
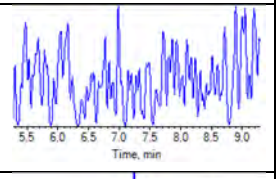
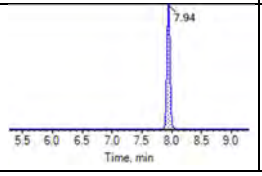
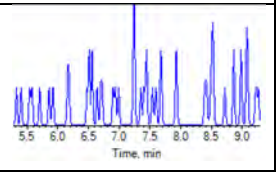
PFC103117145.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	298600	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	298600	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	31540	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	31540	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	261800	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	261800	N/A	N/A	N/A	N/A/ 0.26		

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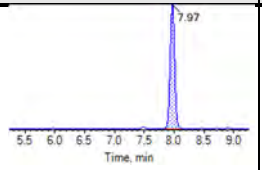
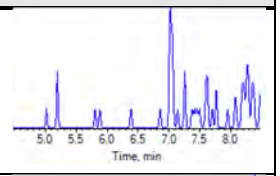
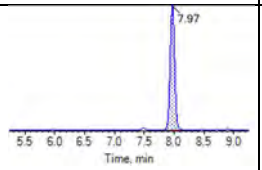
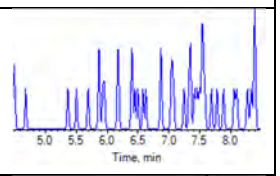
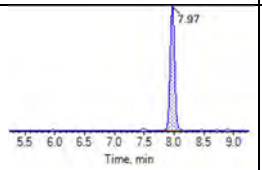
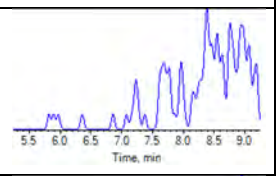
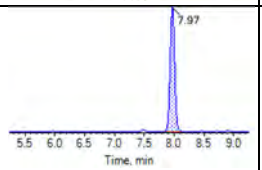
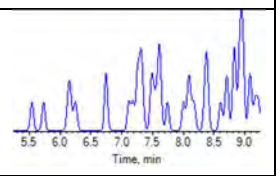
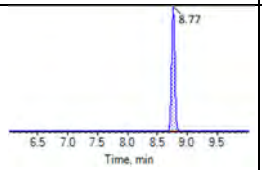
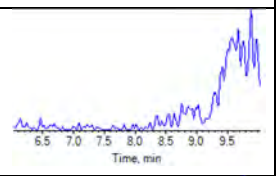
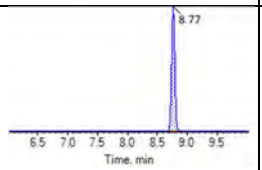
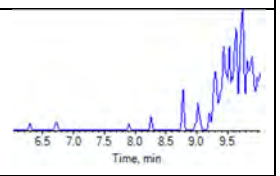
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	75130	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	75130	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	75130	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	75130	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	209900	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	209900	N/A	N/A	N/A	N/A/ 0.37		

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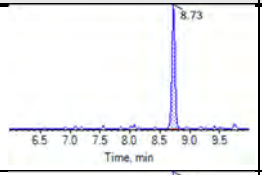
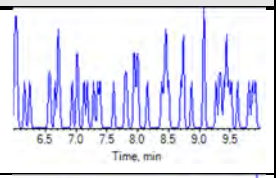
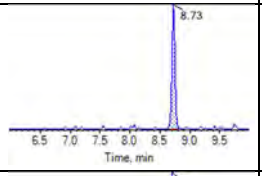
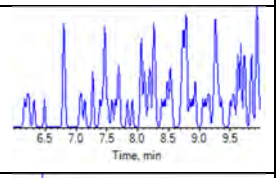
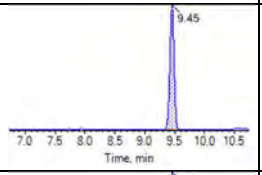
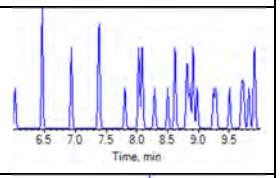
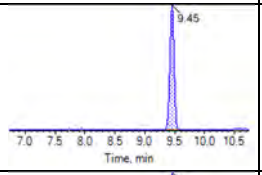
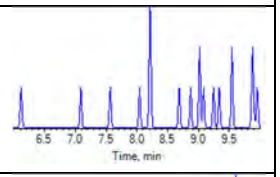
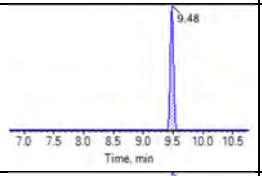
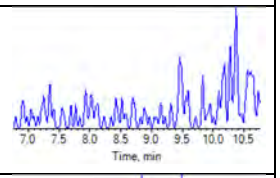
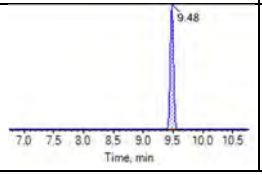
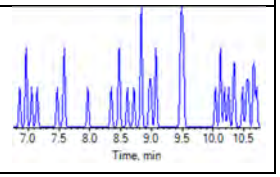
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	36660	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	36660	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	213100	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	213100	N/A	N/A	N/A	N/A/ 0.24		

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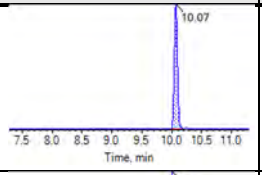
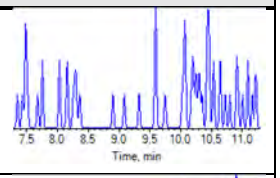
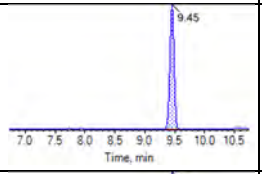
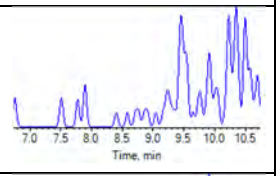
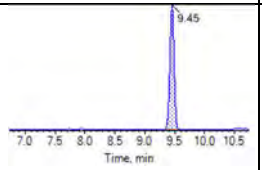
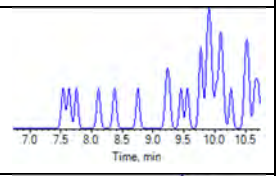
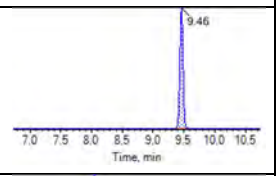
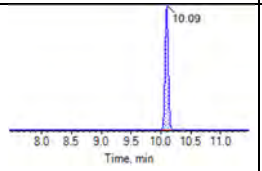
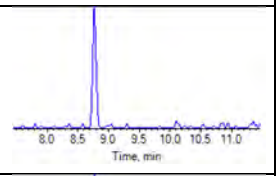
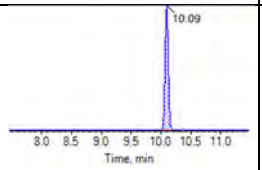
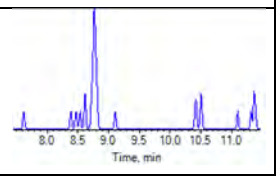
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	498600	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1593000	N/A	N/A	N/A	950.1	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 0.13		

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LCMSMS#6

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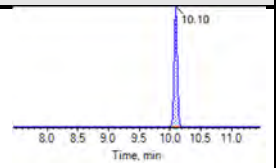
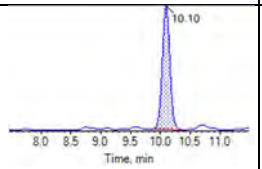
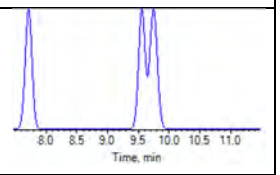
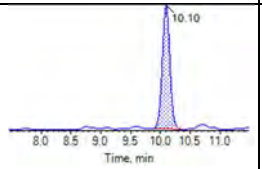
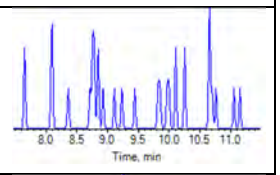
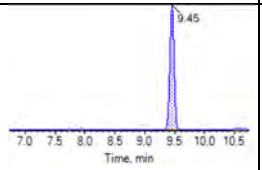
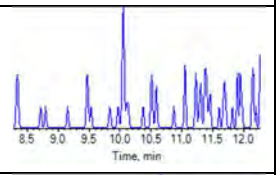
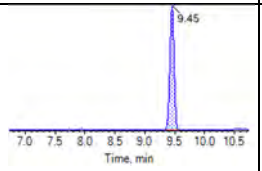
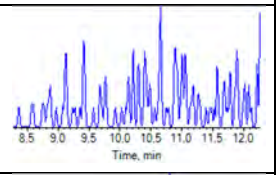
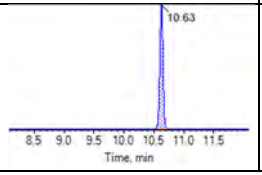
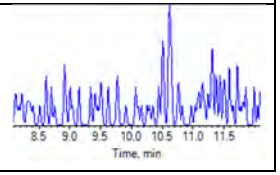
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1114000	N/A	N/A	N/A	965.8	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	30850	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	30850	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	199600	N/A	N/A	N/A	N/A/ 1.00		

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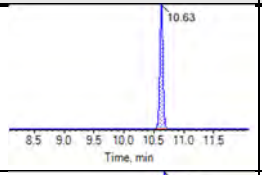
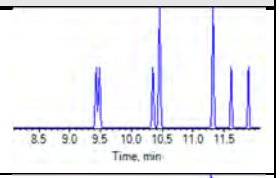
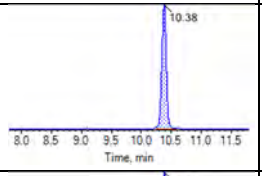
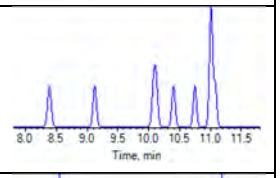
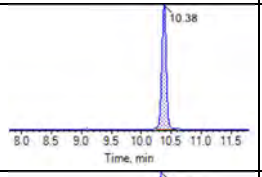
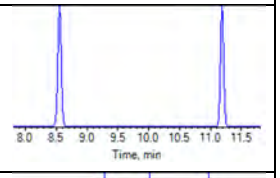
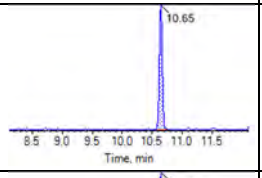
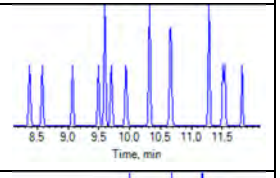
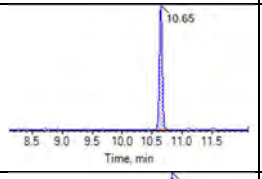
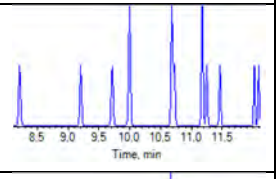
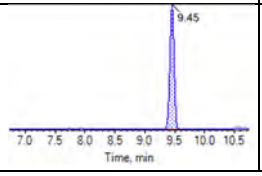
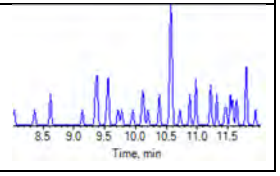
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	199600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	55620	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	55620	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	51240	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	51240	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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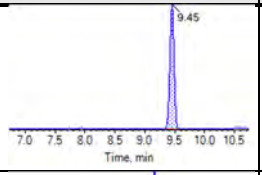
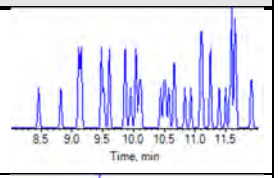
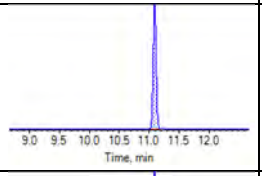
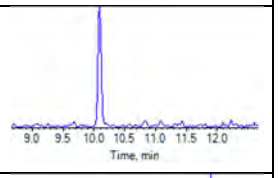
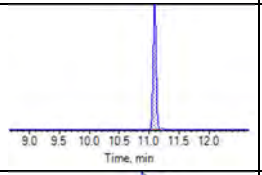
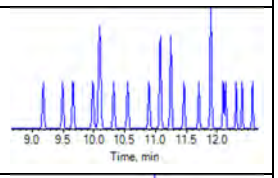
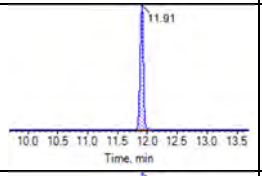
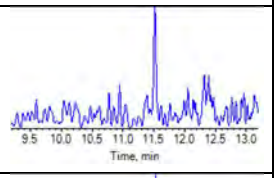
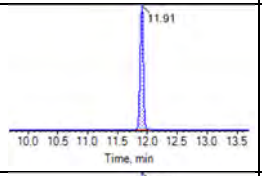
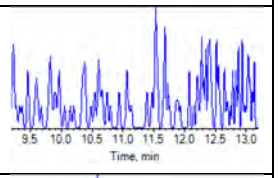
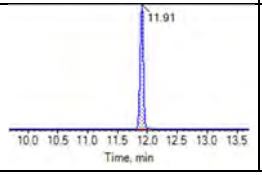
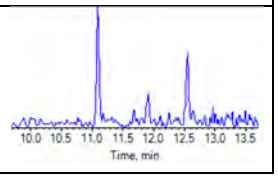
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	52490	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	157900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	157900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	119500	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	119500	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	119500	N/A	N/A	N/A	N/A/ 1.00		

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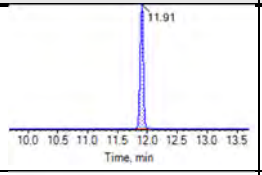
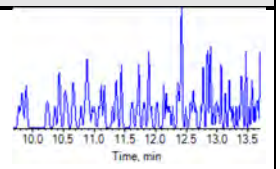
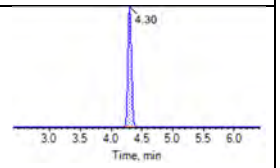
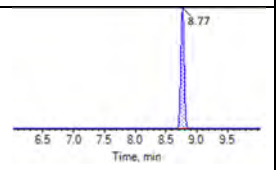
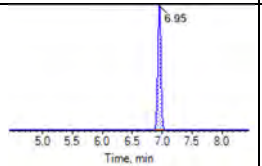
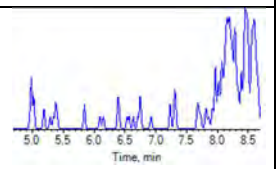
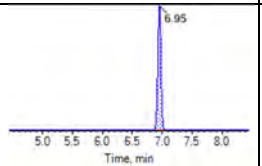
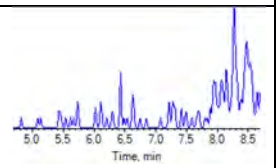
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	119500	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1742000	N/A	N/A	N/A	1006.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.77 (8.75)	1263000	N/A	N/A	N/A	1026.5	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	298600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	298600	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 09:25

Data File: PFC103117160.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JTSB
11/06/2017

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LCMSMS#6

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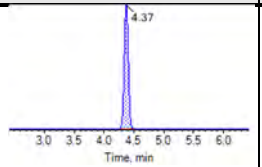
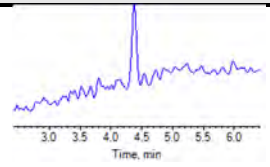
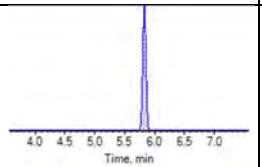
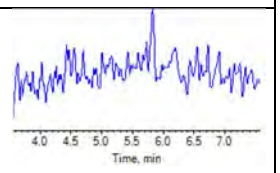
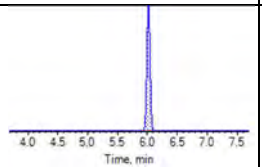
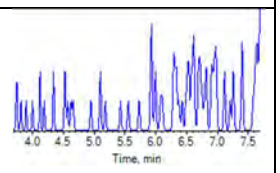
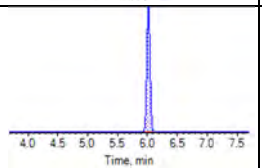
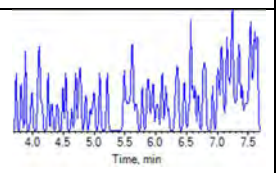
PFC103117160.wiff			
Sample Name	PFCIBLK17	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117160.wiff
Acquisition Date	11/3/2017 09:25:21	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117160.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	138200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	198500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	140200	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	140200	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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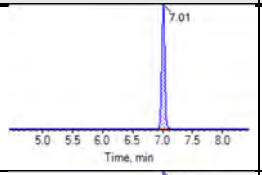
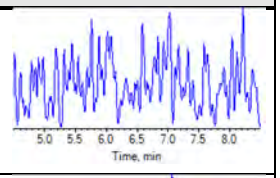
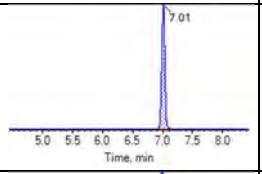
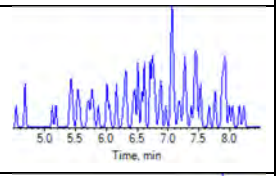
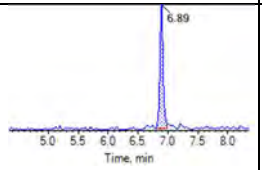
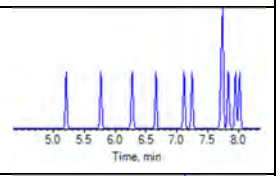
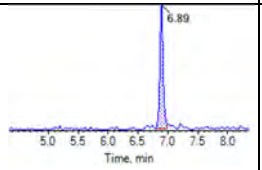
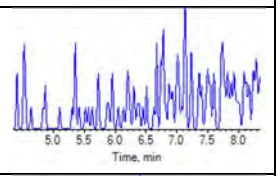
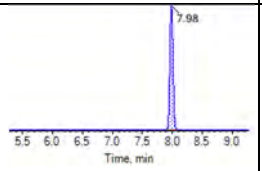
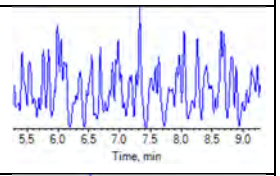
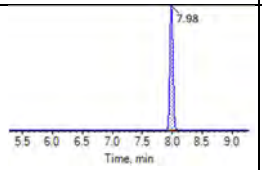
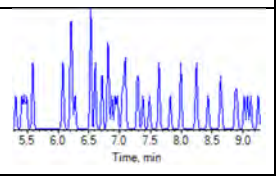
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	56730	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	56730	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	207900	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	207900	N/A	N/A	N/A	N/A/ 0.26		

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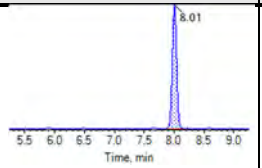
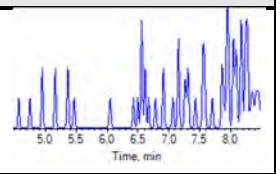
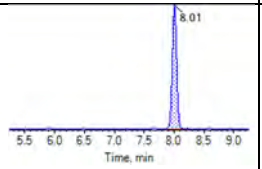
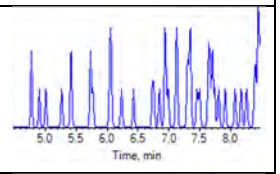
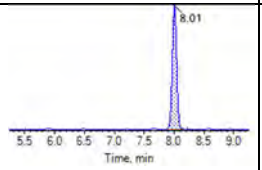
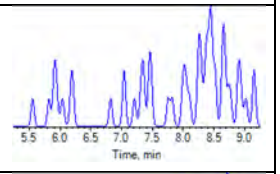
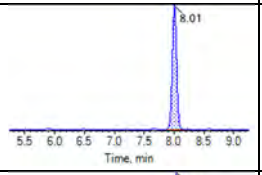
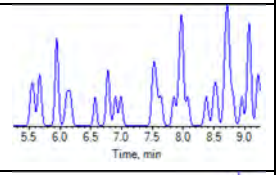
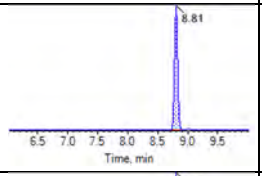
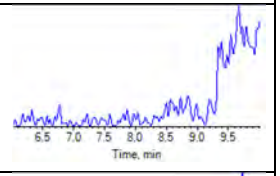
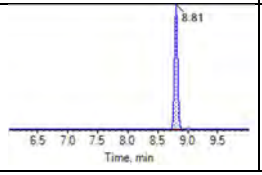
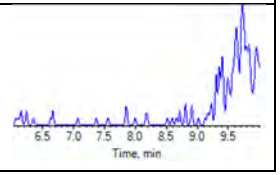
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	187700	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	187700	N/A	N/A	N/A	N/A/ 0.37		

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LCMSMS#6

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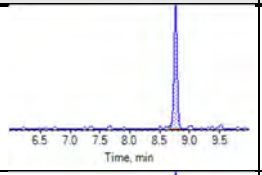
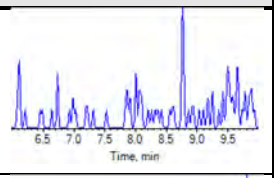
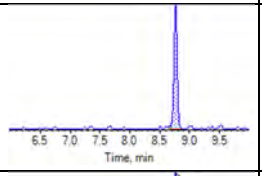
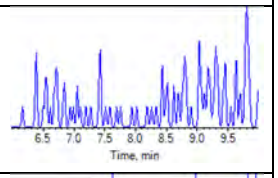
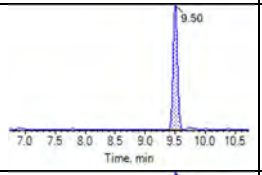
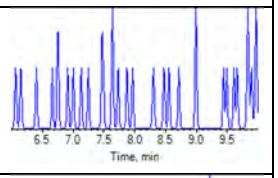
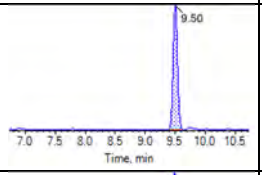
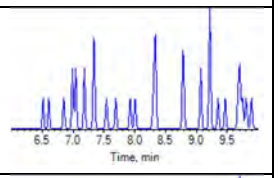
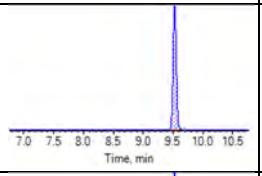
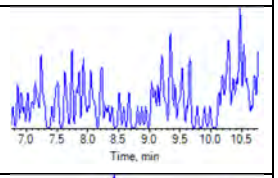
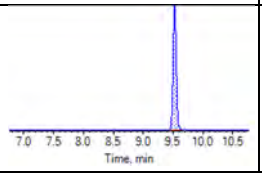
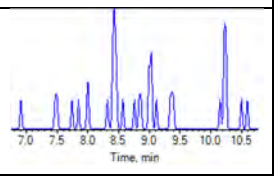
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35000	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35000	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	200900	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	200900	N/A	N/A	N/A	N/A/ 0.24		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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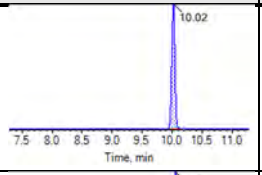
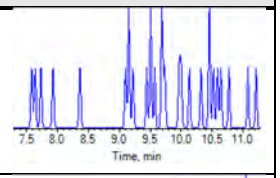
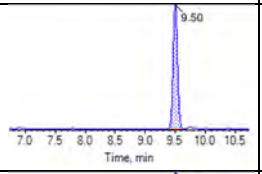
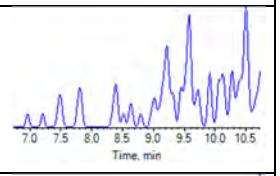
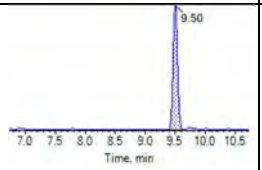
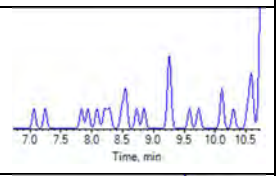
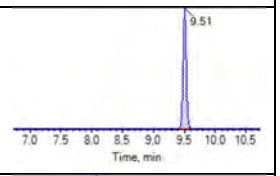
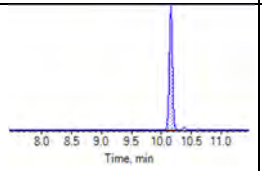
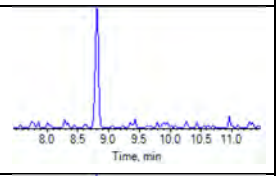
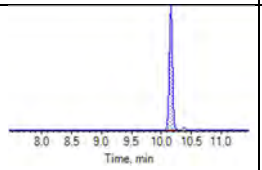
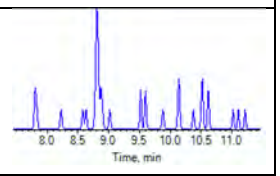
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	409000	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.51 (9.45)	1160000	N/A	N/A	N/A	691.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	103900	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	103900	N/A	N/A	N/A	N/A/ 0.13		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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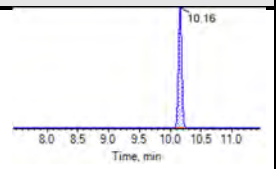
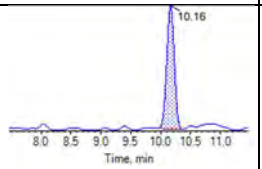
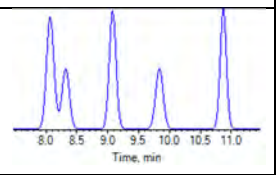
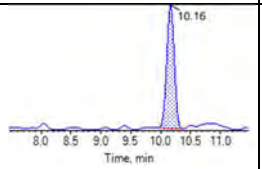
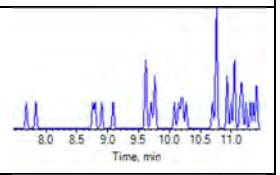
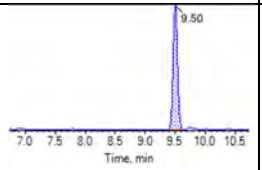
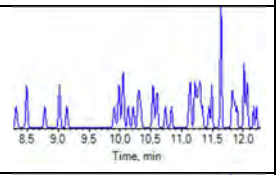
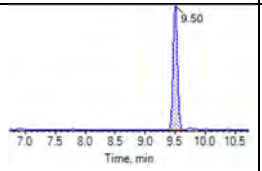
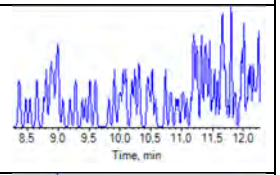
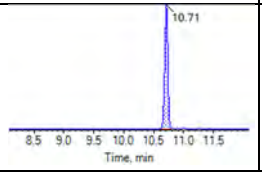
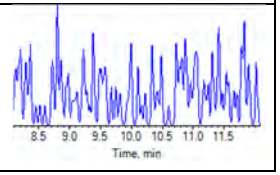
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.16 (10.02)	695900	N/A	N/A	N/A	603.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	17560	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	17560	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	134600	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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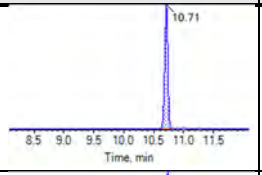
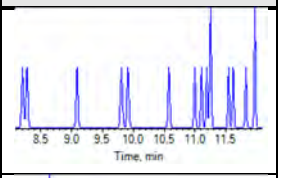
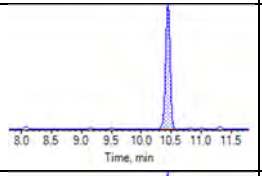
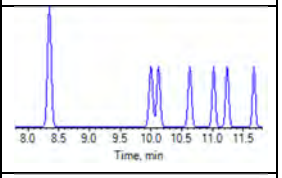
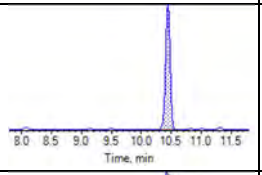
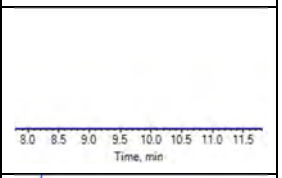
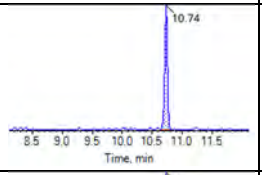
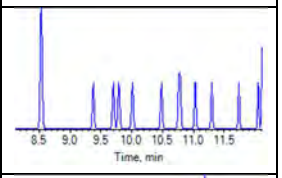
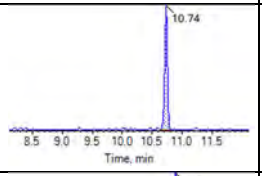
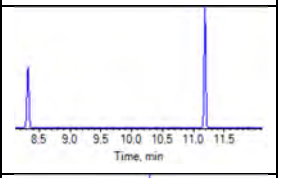
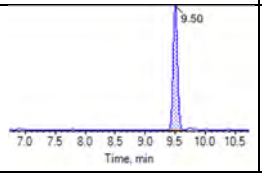
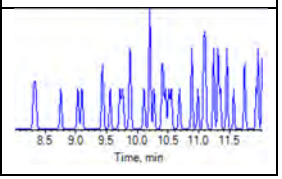
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	134600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	33490	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	33490	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	32280	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	32280	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
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LCMSMS#6

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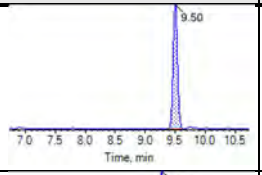
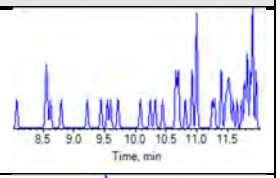
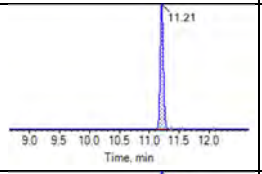
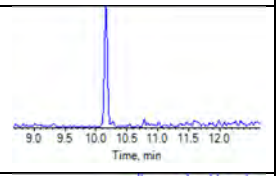
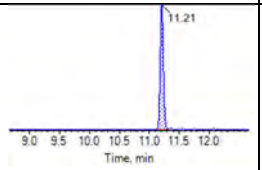
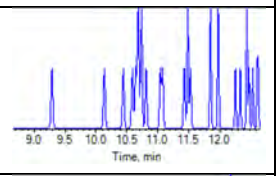
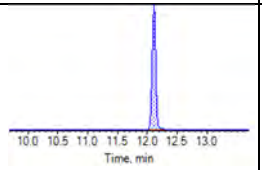
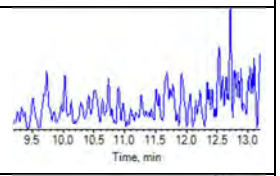
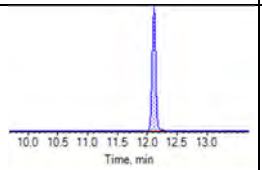
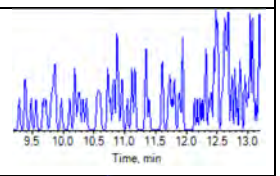
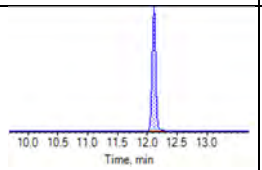
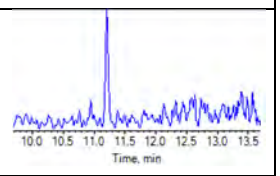
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	129300	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	129300	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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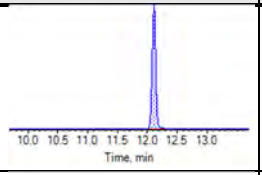
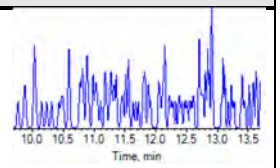
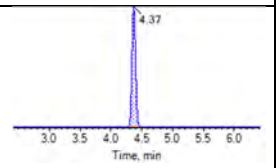
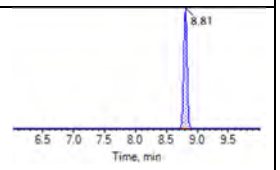
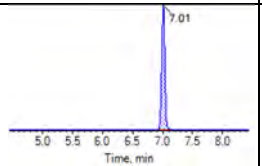
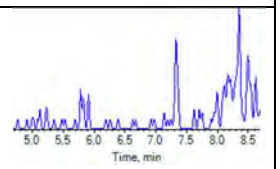
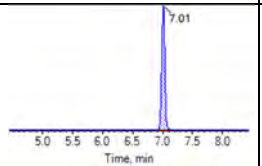
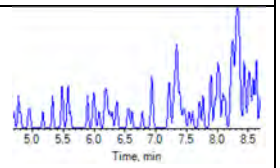
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.37 (4.60)	1385000	N/A	N/A	N/A	800.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.81 (8.75)	869200	N/A	N/A	N/A	706.5	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 10:08

Data File: PFC103117162.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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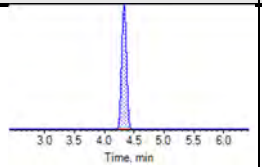
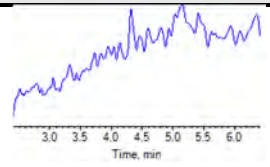
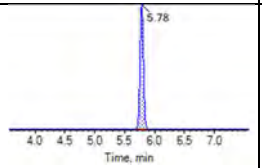
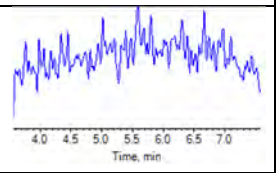
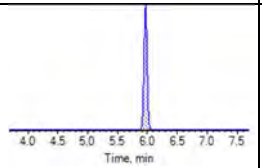
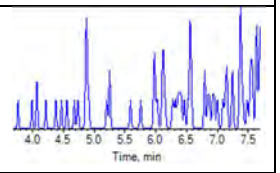
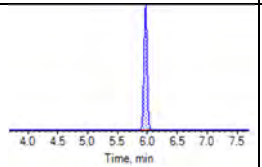
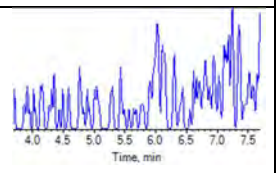
PFC103117162.wiff			
Sample Name	PFCIBLK18	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117162.wiff
Acquisition Date	11/3/2017 10:08:11	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117162.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	173400	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	278300	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	189900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	189900	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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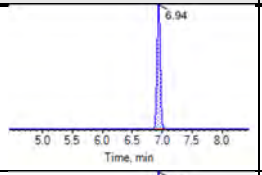
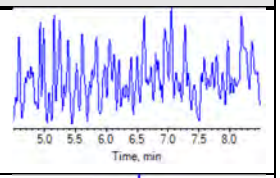
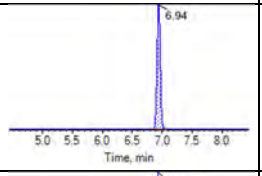
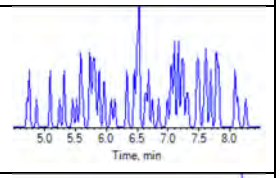
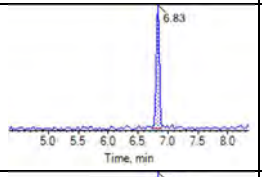
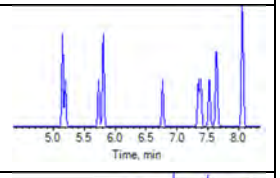
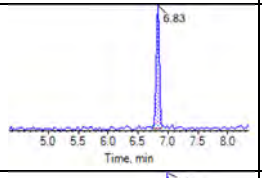
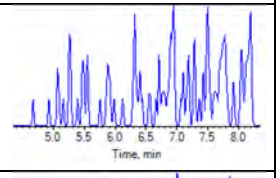
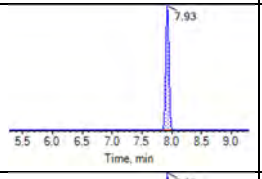
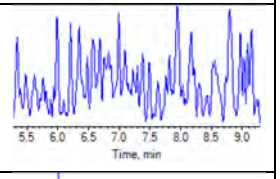
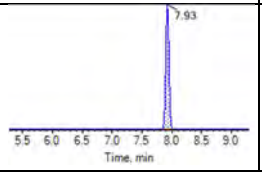
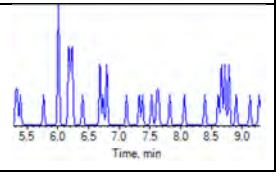
PFC103117162.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	43120	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	43120	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	285800	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	285800	N/A	N/A	N/A	N/A/ 0.26		

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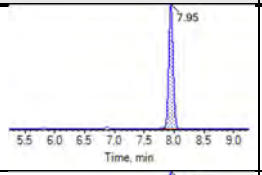
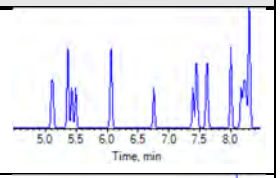
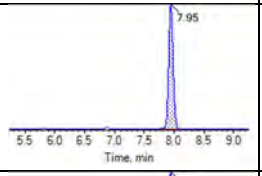
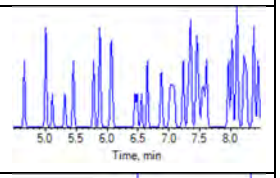
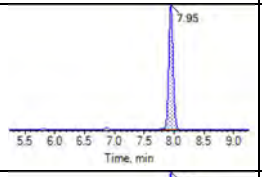
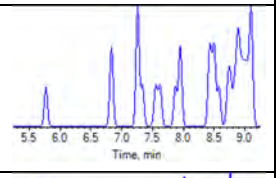
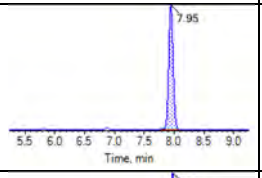
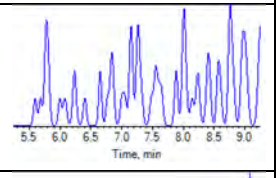
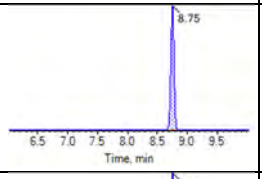
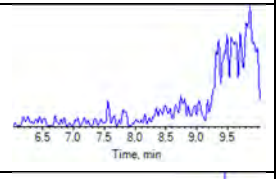
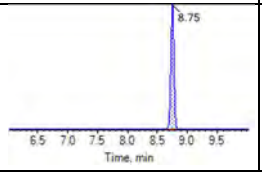
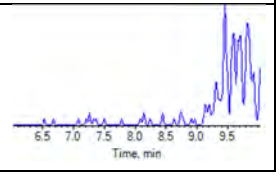
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	261800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	261800	N/A	N/A	N/A	N/A/ 0.37		

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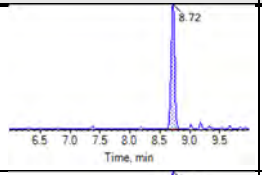
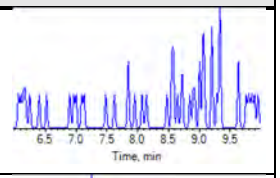
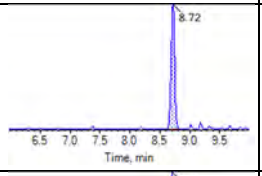
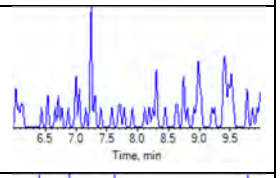
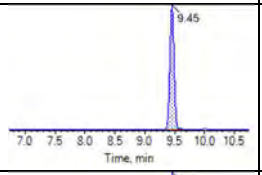
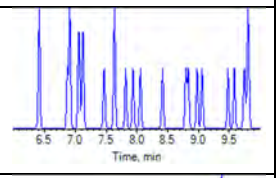
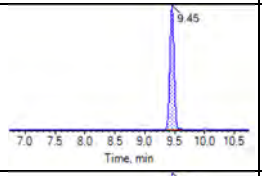
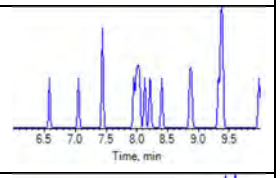
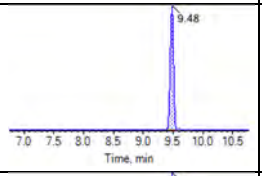
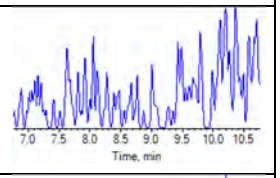
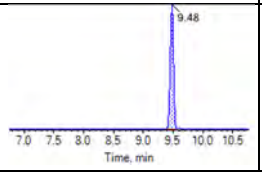
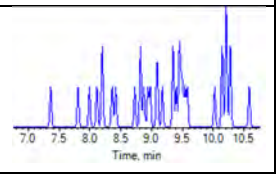
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	42240	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	42240	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	247600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	247600	N/A	N/A	N/A	N/A/ 0.24		

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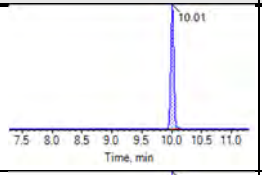
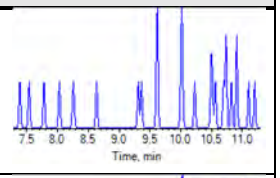
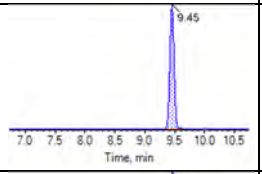
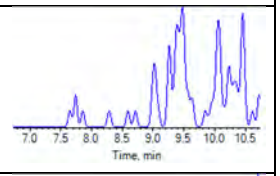
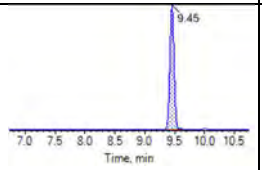
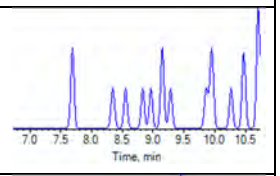
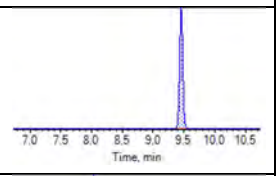
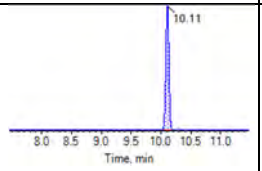
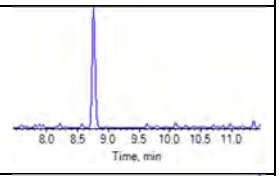
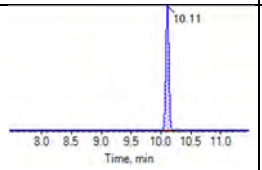
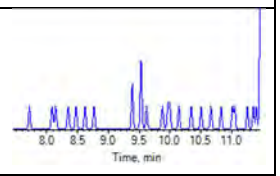
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	592200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1524000	N/A	N/A	N/A	908.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 0.13		

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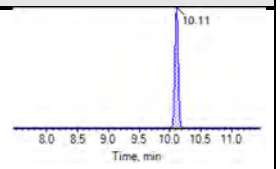
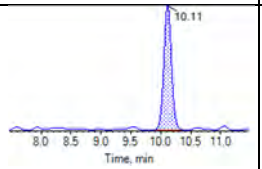
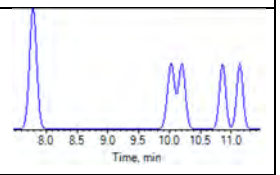
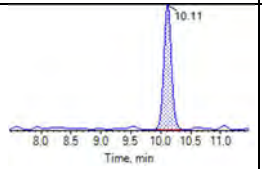
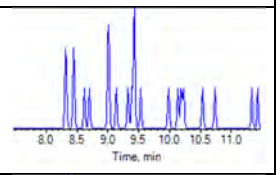
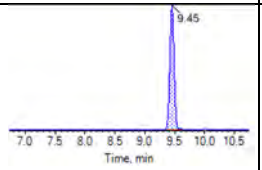
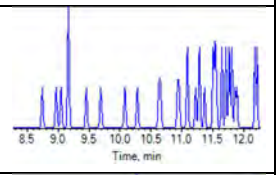
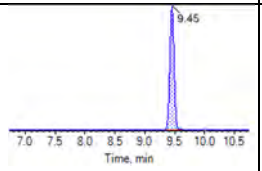
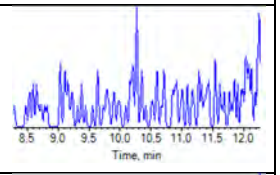
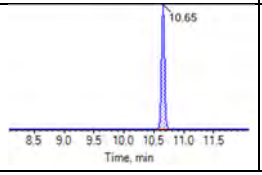
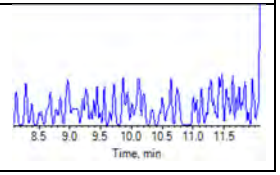
PFC103117162.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.11 (10.02)	1028000	N/A	N/A	N/A	891.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	192900	N/A	N/A	N/A	N/A/ 1.00		

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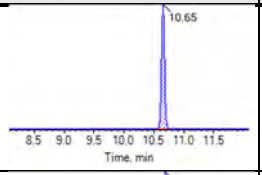
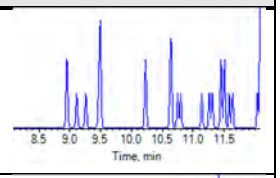
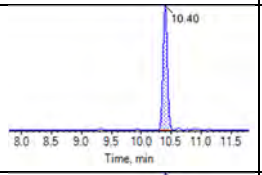
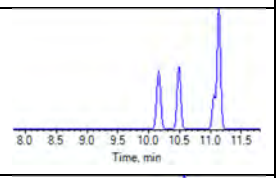
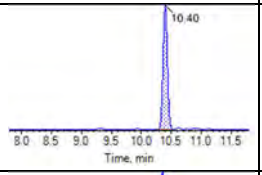
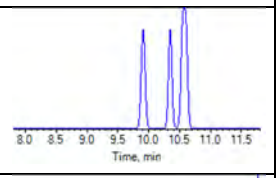
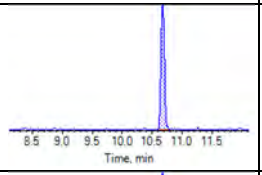
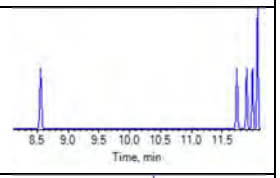
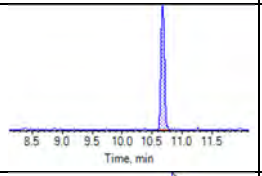
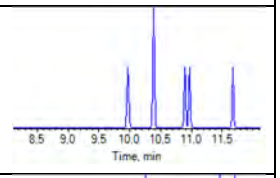
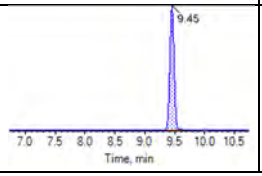
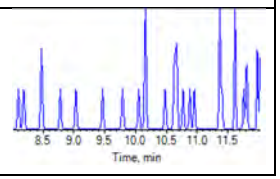
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	192900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44410	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44410	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47700	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47700	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		

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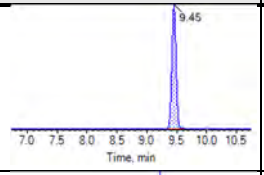
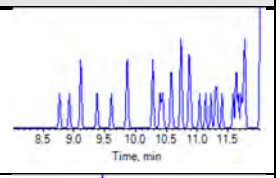
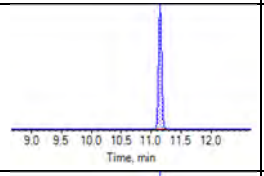
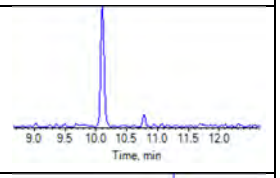
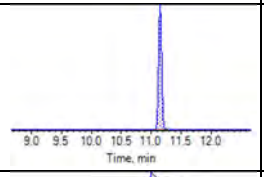
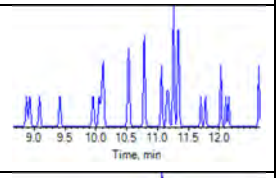
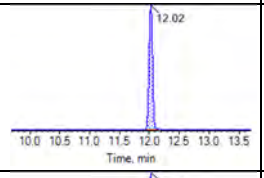
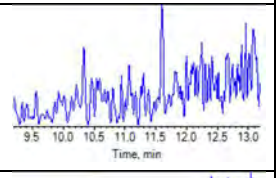
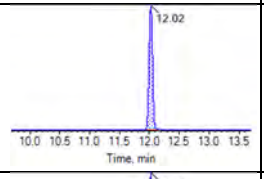
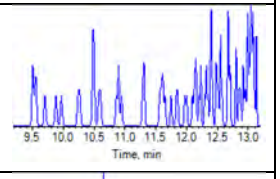
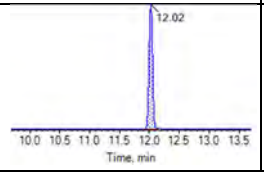
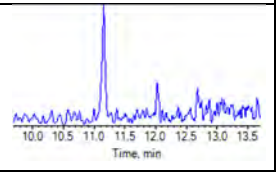
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	204900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	204900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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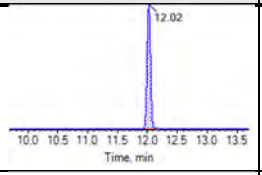
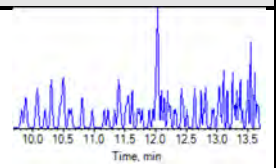
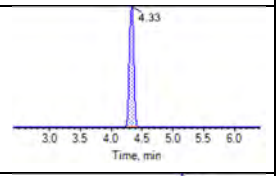
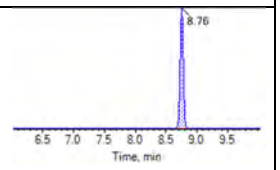
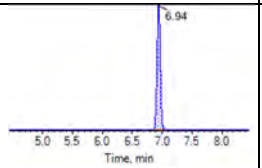
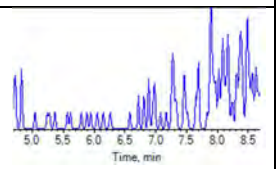
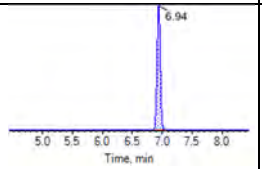
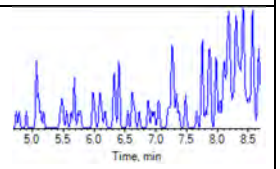
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.33 (4.60)	1773000	N/A	N/A	N/A	1024.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1241000	N/A	N/A	N/A	1008.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 17:16

Data File: PFC103117182.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB GC
11/06/2017 11/06/2017

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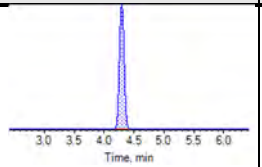
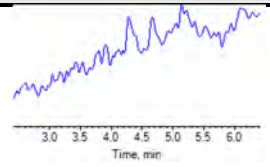
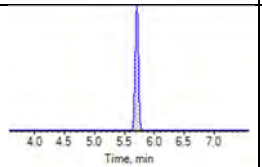
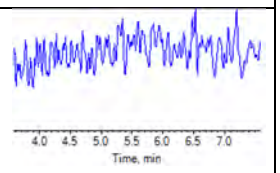
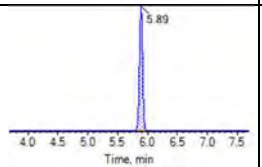
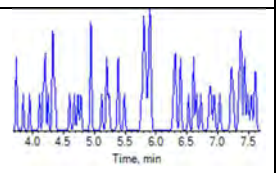
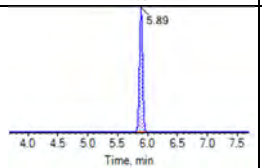
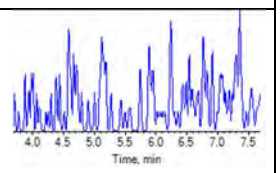
PFC103117182.wiff			
Sample Name	PFCIBLK20	**Injection Vial**	10
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117182.wiff
Acquisition Date	11/3/2017 17:16:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117182.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	175000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	264700	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	186600	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	186600	N/A	N/A	N/A	N/A/ 0.45		

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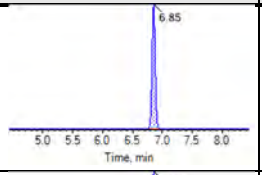
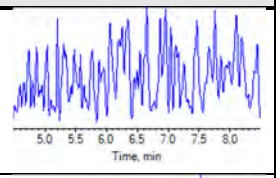
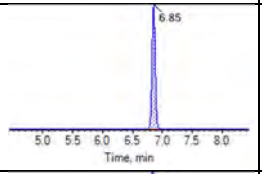
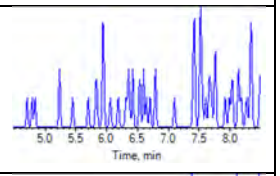
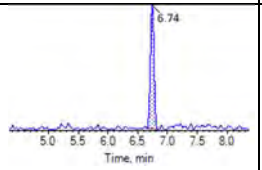
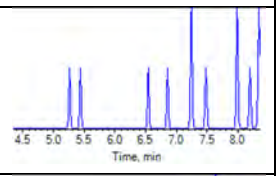
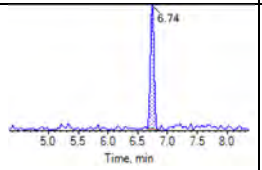
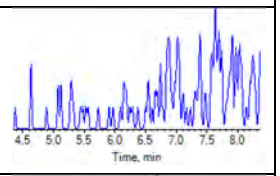
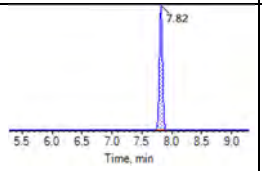
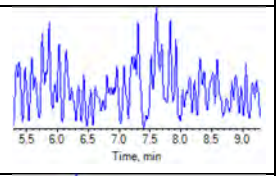
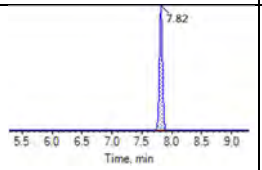
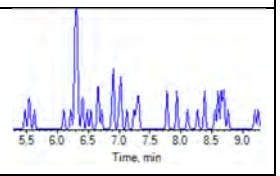
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	359600	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	359600	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	41130	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	41130	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	297800	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	297800	N/A	N/A	N/A	N/A/ 0.26		

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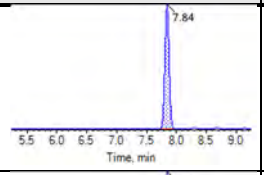
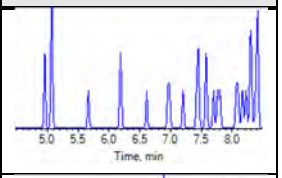
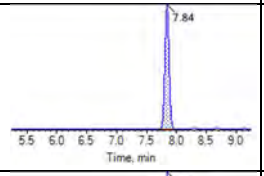
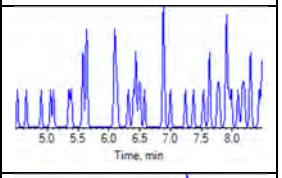
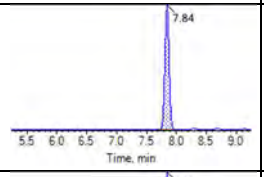
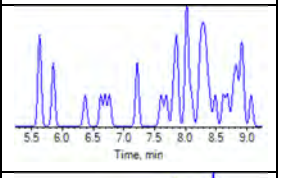
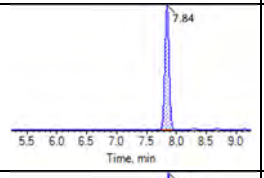
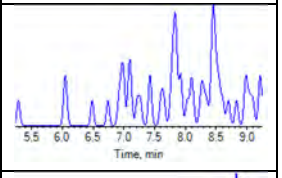
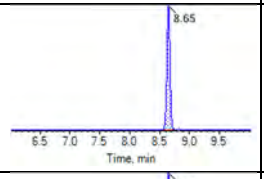
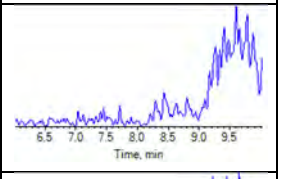
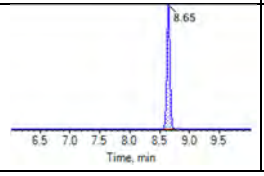
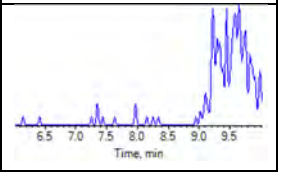
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	94970	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	94970	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	94970	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	94970	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	276500	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	276500	N/A	N/A	N/A	N/A/ 0.37		

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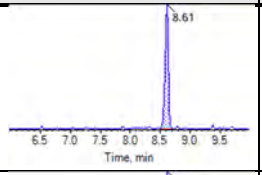
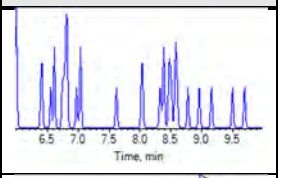
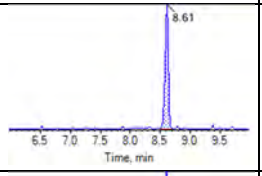
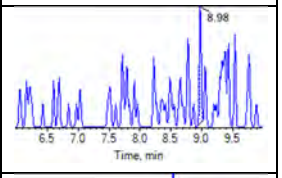
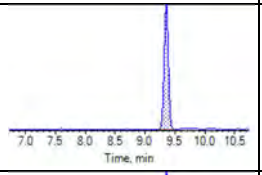
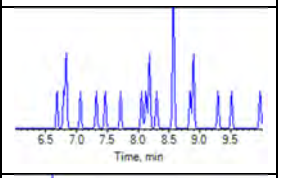
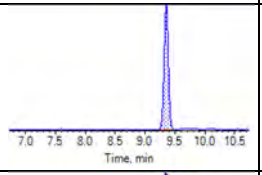
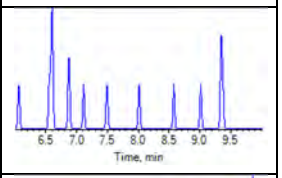
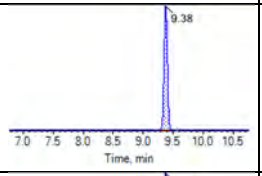
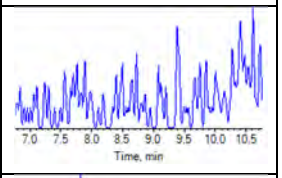
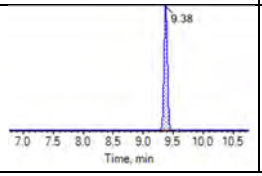
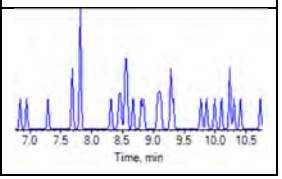
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	40090	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.98 (8.72)	1472	13C2_6:2 FTS	40090	N/A	7.8	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	253200	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	253200	N/A	N/A	N/A	N/A/ 0.24		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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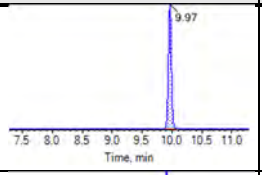
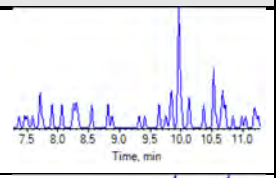
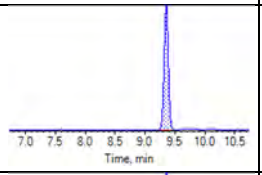
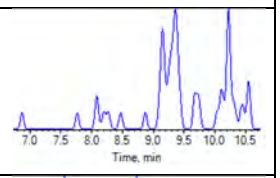
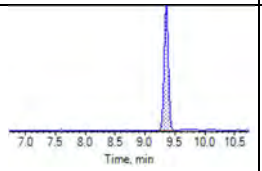
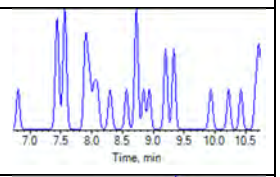
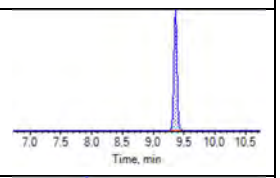
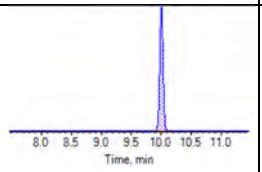
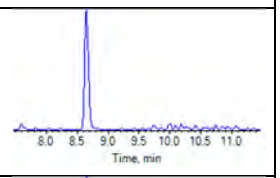
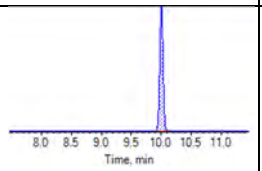
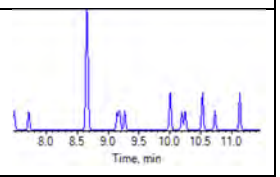
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	594700	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.36 (9.45)	1649000	N/A	N/A	N/A	983.3	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	155300	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	155300	N/A	N/A	N/A	N/A/ 0.13		

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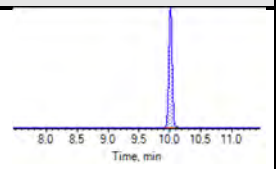
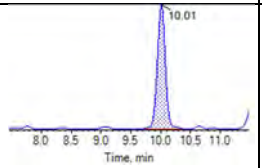
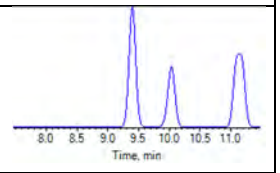
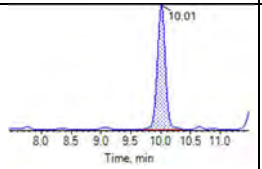
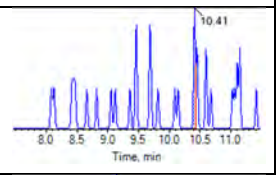
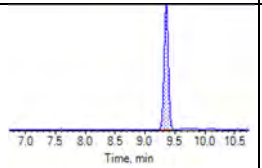
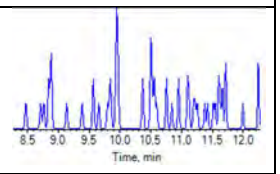
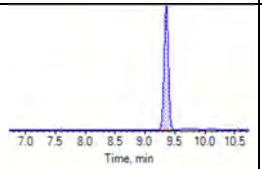
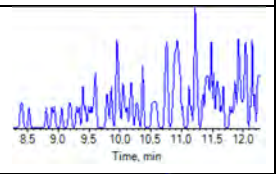
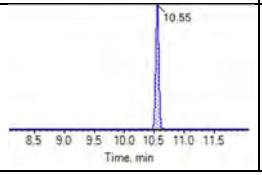
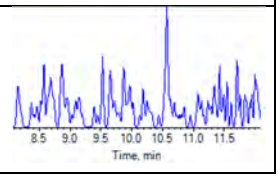
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1108000	N/A	N/A	N/A	960.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	26150	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.41 (10.09)	874	13C2_8:2 FTS	26150	N/A	6.7	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	204200	N/A	N/A	N/A	N/A/ 1.00		

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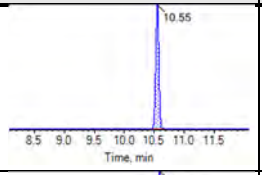
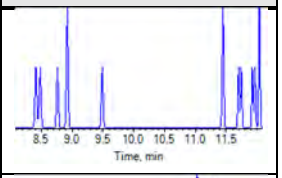
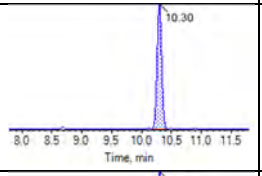
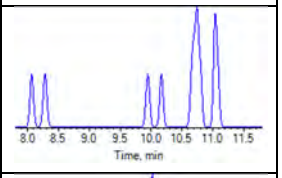
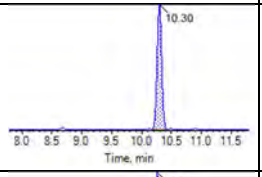
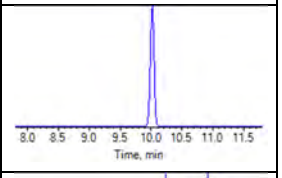
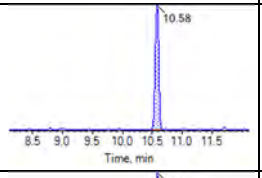
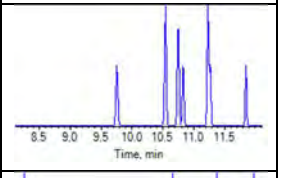
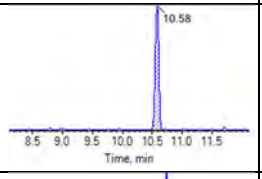
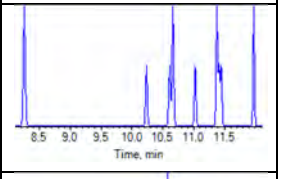
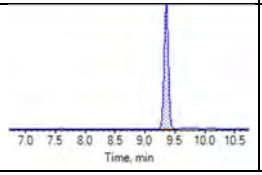
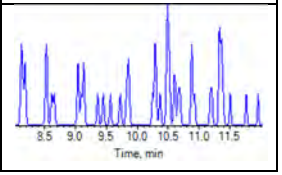
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	204200	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50360	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	50360	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50800	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	50800	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 1.00		

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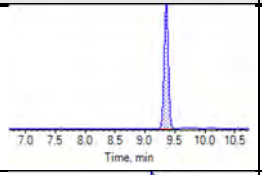
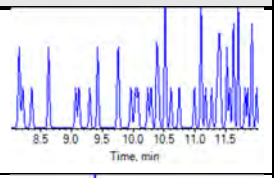
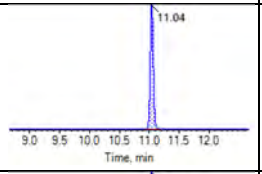
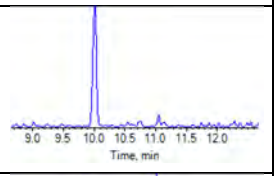
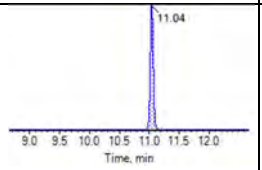
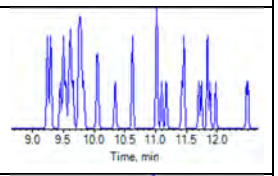
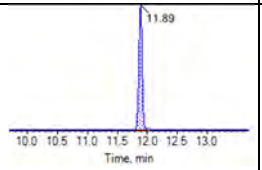
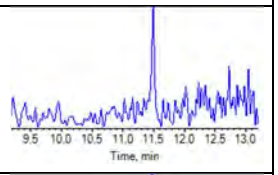
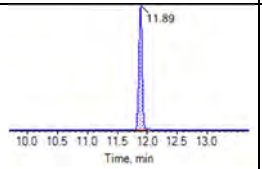
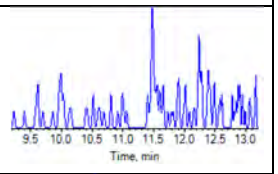
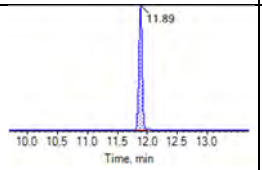
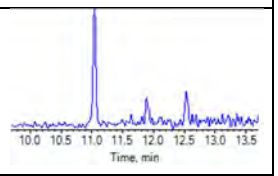
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	69860	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	207900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	207900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	145200	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	145200	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	145200	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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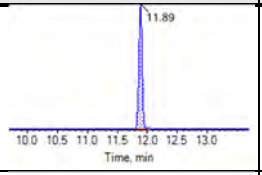
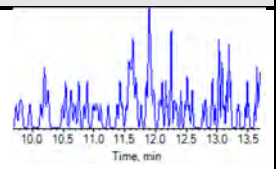
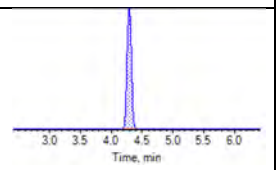
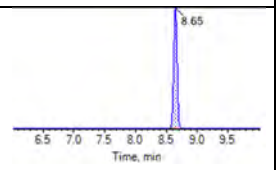
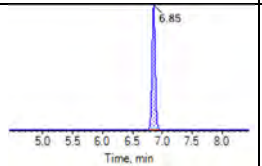
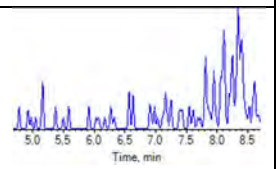
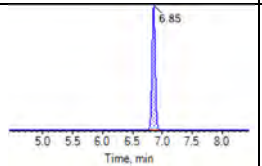
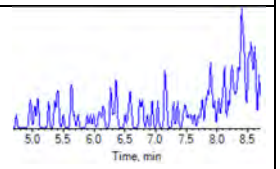
PFC103117182.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	145200	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1802000	N/A	N/A	N/A	1041.4	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.65 (8.75)	1152000	N/A	N/A	N/A	936.5	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	359600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	359600	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 436518

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 21:54

Data File: PFC103117195.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JTSB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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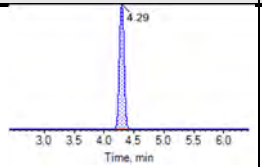
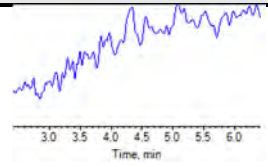
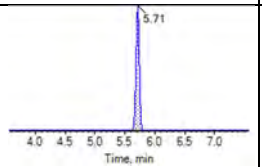
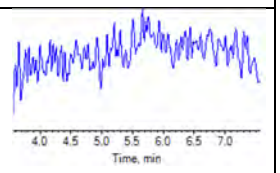
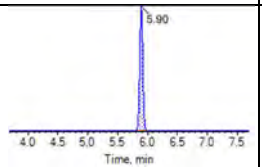
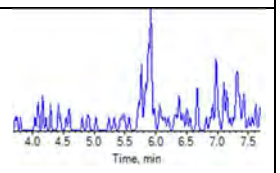
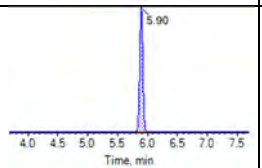
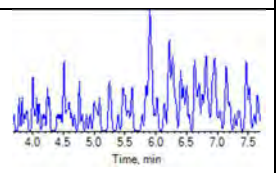
PFC103117195.wiff			
Sample Name	PFCIBLK21	**Injection Vial**	10
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117195.wiff
Acquisition Date	11/3/2017 21:54:09	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117195.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	182200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	268700	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	182600	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	182600	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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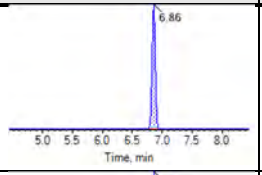
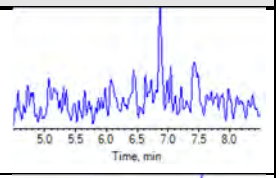
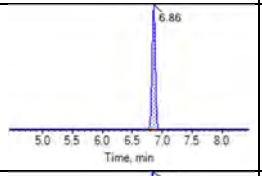
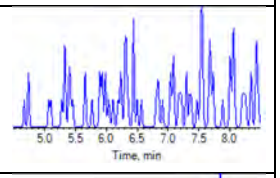
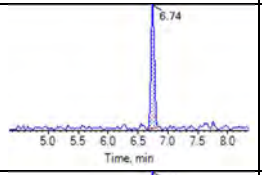
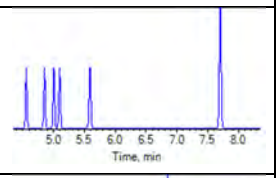
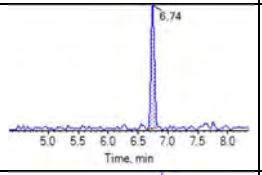
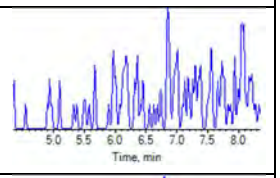
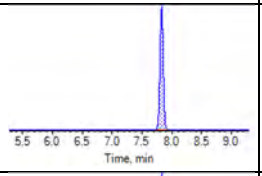
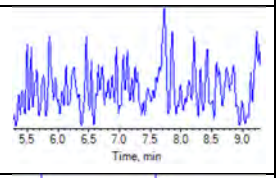
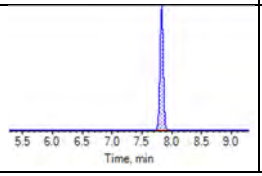
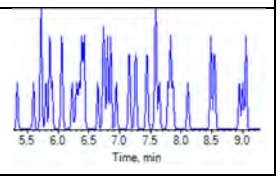
PFC103117195.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	356000	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	356000	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	38380	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	38380	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	298500	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	298500	N/A	N/A	N/A	N/A/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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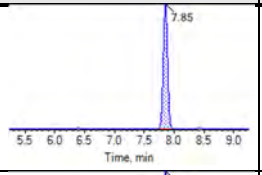
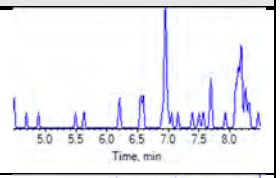
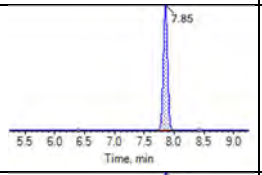
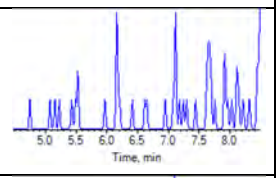
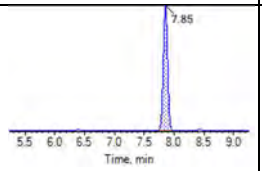
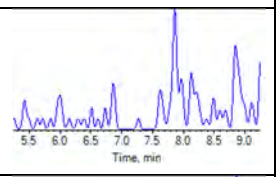
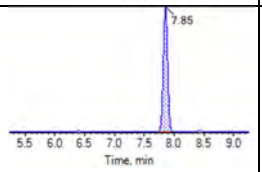
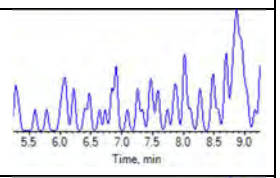
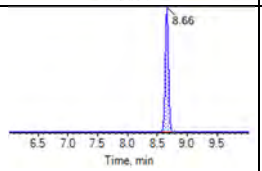
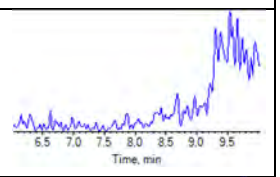
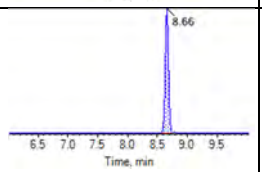
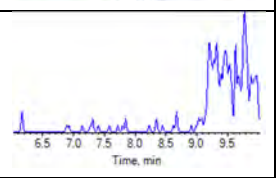
PFC103117195.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	96180	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	96180	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	96180	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	96180	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	273500	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	273500	N/A	N/A	N/A	N/A/ 0.37		

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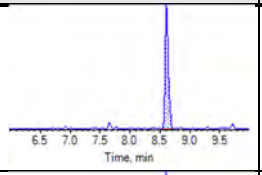
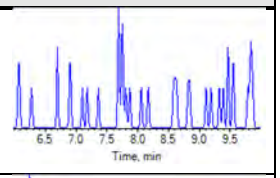
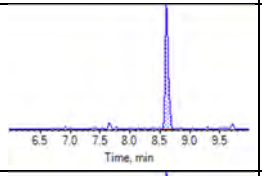
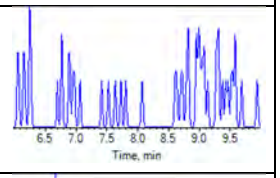
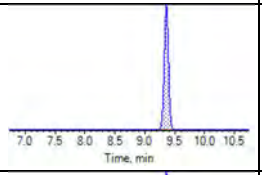
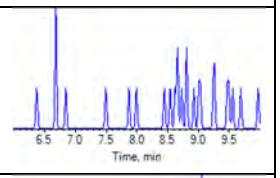
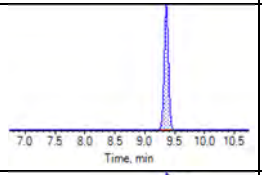
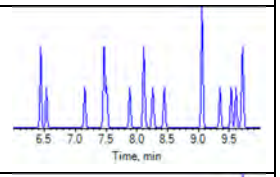
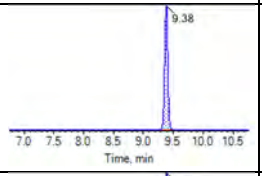
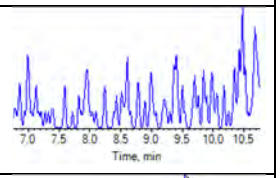
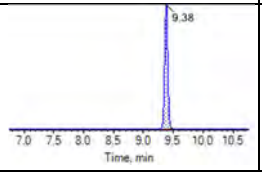
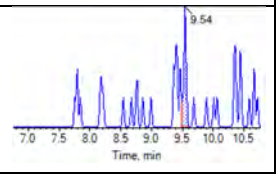
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	45680	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	45680	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	287500	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	9.54 (9.47)	1520	13C9_PFNA	287500	N/A	0.0	N/A	N/A/ 0.24		

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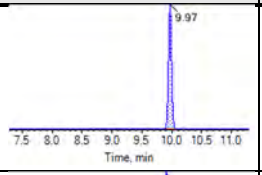
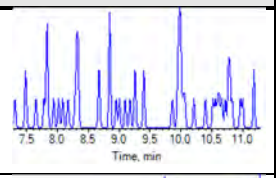
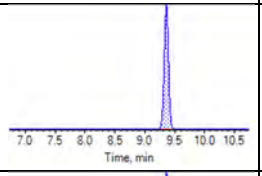
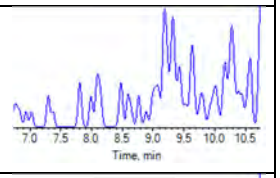
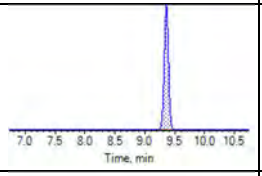
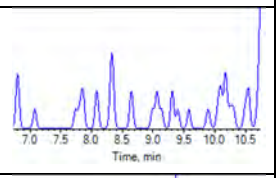
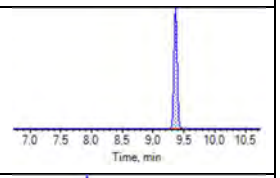
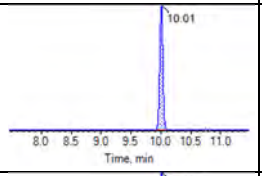
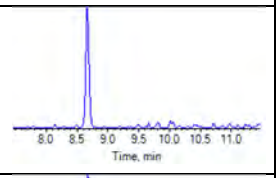
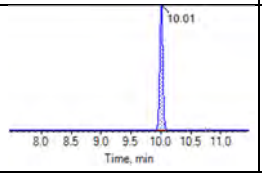
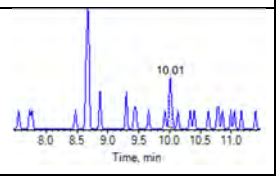
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	641200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.37 (9.45)	1621000	N/A	N/A	N/A	966.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	154500	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	10.01 (10.08)	1050	13C6_PFDA	154500	N/A	0.0	N/A	N/A/ 0.13		

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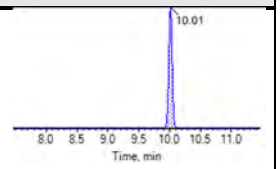
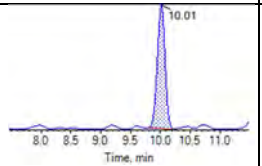
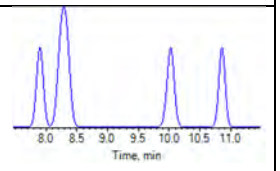
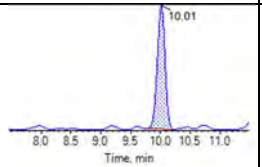
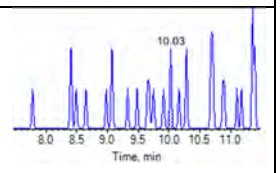
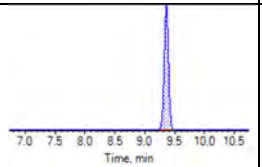
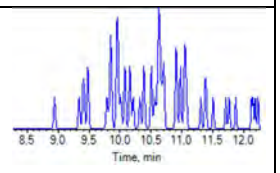
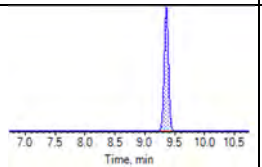
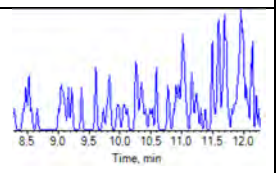
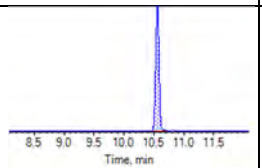
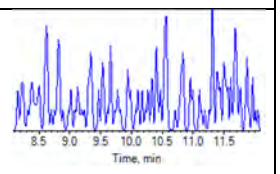
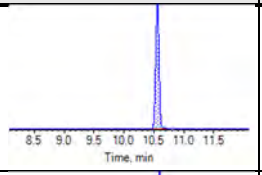
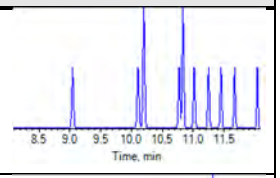
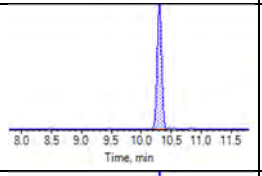
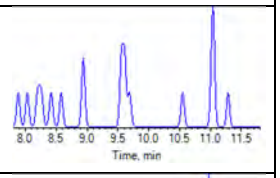
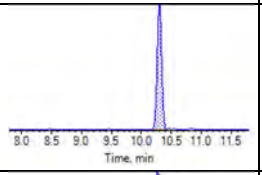
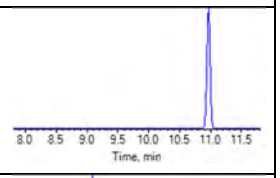
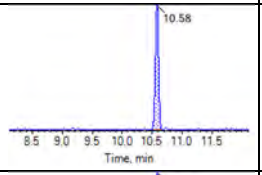
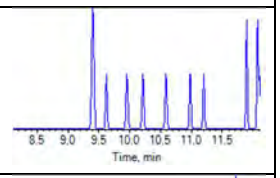
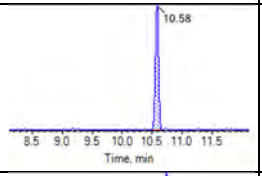
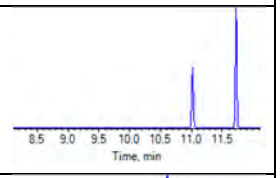
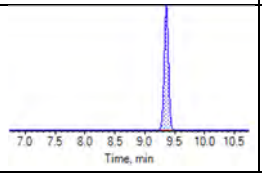
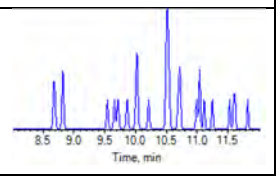
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1171000	N/A	N/A	N/A	1015.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	29400	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.03 (10.09)	551	13C2_8:2 FTS	29400	N/A	0.0	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	207500	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 11:31:00

PFC103117195.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	207500	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	57590	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	57590	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	63120	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	63120	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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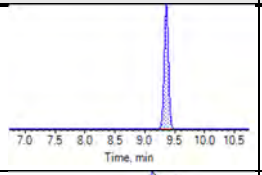
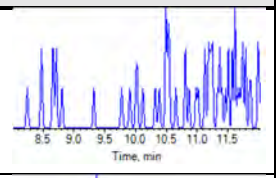
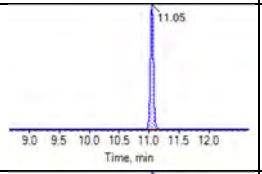
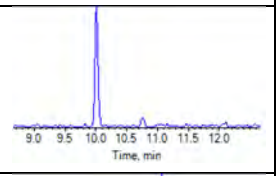
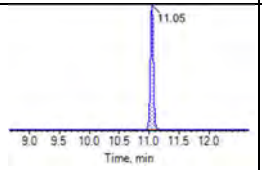
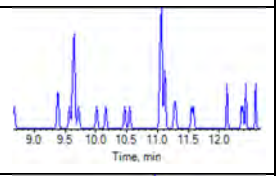
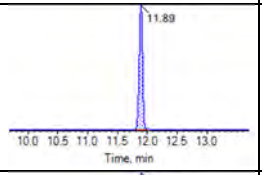
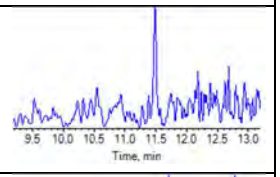
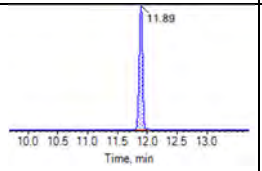
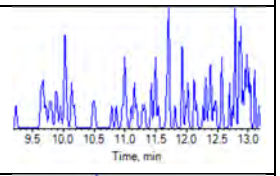
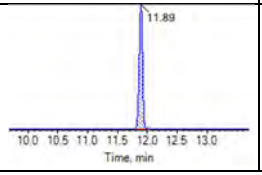
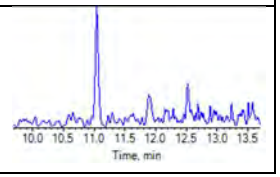
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	73980	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	210900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	210900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	158300	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	158300	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	158300	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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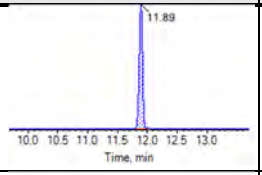
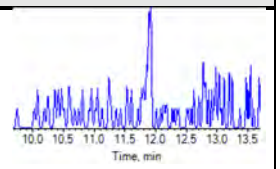
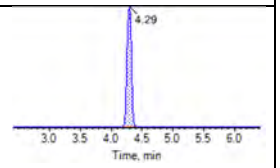
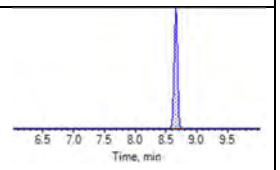
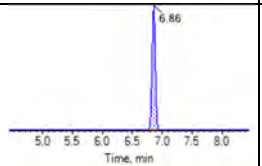
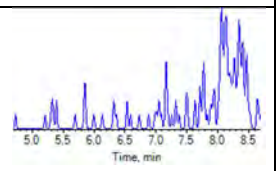
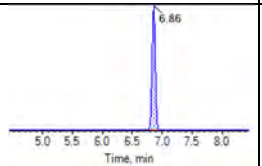
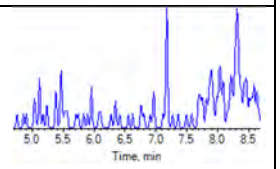
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	158300	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1863000	N/A	N/A	N/A	1076.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.66 (8.75)	1124000	N/A	N/A	N/A	913.3	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	356000	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	356000	N/A	N/A	N/A	N/A/ 0.75		

Miscellaneous

Prep Logbook

The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS

Batch ID: 1714400 **Verified by:** _____
Analyst: Grace Cappelmann
Method: EPA 537 Modified

Lab SOP: GL-OA-E-076 REV# 3
Instrument: LCMSMS Manual Instrument

Sample ID	Prep Date	Initial Wt (g)	Final Wt (g)	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1203908641 MB	31-OCT-2017 12:00:00	285.48	33.68	251.8	5	0.01986
1203908642 LCS	31-OCT-2017 12:00:00	284.95	33.58	251.37	5	0.01989
436081001 - 2	31-OCT-2017 12:00:00	83.41	33.39	50.02	5	0.09996
1203908643 - 2 MS (436081001)	31-OCT-2017 12:00:00	84.19	33.48	50.71	5	0.0986
1203908645 - 2 MSD (436081001)	31-OCT-2017 12:00:00	84.07	33.45	50.62	5	0.09878
436081002 - 2	31-OCT-2017 12:00:00	83.28	33.35	49.93	5	0.10014
436081003 - 2	31-OCT-2017 12:00:00	84.2	33.5	50.7	5	0.09862
436488001	31-OCT-2017 12:00:00	298.64	34.22	264.42	5	0.01891
1203908644 MS (436488001)	31-OCT-2017 12:00:00	300.5	34.17	266.33	5	0.01877
1203908646 MSD (436488001)	31-OCT-2017 12:00:00	308.95	34.29	274.66	5	0.0182
436488002	31-OCT-2017 12:00:00	313.23	34.16	279.07	5	0.01792
436488003	31-OCT-2017 12:00:00	315.74	34.18	281.56	5	0.01776
436488004	31-OCT-2017 12:00:00	305.97	34.24	271.73	5	0.0184
436488005	31-OCT-2017 12:00:00	310.65	33.98	276.67	5	0.01807
436488006	31-OCT-2017 12:00:00	301.89	34.29	267.6	5	0.01868
436488007	31-OCT-2017 12:00:00	309.86	34.05	275.81	5	0.01813
436518001	31-OCT-2017 12:00:00	299.98	34.19	265.79	5	0.01881
436518002	31-OCT-2017 12:00:00	221.04	33.52	187.52	5	0.02666
436518003	31-OCT-2017 12:00:00	303.42	34.29	269.13	5	0.01858
436518004	31-OCT-2017 12:00:00	306.81	34.3	272.51	5	0.01835
436518005	31-OCT-2017 12:00:00	301.21	34.06	267.15	5	0.01872
436518006	31-OCT-2017 12:00:00	303.45	34.19	269.26	5	0.01857

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1203908642	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MS	1203908643	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MS	1203908644	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MSD	1203908645	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
MSD	1203908646	PFAS 20 ug/L 537 Std	IPF171027-06	.25	mL
RGNT	All	Water LC/MS Optima	2596326.16	250	mL
SURR	All	MPFAC-24ES 10 ug/L SURR	IPF171027-03	.125	mL
REGNT	All	Methanol HPLC Optima	2585244	4	mL

Comments:

Strata lot #: S322-0018
Envi-Carb lot #: 8632901

Samples 436081001 (and MS/MSD), 436081002 and 436081003 were diluted to 5x. Samples 436488001 (and MS/MSD), 436488004, 436488006, 436518001, 436518003 and 436518004 were filtered due to sediment. The liquid was decanted off sample 436518002 and it was filtered.

Prep Logbook

Batch ID: 1714400 **Verified by:** _____
Analyst: Grace Cappelmann
Method: EPA 537 Modified

Lab SOP: GL-OA-E-076 REV# 3
Instrument: LCMSMS Manual Instrument

Sample ID	Prep Date	Initial Wt (g)	Final Wt (g)	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
REGNT All	Water LC/MS Optima			2596326.16	1	mL
REGNT All	0.1% Ammonia in Methanol			2597946	4	mL
REGNT All	Acetate Buffer, pH 4			2613490	4	mL

JISB GC
11/06/2017 11/10/2017

GEL ORGANIC RUN LOG

INSTRUMENT ID: lcmsms6

Date:10/31/17
Extr. Injection Volume: 25uL
Sequence Number: 103117
Initial Calibration Date: 10/31/2017

Method: EPA 537 MOD/TABLE B-15
Int. Std. IPF171027-03 & IPF171027-06
Mobile Phase Lot#: 2612992 MeOH: 2595995

SOP: GL-OA-E-076Rev.2

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag	REFMAT
PFC103117001.wiff	PFCIBLK01	JLS	10/31/2017 16:13			1		USE	B	
PFC103117002.wiff	PFCIBLK01	JLS	10/31/2017 16:34			1		USE	B	
PFC103117003.wiff	WPFICAL-01	JLS	10/31/2017 16:55			1		USE	I	WPF171018-01
PFC103117004.wiff	WPFICAL-02	JLS	10/31/2017 17:17			1		USE	I	WPF171018-02
PFC103117005.wiff	WPFICAL-03	JLS	10/31/2017 17:38			1		USE	I	WPF171018-03
PFC103117006.wiff	WPFICAL-04	JLS	10/31/2017 18:00			1		USE	I	WPF171018-04
PFC103117007.wiff	WPFICAL-05	JLS	10/31/2017 18:21			1		USE	I	WPF171018-05
PFC103117008.wiff	WPFICAL-06	JLS	10/31/2017 18:42			1		USE	I	WPF171018-06
PFC103117009.wiff	WPFICAL-07	JLS	10/31/2017 19:04			1		USE	I	WPF171018-07
PFC103117010.wiff	WPFISC	JLS	10/31/2017 19:25			1		USE	C	WPF171018-08
PFC103117011.wiff	WPFISC	JLS	10/31/2017 19:47			1		USE	C	WPF171018-11
PFC103117012.wiff	WPFICV	JLS	10/31/2017 20:08			1		USE	C	WPF171018-09
PFC103117013.wiff	Technical PFOA	JLS	10/31/2017 20:29			1		USE	L	
PFC103117014.wiff	Carry Over Std	JLS	10/31/2017 20:51			1		USE	L	
PFC103117015.wiff	PFCIBLK02	JLS	10/31/2017 21:12			1		USE	B	
PFC103117016.wiff	1203907522	JLS	10/31/2017 21:34	1714023	436205	1	LQAO	USE	L	
PFC103117017.wiff	1203907523	JLS	10/31/2017 21:55	1714023	436205	1	LQAO	USE	L	
PFC103117018.wiff	436205001	JLS	10/31/2017 22:16	1714023	436205	100	LQAO	DUSE	L	
PFC103117019.wiff	1203907526	JLS	10/31/2017 22:38	1714023	436205	100	LQAO	DUSE	L	
PFC103117020.wiff	1203907529	JLS	10/31/2017 22:59	1714023	436205	100	LQAO	DUSE	L	
PFC103117021.wiff	1203907529	JLS	10/31/2017 23:21	1714023	436205	100	LQAO	DUSE	L	
PFC103117022.wiff	436205002	JLS	10/31/2017 23:42	1714023	436205	100	LQAO	DUSE	L	
PFC103117023.wiff	1203907527	JLS	11/1/2017 00:03	1714023	436205	100	LQAO	DUSE	L	
PFC103117024.wiff	1203907530	JLS	11/1/2017 00:25	1714023	436205	100	LQAO	DUSE	L	
PFC103117025.wiff	1203907530	JLS	11/1/2017 00:46	1714023	436205	100	LQAO	DUSE	L	
PFC103117026.wiff	WPFCCV	JLS	11/1/2017 01:08			1		USE	C	
PFC103117027.wiff	PFCIBLK03	JLS	11/1/2017 01:29			1		USE	B	
PFC103117028.wiff	436205003	JLS	11/1/2017 01:50	1714023	436205	100	LQAO	DUSE	L	
PFC103117029.wiff	1203907525	JLS	11/1/2017 02:12	1714023	436205	100	LQAO	DUSE	L	
PFC103117030.wiff	1203907528	JLS	11/1/2017 02:33	1714023	436205	100	LQAO	DUSE	L	
PFC103117031.wiff	1203907528	JLS	11/1/2017 02:55	1714023	436205	100	LQAO	DUSE	L	
PFC103117032.wiff	BLANK	JLS	11/1/2017 03:16			1		USE	C	
PFC103117033.wiff	BLANK	JLS	11/1/2017 03:37			1		USE	B	

PFC103117034.wiff	436205001	JLS	11/1/2017 03:59	1714023	436205	1000	LQAO	USE	L	
PFC103117035.wiff	1203907526	JLS	11/1/2017 04:20	1714023	436205	1000	LQAO	USE	L	
PFC103117036.wiff	1203907529	JLS	11/1/2017 04:41	1714023	436205	1000	LQAO	USE	L	
PFC103117037.wiff	436205002	JLS	11/1/2017 05:03	1714023	436205	1000	LQAO	USE	L	
PFC103117038.wiff	1203907527	JLS	11/1/2017 05:24	1714023	436205	1000	LQAO	USE	L	
PFC103117039.wiff	1203907530	JLS	11/1/2017 05:46	1714023	436205	1000	LQAO	USE	L	
PFC103117040.wiff	WPFCCV	JLS	11/1/2017 06:07			1		USE	C	WPF171018-09
PFC103117041.wiff	PFCIBLK04	JLS	11/1/2017 06:28			1		USE	B	
PFC103117042.wiff	436205003	JLS	11/1/2017 06:50	1714023	436205	1000	LQAO	USE	L	
PFC103117043.wiff	1203907525	JLS	11/1/2017 07:11	1714023	436205	1000	LQAO	USE	L	
PFC103117044.wiff	1203907528	JLS	11/1/2017 07:33	1714023	436205	1000	LQAO	USE	L	
PFC103117045.wiff	1203906756	JLS	11/1/2017 07:54	1713733	Various	1		USE	S	
PFC103117046.wiff	1203906757	JLS	11/1/2017 08:15	1713733	Various	1		USE	S	
PFC103117047.wiff	435984002	JLS	11/1/2017 08:37	1713733	2017LOD_LCMPFC_S	1		USE	S	
PFC103117048.wiff	435984003	JLS	11/1/2017 08:58	1713733	2017LOD_LCMPFC_S	1		USE	S	
PFC103117049.wiff	435706001	JLS	11/1/2017 09:19	1713733	435706	1	CFPA	USE	S	
PFC103117050.wiff	435706002	JLS	11/1/2017 09:41	1713733	435706	1	CFPA	USE	S	
PFC103117051.wiff	435706003	JLS	11/1/2017 10:02	1713733	435706	1	CFPA	USE	S	
PFC103117052.wiff	WPFCCV	JLS	11/1/2017 10:24			1		USE	C	WPF171018-09
PFC103117053.wiff	PFCIBLK07	JLS	11/1/2017 10:45			1		USE	B	
PFC103117054.wiff	435706004	JLS	11/1/2017 11:06	1713733	435706	1	CFPA	USE	S	
PFC103117055.wiff	1203906758	JLS	11/1/2017 11:28	1713733	435706	1	CFPA	USE	S	
PFC103117056.wiff	1203906759	JLS	11/1/2017 11:49	1713733	435706	1	CFPA	USE	S	
PFC103117057.wiff	436205001	JLS	11/1/2017 12:11	1714023	436205	1000	LQAO	USE	L	
PFC103117058.wiff	436205002	JLS	11/1/2017 12:32	1714023	436205	1000	LQAO	USE	L	
PFC103117059.wiff	436205003	JLS	11/1/2017 12:53	1714023	436205	1000	LQAO	USE	L	
PFC103117060.wiff	1203907529	JLS	11/1/2017 13:15	1714023	436205	1000	LQAO	USE	L	
PFC103117061.wiff	1203907530	JLS	11/1/2017 13:36	1714023	436205	1000	LQAO	USE	L	
PFC103117062.wiff	1203907528	JLS	11/1/2017 13:57	1714023	436205	1000	LQAO	USE	L	
PFC103117063.wiff	WPFCCV	JLS	11/1/2017 14:19			1		USE	C	WPF171018-09
PFC103117064.wiff	PFCIBLK08	JLS	11/1/2017 14:40			1		USE	B	
PFC103117065.wiff	1203907530	JLS	11/1/2017 15:04	1714023	436205	1000	LQAO	USE	L	
PFC103117066.wiff	1203907528	JLS	11/1/2017 15:25	1714023	436205	1000	LQAO	USE	L	
PFC103117067.wiff	436205002	JLS	11/1/2017 15:47	1714023	436205	5000	LQAO	USE	L	
PFC103117068.wiff	1203907527	JLS	11/1/2017 16:08	1714023	436205	5000	LQAO	USE	L	
PFC103117069.wiff	1203907530	JLS	11/1/2017 16:29	1714023	436205	5000	LQAO	USE	L	
PFC103117070.wiff	1203907528	JLS	11/1/2017 16:51	1714023	436205	5000	LQAO	USE	L	
PFC103117071.wiff	1203907525	JLS	11/1/2017 17:12	1714023	436205	5000	LQAO	USE	L	
PFC103117072.wiff	436205003	JLS	11/1/2017 17:34	1714023	436205	5000	LQAO	USE	L	
PFC103117073.wiff	WPFCCV	JLS	11/1/2017 17:55			1		USE	C	WPF171018-09
PFC103117074.wiff	PFCIBLK09	JLS	11/1/2017 18:16			1		USE	B	

PFC103117075.wiff	436205001	JLS	11/1/2017 18:38	1714023	436205	100	LQAO	USE	L	
PFC103117076.wiff	1203907526	JLS	11/1/2017 19:37	1714023	436205	100	LQAO	USE	L	
PFC103117077.wiff	1203907529	JLS	11/1/2017 19:58	1714023	436205	100	LQAO	USE	L	
PFC103117078.wiff	436205002	JLS	11/1/2017 20:20	1714023	436205	100	LQAO	USE	L	
PFC103117079.wiff	1203907527	JLS	11/1/2017 20:41	1714023	436205	100	LQAO	USE	L	
PFC103117080.wiff	1203907530	JLS	11/1/2017 21:02	1714023	436205	100	LQAO	USE	L	
PFC103117081.wiff	436205003	JLS	11/1/2017 21:24	1714023	436205	100	LQAO	USE	L	
PFC103117082.wiff	1203907525	JLS	11/1/2017 21:45	1714023	436205	100	LQAO	USE	L	
PFC103117083.wiff	1203907528	JLS	11/1/2017 22:07	1714023	436205	100	LQAO	USE	L	
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PFC103117085.wiff	Blank	JLS	11/1/2017 22:49			1		USE	B	
PFC103117086.wiff	WPFCCV	JLS	11/1/2017 23:11			1		USE	C	WPF171018-09
PFC103117087.wiff	PFCIBLK10	JLS	11/1/2017 23:32			1		USE	B	
PFC103117088.wiff	1203908641	JLS	11/1/2017 23:54	1714407	Various	1	Various	USE	L	
PFC103117089.wiff	1203908642	JLS	11/2/2017 00:15	1714407	Various	1	Various	USE	L	
PFC103117090.wiff	436081001	JLS	11/2/2017 00:36	1714407	436081	100	TNAQ	USE	L	
PFC103117091.wiff	1203908643	JLS	11/2/2017 00:58	1714407	436081	100	TNAQ	USE	L	
PFC103117092.wiff	1203908645	JLS	11/2/2017 01:19	1714407	436081	100	TNAQ	USE	L	
PFC103117093.wiff	436081002	JLS	11/2/2017 01:41	1714407	436081	100	TNAQ	USE	L	
PFC103117094.wiff	436081003	JLS	11/2/2017 02:02	1714407	436081	100	TNAQ	USE	L	
PFC103117095.wiff	436488001	JLS	11/2/2017 02:23	1714407	DRM102617	1	ESAF	USE	L	
PFC103117096.wiff	1203908644	JLS	11/2/2017 02:45	1714407	DRM102617	1	ESAF	USE	L	
PFC103117097.wiff	1203908646	JLS	11/2/2017 03:06	1714407	DRM102617	1	ESAF	USE	L	
PFC103117098.wiff	WPFCCV	JLS	11/2/2017 03:28			1		USE	C	WPF171018-09
PFC103117099.wiff	PFCIBLK11	JLS	11/2/2017 03:49			1		USE	B	
PFC103117100.wiff	436488002	JLS	11/2/2017 04:10	1714407	DRM102617	1	ESAF	USE	L	
PFC103117101.wiff	436488003	JLS	11/2/2017 04:32	1714407	DRM102617	1	ESAF	USE	L	
PFC103117102.wiff	436488004	JLS	11/2/2017 04:53	1714407	DRM102617	1	ESAF	USE	L	
PFC103117103.wiff	436488005	JLS	11/2/2017 05:15	1714407	DRM102617	1	ESAF	USE	L	
PFC103117104.wiff	436488006	JLS	11/2/2017 05:36	1714407	DRM102617	1	ESAF	USE	L	
PFC103117105.wiff	436488007	JLS	11/2/2017 05:57	1714407	DRM102617	1	ESAF	USE	L	
PFC103117106.wiff	436518001	JLS	11/2/2017 06:19	1714407	DRM102617	1	ESAF	USE	L	
PFC103117107.wiff	436518002	JLS	11/2/2017 06:40	1714407	DRM102617	1	ESAF	USE	L	
PFC103117108.wiff	436518003	JLS	11/2/2017 07:01	1714407	DRM102617	1	ESAF	USE	L	
PFC103117109.wiff	436518004	JLS	11/2/2017 07:23	1714407	DRM102617	1	ESAF	USE	L	
PFC103117110.wiff	WPFCCV	JLS	11/2/2017 07:44			1		USE	C	WPF171018-09
PFC103117111.wiff	PFCIBLK12	JLS	11/2/2017 08:06			1		USE	B	
PFC103117112.wiff	436518005	JLS	11/2/2017 08:27	1714407	DRM102617	1	ESAF	USE	L	
PFC103117113.wiff	436518006	JLS	11/2/2017 08:48	1714407	DRM102617	1	ESAF	USE	L	
PFC103117114.wiff	436081001	JLS	11/2/2017 09:10	1714407	436081	1	TNAQ	USE	L	
PFC103117115.wiff	1203908643	JLS	11/2/2017 09:31	1714407	436081	1	TNAQ	USE	L	

PFC103117116.wiff	1203908645	JLS	11/2/2017 09:53	1714407	436081	1	TNAQ	USE	L	
PFC103117117.wiff	436081002	JLS	11/2/2017 10:14	1714407	436081	1	TNAQ	USE	L	
PFC103117118.wiff	436081003	JLS	11/2/2017 10:35	1714407	436081	1	TNAQ	USE	L	
PFC103117119.wiff	Blank	JLS	11/2/2017 10:57			1		USE	B	
PFC103117120.wiff	Blank	JLS	11/2/2017 11:18			1		USE	B	
PFC103117121.wiff	WPFCCV	JLS	11/2/2017 11:39			1		USE	C	WPF171018-09
PFC103117122.wiff	PFCIBLK13	JLS	11/2/2017 12:01			1		USE	B	
PFC103117123.wiff	436081001	JLS	11/2/2017 12:22	1714407	436081	20	TNAQ	USE	L	
PFC103117124.wiff	1203908643	JLS	11/2/2017 12:44	1714407	436081	20	TNAQ	USE	L	
PFC103117125.wiff	1203908645	JLS	11/2/2017 13:05	1714407	436081	20	TNAQ	USE	L	
PFC103117126.wiff	436081002	JLS	11/2/2017 13:26	1714407	436081	20	TNAQ	USE	L	
PFC103117127.wiff	436081003	JLS	11/2/2017 13:48	1714407	436081	20	TNAQ	USE	L	
PFC103117128.wiff	436488002	JLS	11/2/2017 14:09	1714407	DRM102617	10	ESAF	USE	L	
PFC103117129.wiff	436488003	JLS	11/2/2017 14:31	1714407	DRM102617	10	ESAF	USE	L	
PFC103117130.wiff	436488004	JLS	11/2/2017 14:52	1714407	DRM102617	5	ESAF	USE	L	
PFC103117131.wiff	436518001	JLS	11/2/2017 15:13	1714407	DRM102617	10	ESAF	USE	L	
PFC103117132.wiff	436518002	JLS	11/2/2017 15:35	1714407	DRM102617	100	ESAF	USE	L	
PFC103117133.wiff	WPFCCV	JLS	11/2/2017 15:56			1		USE	C	WPF171018-09
PFC103117134.wiff	PFCIBLK14	JLS	11/2/2017 16:18			1		USE	B	
PFC103117135.wiff	436518003	JLS	11/2/2017 16:39	1714407	DRM102617	5	ESAF	USE	L	
PFC103117136.wiff	436518003	JLS	11/2/2017 17:00	1714407	DRM102617	1	ESAF	USE	L	
PFC103117137.wiff	Blank	JLS	11/2/2017 17:22			1		USE	B	
PFC103117138.wiff	436205001	JLS	11/2/2017 17:43	1714023	436205	5000	LQAO	USE	L	
PFC103117139.wiff	1203907526	JLS	11/2/2017 18:05	1714023	436205	5000	LQAO	USE	L	
PFC103117140.wiff	1203907529	JLS	11/2/2017 18:26	1714023	436205	5000	LQAO	USE	L	
PFC103117141.wiff	436205001	JLS	11/2/2017 18:47	1714023	436205	100	LQAO	USE	L	
PFC103117142.wiff	1203907526	JLS	11/2/2017 19:09	1714023	436205	100	LQAO	USE	L	
PFC103117143.wiff	1203907529	JLS	11/2/2017 19:30	1714023	436205	100	LQAO	USE	L	
PFC103117144.wiff	WPFCCV	JLS	11/2/2017 19:52			1		USE	C	WPF171018-09
PFC103117145.wiff	PFCIBLK15	JLS	11/2/2017 20:13			1		USE	B	
PFC103117146.wiff	1203910649	JLS	11/2/2017 20:34	1715232	436646	1	ARMY	USE	L	
PFC103117147.wiff	1203910650	JLS	11/2/2017 20:56	1715232	436646	1	ARMY	USE	L	
PFC103117148.wiff	436646001	JLS	11/2/2017 21:17	1715232	436646	1	ARMY	USE	L	
PFC103117149.wiff	1203910651	JLS	11/2/2017 21:39	1715232	436646	1	ARMY	USE	L	
PFC103117150.wiff	1203910652	JLS	11/2/2017 22:00	1715232	436646	1	ARMY	USE	L	
PFC103117151.wiff	1203911346	JLS	11/2/2017 22:21	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117152.wiff	Filter Paper MB	JLS	11/2/2017 22:43		VARIOUS	1	VARIOUS	DUSE	S	
PFC103117153.wiff	1203911347	JLS	11/2/2017 23:04	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117154.wiff	1203911348	JLS	11/2/2017 23:25	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117155.wiff	435984001	JLS	11/2/2017 23:47	1715548	2017LOD_LCMPFC_S	1	QCQA	DUSE	S	
PFC103117156.wiff	436427004	JLS	11/3/2017 00:08	1715548	436427	1	H2GO	DUSE	S	

PFC103117157.wiff	WPFCCV	JLS	11/3/2017 00:30			1		USE	C	WPF171018-09
PFC103117158.wiff	PFCIBLK16	JLS	11/3/2017 00:51			1		USE	B	
PFC103117159.wiff	Rinse	JLS	11/3/2017 09:03			1		DUSE	B	
PFC103117160.wiff	PFCIBLK17	JLS	11/3/2017 09:25			1		USE	B	
PFC103117161.wiff	WPFDISC	JLS	11/3/2017 09:46			1		USE	C	WPF171018-08
PFC103117162.wiff	PFCIBLK18	JLS	11/3/2017 10:08			1		USE	B	
PFC103117163.wiff	1203911346	JLS	11/3/2017 10:29	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117164.wiff	Filter Paper MB	JLS	11/3/2017 10:50		VARIOUS	1	VARIOUS	USE	S	
PFC103117165.wiff	1203911347	JLS	11/3/2017 11:12	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117166.wiff	1203911348	JLS	11/3/2017 11:33	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117167.wiff	435984001	JLS	11/3/2017 11:55	1715548	2017LOD_LCMPFC_S	1	QCQA	USE	S	
PFC103117168.wiff	436427004	JLS	11/3/2017 12:16	1715548	436427	1	H2GO	USE	S	
PFC103117169.wiff	WPFCCV	JLS	11/3/2017 12:37			1		USE	C	WPF171018-09
PFC103117170.wiff	PFCIBLK19	JLS	11/3/2017 12:59			1		USE	B	
PFC103117171.wiff	1203905293	JLS	11/3/2017 13:20	1713140		1	VARIOUS	USE	L	
PFC103117172.wiff	1203905294	JLS	11/3/2017 13:42	1713140		1	VARIOUS	USE	L	
PFC103117173.wiff	1203905295	JLS	11/3/2017 14:03	1713140		1	VARIOUS	USE	L	
PFC103117174.wiff	435706005	JLS	11/3/2017 14:24	1713140	435706	1	CFPA	USE	L	
PFC103117175.wiff	435983002	JLS	11/3/2017 14:46	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117176.wiff	435983003	JLS	11/3/2017 15:07	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117177.wiff	436081001	JLS	11/3/2017 15:29	1713140	436081	500	TNAQ	DUSE	L	
PFC103117178.wiff	436081002	JLS	11/3/2017 15:50	1713140	436081	500	TNAQ	DUSE	L	
PFC103117179.wiff	436081003	JLS	11/3/2017 16:11	1713140	436081	500	TNAQ	DUSE	L	
PFC103117180.wiff	436081005	JLS	11/3/2017 16:33	1713140	436081	1	TNAQ	USE	L	
PFC103117181.wiff	WPFCCV	JLS	11/3/2017 16:54			1		USE	C	WPF171018-09
PFC103117182.wiff	PFCIBLK20	JLS	11/3/2017 17:16			1		USE	B	
PFC103117183.wiff	436081006	JLS	11/3/2017 17:37	1713140	436081	1	TNAQ	USE	L	
PFC103117184.wiff	436081001	JLS	11/3/2017 17:58	1713140	436081	100	TNAQ	DUSE	L	
PFC103117185.wiff	436081002	JLS	11/3/2017 18:20	1713140	436081	100	TNAQ	DUSE	L	
PFC103117186.wiff	436081003	JLS	11/3/2017 18:41	1713140	436081	100	TNAQ	DUSE	L	
PFC103117187.wiff	436081001	JLS	11/3/2017 19:03	1713140	436081	1	TNAQ	DUSE	L	
PFC103117188.wiff	436081002	JLS	11/3/2017 19:24	1713140	436081	1	TNAQ	DUSE	L	
PFC103117189.wiff	436081003	JLS	11/3/2017 19:45	1713140	436081	1	TNAQ	DUSE	L	
PFC103117190.wiff	BLANK	JLS	11/3/2017 20:07			1		USE	B	
PFC103117191.wiff	BLANK	JLS	11/3/2017 20:28			1		USE	B	
PFC103117192.wiff	436518002	JLS	11/3/2017 20:50	1714407	DRM102617	10	ESAF	USE	L	
PFC103117193.wiff	BLANK	JLS	11/3/2017 21:11			1		USE	B	
PFC103117194.wiff	WPFCCV	JLS	11/3/2017 21:32			1		USE	C	WPF171018-09
PFC103117195.wiff	PFCIBLK21	JLS	11/3/2017 21:54			1		USE	B	
PFC103117196.wiff	436205001	JLS	11/3/2017 22:15	1714023	436205	10000	LQAO	USE	L	
PFC103117197.wiff	1203907526	JLS	11/3/2017 22:36	1714023	436205	10000	LQAO	USE	L	

PFC103117198.wiff	1203907529	JLS	11/3/2017 22:58	1714023	436205	10000	LQAO	USE	L	
PFC103117199.wiff	436205002	JLS	11/3/2017 23:19	1714023	436205	10000	LQAO	USE	L	
PFC103117200.wiff	1203907527	JLS	11/3/2017 23:41	1714023	436205	10000	LQAO	USE	L	
PFC103117201.wiff	1203907530	JLS	11/4/2017 00:02	1714023	436205	10000	LQAO	USE	L	
PFC103117202.wiff	436205003	JLS	11/4/2017 00:23	1714023	436205	10000	LQAO	USE	L	
PFC103117203.wiff	1203907525	JLS	11/4/2017 00:45	1714023	436205	10000	LQAO	USE	L	
PFC103117204.wiff	1203907528	JLS	11/4/2017 01:06	1714023	436205	10000	LQAO	USE	L	
PFC103117205.wiff	WPFCCV	JLS	11/4/2017 01:28			1		USE	C	WPF171018-09
PFC103117206.wiff	PFCIBLK22	JLS	11/4/2017 01:49			1		USE	B	

LC-MS/MS Analysis

Case Narrative

LCMSMS-Misc
Technical Case Narrative
EnSafe Inc. (ESAF)
SDG #: 437370

Product: **The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS**
Analytical Method: EPA 537 Modified
Analytical Procedure: GL-OA-E-076 REV# 4
Analytical Batches: 1717446 and 1717445

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
437370001	Trip Blank
1203916041	Method Blank (MB)
1203916042	Laboratory Control Sample (LCS)
1203916043	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ESAF001 EnSafe Inc.

Client SDG: 437370 GEL Work Order: 437370

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Jannie Shaw - Busby **Name: Jannie Shaw-Busby**

Date: 10 NOV 2017 **Title: Senior Chemist**

Sample Data Summary

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**437370**	**Date Collected:**	**10/27/2017 00:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**437370001**	**Date Received:**	**10/28/2017 08:50**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**Trip Blank**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1717446**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/09/2017 22:08**	**Analyst:**	**JLS**		
Prep Date:	**11/09/2017 11:00**	**Aliquot:**	**248.26 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117213.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00268	ug/L	0.00133	0.00268	0.00403
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00268	ug/L	0.00133	0.00268	0.00403
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00135	ug/L	0.000665	0.00135	0.00179
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00135	ug/L	0.000785	0.00135	0.00201
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00123	ug/L	0.000665	0.00123	0.00183
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00133	ug/L	0.000665	0.00133	0.00201
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00133	ug/L	0.000705	0.00133	0.00201
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00133	ug/L	0.000665	0.00133	0.00201

Quality Control Summary

Quality Control Summary
Spike Recovery Report

SDG Number: 437370
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1717445
Matrix: WATER
Lab Sample ID: 1203916042
Instrument: LCMSMS6
Analysis Date: 11/09/2017 21:26
Dilution: 1
Analyst: JLS
Prep Batch ID: 1717445
Batch ID: 1717446

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
1763-23-1	LCS Perfluorooctanesulfonate (PFOS)	0.0198	0.0	0.0204	103	70-130
2058-94-8	LCS Perfluoroundecanoic acid (PFUdA)	0.0198	0.0	0.0193	97	70-130
2355-31-9	LCS N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0198	0.0	0.0201	101	70-130
2991-50-6	LCS N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0198	0.0	0.0184	93	70-130
307-24-4	LCS Perfluorohexanoic acid (PFHxA)	0.0198	0.0	0.0186	94	70-130
307-55-1	LCS Perfluorododecanoic acid (PFDoA)	0.0198	0.0	0.0206	104	70-130
335-67-1	LCS Perfluorooctanoic acid (PFOA)	0.0198	0.0	0.0213	108	70-130
335-76-2	LCS Perfluorodecanoic acid (PFDA)	0.0198	0.0	0.0207	104	70-130
355-46-4	LCS Perfluorohexanesulfonate (PFHxS)	0.0181	0.0	0.0185	102	70-130
375-73-5	LCS Perfluorobutanesulfonate (PFBS)	0.0175	0.0	0.0168	95	70-130
375-85-9	LCS Perfluoroheptanoic acid (PFHpA)	0.0198	0.0	0.0188	95	70-130
375-95-1	LCS Perfluorononanoic acid (PFNA)	0.0198	0.0	0.0204	103	70-130
376-06-7	LCS Perfluorotetradecanoic acid (PFTeDA)	0.0198	0.0	0.0195	98	70-130
72629-94-8	LCS Perfluorotridecanoic acid (PFTrDA)	0.0198	0.0	0.0178	90	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: 437370
Sample Type: Laboratory Control Sample Duplicate
Client ID: LCSD for batch 1717445
Matrix: WATER
Lab Sample ID: 1203916043
Instrument: LCMSMS6
Analysis Date: 11/09/2017 21:47
Dilution: 1
Analyst: JLS
Prep Batch ID: 1717445
Batch ID: 1717446

CAS No.	Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1763-23-1	LCSD Perfluorooctanesulfonate (PFOS)	0.0199	0.0	0.0184	93	70-130	10	0-30
2058-94-8	LCSD Perfluoroundecanoic acid (PFUdA)	0.0199	0.0	0.0182	91	70-130	6	0-30
2355-31-9	LCSD N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA) N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0205	103	70-130	2	0-30
2991-50-6	LCSD N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0199	0.0	0.0171	86	70-130	7	0-30
307-24-4	LCSD Perfluorohexanoic acid (PFHxA)	0.0199	0.0	0.0196	99	70-130	5	0-30
307-55-1	LCSD Perfluorododecanoic acid (PFDoA)	0.0199	0.0	0.0191	96	70-130	8	0-30
335-67-1	LCSD Perfluorooctanoic acid (PFOA)	0.0199	0.0	0.0187	94	70-130	13	0-30
335-76-2	LCSD Perfluorodecanoic acid (PFDA)	0.0199	0.0	0.0183	92	70-130	12	0-30
355-46-4	LCSD Perfluorohexanesulfonate (PFHxS)	0.0181	0.0	0.0169	93	70-130	9	0-30
375-73-5	LCSD Perfluorobutanesulfonate (PFBS)	0.0176	0.0	0.017	97	70-130	2	0-30
375-85-9	LCSD Perfluoroheptanoic acid (PFHpA)	0.0199	0.0	0.0205	103	70-130	9	0-30
375-95-1	LCSD Perfluorononanoic acid (PFNA)	0.0199	0.0	0.0198	99	70-130	3	0-30
376-06-7	LCSD Perfluorotetradecanoic acid (PFTeDA)	0.0199	0.0	0.0187	94	70-130	4	0-30
72629-94-8	LCSD Perfluorotridecanoic acid (PFTrDA)	0.0199	0.0	0.0176	88	70-130	1	0-30

Method Blank Summary

SDG Number:	**437370**	**Client:**	**ESAF001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1717445**	**Instrument ID:**	**LCMSMS6**	**Data File:**	**PFC103117210.wiff**
Lab Sample ID:	**1203916041**	**Prep Date:**	**11/09/2017 11:00**	**Analyzed:**	**11/09/17 21:04**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1717445	1203916042	PFC103117211.wiff	11/09/17	2126
02	LCSD for batch 1717445	1203916043	PFC103117212.wiff	11/09/17	2147
03	Trip Blank	437370001	PFC103117213.wiff	11/09/17	2208

Sample Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**437370**	**Date Collected:**	**10/27/2017 00:00**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**437370001**	**Date Received:**	**10/28/2017 08:50**		
		Client:	**ESAF001**	**Project:**	**ESAF00101**
Client ID:	**Trip Blank**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1717446**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/09/2017 22:08**	**Analyst:**	**JLS**		
Prep Date:	**11/09/2017 11:00**	**Aliquot:**	**248.26 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117213.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00268	ug/L	0.00133	0.00268	0.00403
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00268	ug/L	0.00133	0.00268	0.00403
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00135	ug/L	0.000665	0.00135	0.00179
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00135	ug/L	0.000785	0.00135	0.00201
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00123	ug/L	0.000665	0.00123	0.00183
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00135	ug/L	0.000665	0.00135	0.00201
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00133	ug/L	0.000665	0.00133	0.00201
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00133	ug/L	0.000705	0.00133	0.00201
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00133	ug/L	0.000665	0.00133	0.00201
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00133	ug/L	0.000665	0.00133	0.00201

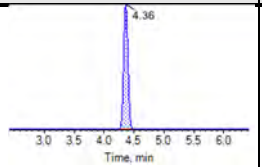
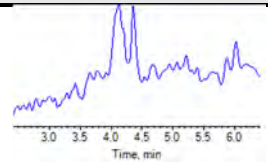
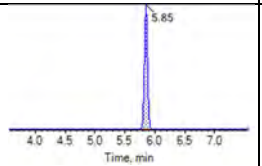
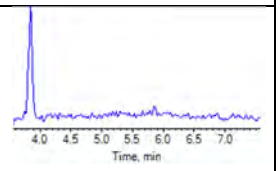
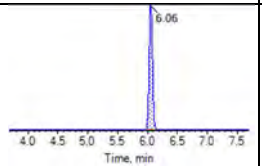
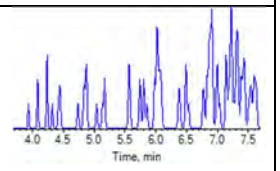
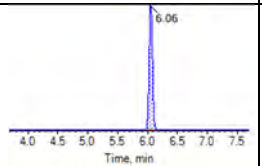
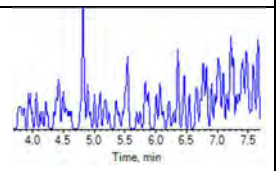
GC
11/10/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/10/2017 18:08:00

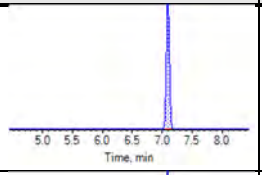
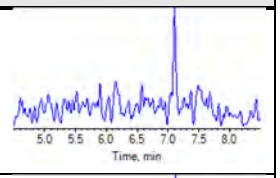
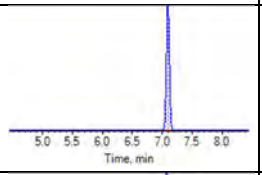
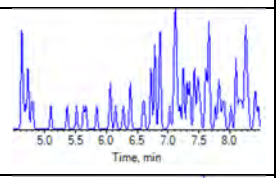
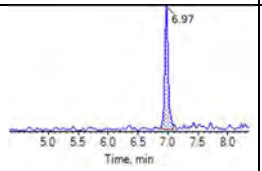
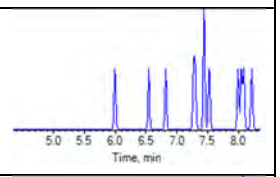
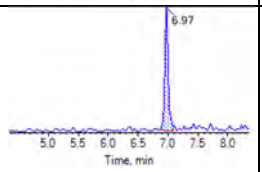
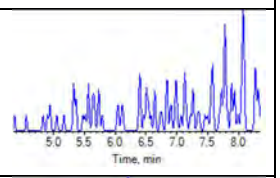
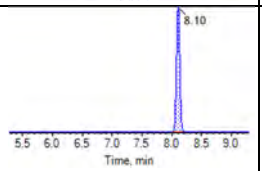
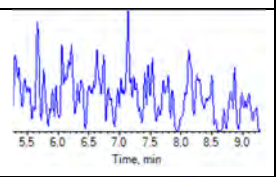
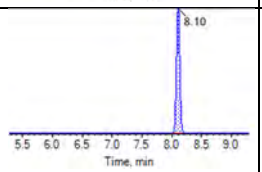
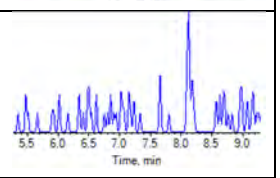
PFC103117213.wiff			
Sample Name	437370001	**Injection Vial**	6
Batch|Dilution|Analyst	1717446|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117213.wiff
Acquisition Date	11/9/2017 22:08:57	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117213.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	141200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	234900	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	169000	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	169000	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/10/2017 18:08:00

PFC103117213.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	307600	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	307600	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	46690	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	46690	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	282700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	282700	N/A	N/A	N/A	N/A/ 0.26		

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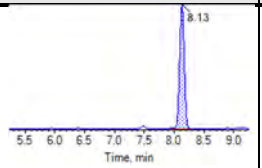
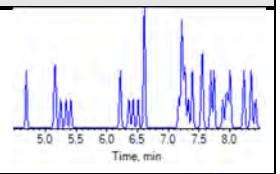
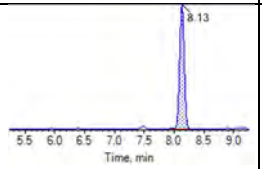
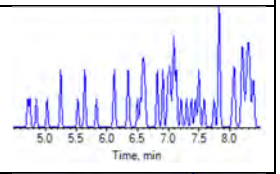
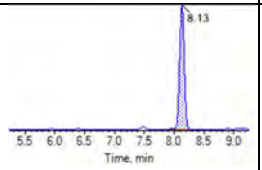
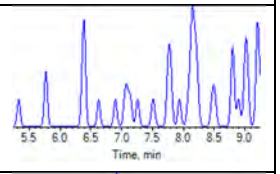
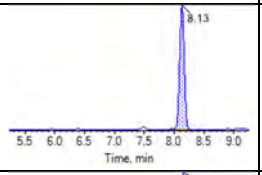
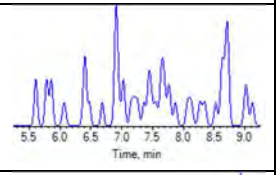
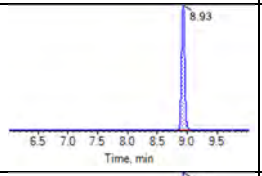
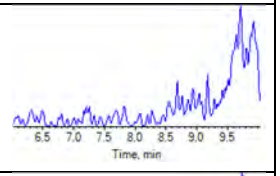
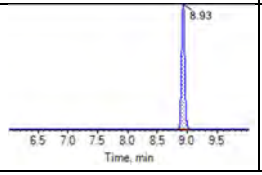
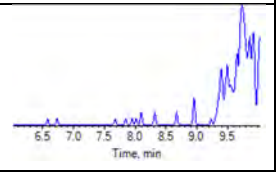
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	81500	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	81500	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	81500	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	81500	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	236900	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	236900	N/A	N/A	N/A	N/A/ 0.37		

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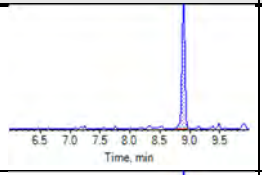
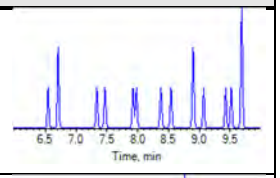
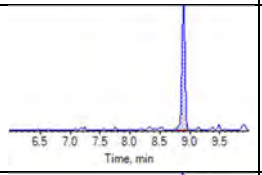
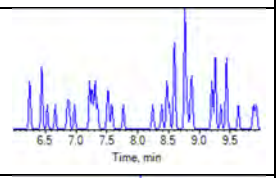
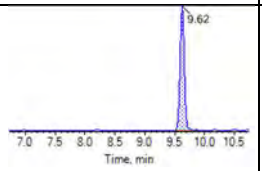
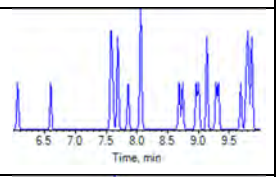
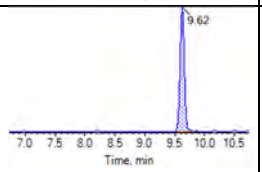
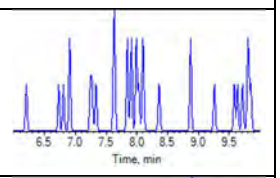
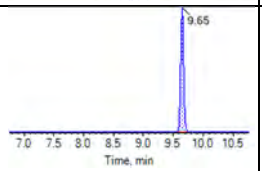
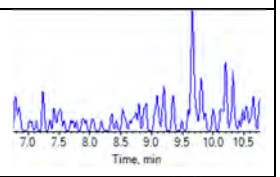
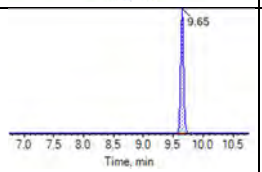
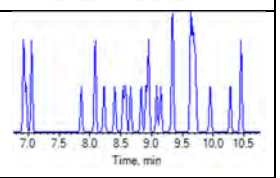
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	39200	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	39200	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	245200	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	245200	N/A	N/A	N/A	N/A/ 0.24		

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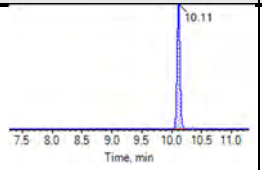
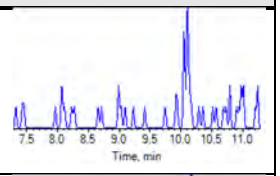
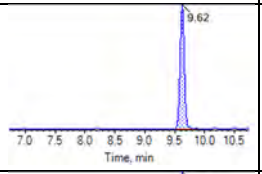
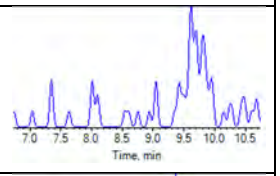
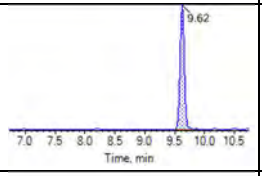
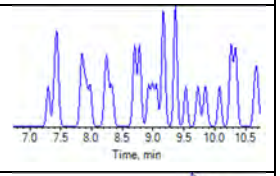
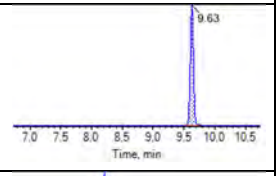
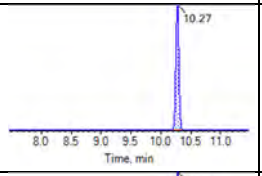
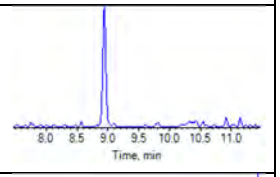
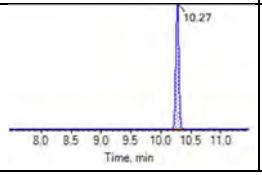
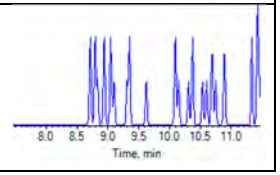
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	445800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.63 (9.45)	1251000	N/A	N/A	N/A	745.8	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	134400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	134400	N/A	N/A	N/A	N/A/ 0.13		

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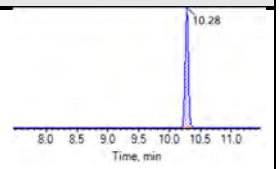
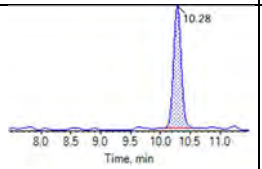
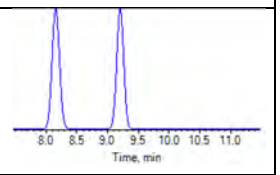
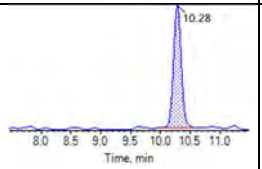
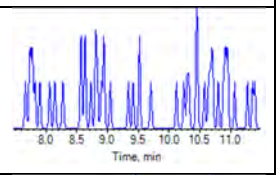
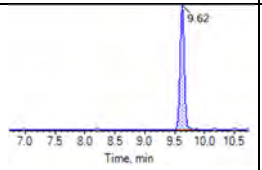
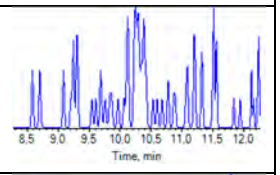
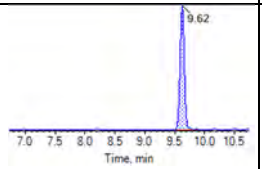
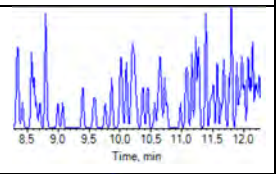
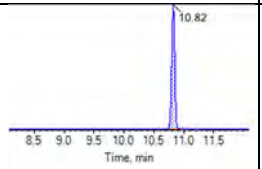
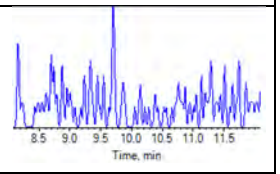
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.28 (10.02)	834900	N/A	N/A	N/A	723.7	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	21700	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	21700	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	161300	N/A	N/A	N/A	N/A/ 1.00		

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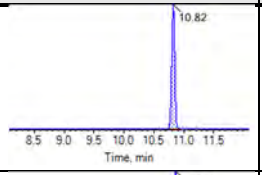
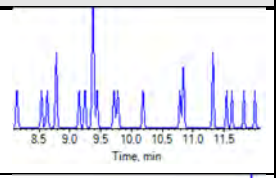
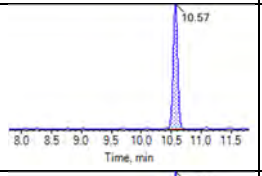
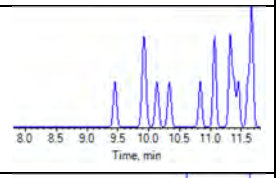
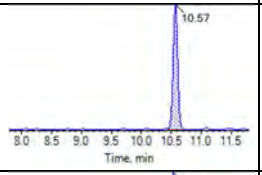
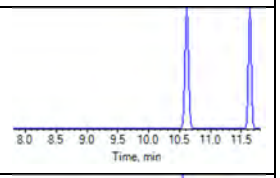
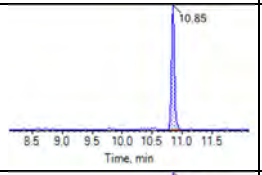
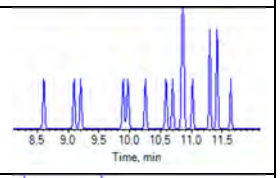
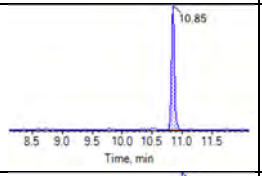
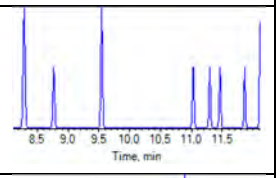
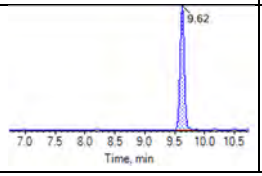
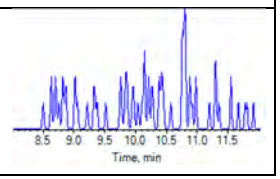
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	161300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	41010	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	41010	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	44920	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	44920	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 1.00		

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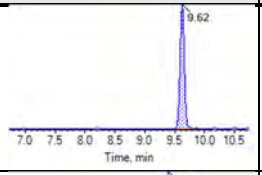
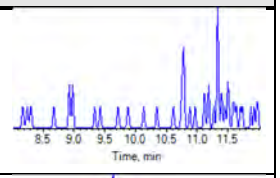
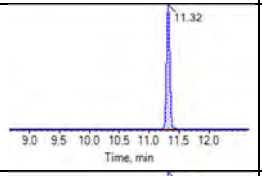
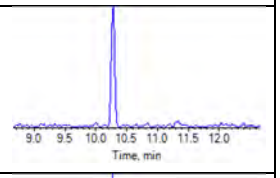
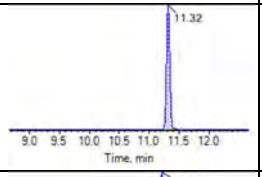
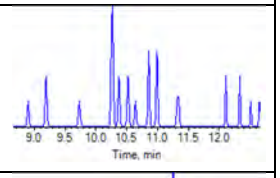
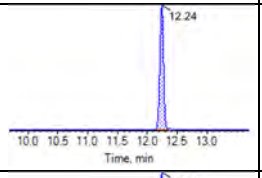
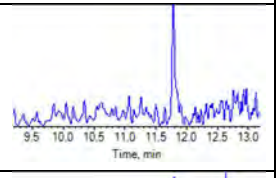
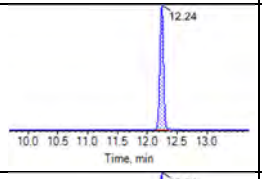
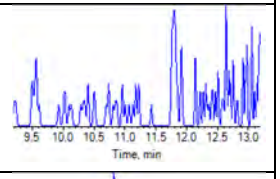
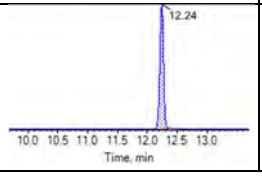
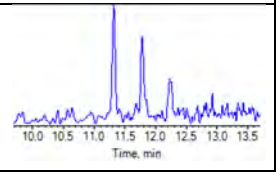
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	64550	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	159800	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	159800	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	115400	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	115400	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	115400	N/A	N/A	N/A	N/A/ 1.00		

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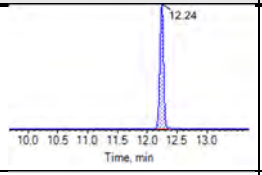
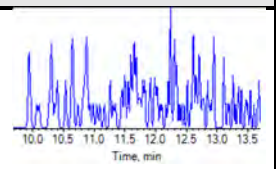
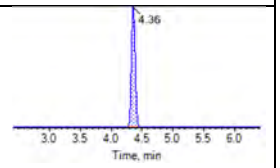
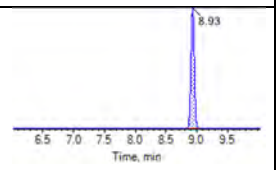
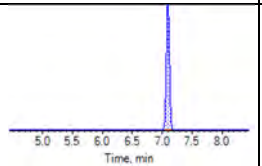
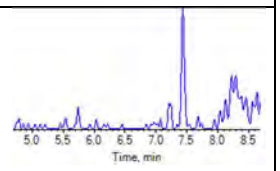
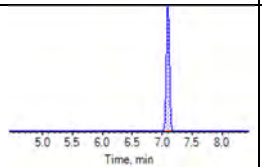
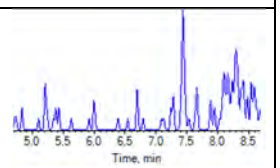
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	115400	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.36 (4.60)	1433000	N/A	N/A	N/A	828.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.93 (8.75)	995000	N/A	N/A	N/A	808.7	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	307600	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	307600	N/A	N/A	N/A	N/A/ 0.75		

Standards

Extraction ISTD Recoveries against ICAL

10/31/2017

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WPF171018-01	158100	247400	261300	617800	56550	56960	180000	74460	173900	37890	331600	94830	37260	254000	291600	24490	158400	223700	146600
WPF171018-02	156000	238500	237600	522200	44720	50990	180800	70880	150600	31560	303300	74500	35810	273800	233000	22510	153100	192800	131300
WPF171018-03	143800	225300	228000	504200	42130	44930	181100	69320	157400	31670	280900	65190	36320	235000	234300	27340	141800	201900	125000
WPF171018-04	149800	231500	250700	562200	51150	47640	171500	69030	156800	33690	309400	74210	29030	236300	253400	23650	127300	203300	124300
WPF171018-05	142000	235000	260000	517000	49860	51440	192600	60240	145100	26660	287400	82910	28340	237800	240000	24270	156800	198300	123800
WPF171018-06	150400	237800	237500	588100	43350	56120	185200	71370	153900	33620	304900	64940	32970	252800	232700	26430	152400	189300	133400
WPF171018-07	145700	223300	239900	519300	42350	47710	182900	66190	152900	27160	294500	83220	29880	225600	223400	22570	138600	215200	124800
Avg	149400	234114.2857	245000	547257.1429	47158.57143	50827.14286	182014.2857	68784.28571	155800	31750	301714.2857	77114.28571	32801.42857	245042.8571	244057.1429	24465.71429	146914.2857	203500	129885.7143
50%	74700	117057.1429	122500	273628.5714	23579.28571	25413.57143	91007.14286	34392.14286	77900	15875	150857.1429	38557.14286	16400.71429	122521.4286	122028.5714	12232.85714	73457.14286	101750	64942.85714
150%	224100	351171.4286	367500	820885.7143	70737.85714	76240.71429	273021.4286	103176.4286	233700	47625	452571.4286	115671.4286	49202.14286	367564.2857	366085.7143	36698.57143	220371.4286	305250	194828.5714

Red Highlighting if > 150%

Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFBA	13C5_PFPeA	13C4_PFHpA	13C8_PFOSA	d3-N-MeFOSAA	d5-N-EtFOSAA	13C2_PFDoA	13C8_PFOS	13C3_PFBS	13C2_4:2 FTS	13C5_PFHxA	13C3_PFHxS	13C2_6:2 FTS	13C8_PFOA	13C9_PFNA	13C2_8:2 FTS	13C6_PFDA	13C7_PFUdA	13C2_PFTeDA
PFC103117001	PFCIBLK01	106.69%	111.61%	101.47%	106.20%	92.07%	91.11%	102.19%	99.59%	107.83%	134.83%	89.42%	110.33%	96.76%	84.60%	93.30%	118.37%	106.66%	100.39%	102.71%
PFC103117002	PFCIBLK01	112.32%	113.88%	108.04%	109.89%	125.53%	105.44%	113.40%	92.10%	115.15%	121.23%	102.25%	98.96%	122.65%	115.53%	111.24%	99.12%	103.94%	101.38%	117.03%
PFC103117003	WPF171018-01	105.82%	105.67%	106.65%	112.89%	119.91%	112.07%	98.89%	108.25%	111.62%	119.34%	109.91%	122.97%	113.59%	103.66%	119.48%	100.10%	107.82%	109.93%	112.87%
PFC103117004	WPF171018-02	104.42%	101.87%	96.98%	95.42%	94.83%	100.32%	99.33%	103.05%	96.66%	99.40%	100.53%	96.61%	109.17%	111.74%	95.47%	92.01%	104.21%	94.74%	101.09%
PFC103117005	WPF171018-03	96.25%	96.24%	93.06%	92.13%	89.34%	88.40%	99.50%	100.78%	101.03%	99.75%	93.10%	84.54%	110.73%	95.90%	96.00%	111.75%	96.52%	99.21%	96.24%
PFC103117006	WPF171018-04	100.27%	98.88%	102.33%	102.73%	108.46%	93.73%	94.22%	100.36%	100.64%	106.11%	102.55%	96.23%	88.50%	96.43%	103.83%	96.67%	86.65%	99.90%	95.70%
PFC103117007	WPF171018-05	95.05%	100.38%	106.12%	94.47%	105.73%	101.21%	105.82%	87.58%	93.13%	83.97%	95.26%	107.52%	86.40%	97.04%	98.34%	99.20%	106.73%	97.44%	95.31%
PFC103117008	WPF171018-06	100.67%	101.57%	96.94%	107.46%	91.92%	110.41%	101.75%	103.76%	98.78%	105.89%	101.06%	84.21%	100.51%	103.17%	95.35%	108.03%	103.73%	93.02%	102.71%
PFC103117009	WPF171018-07	97.52%	95.38%	97.92%	94.89%	89.80%	93.87%	100.49%	96.23%	98.14%	85.54%	97.61%	107.92%	91.09%	92.07%	91.54%	92.25%	94.34%	105.75%	96.08%
PFC103117010	WPF171018-08ISC	108.70%	107.13%	104.16%	113.27%	127.34%	121.18%	109.94%	91.31%	110.33%	109.57%	97.74%	111.99%	110.27%	102.39%	105.96%	126.95%	98.42%	105.95%	107.63%
PFC103117011	WPF171018-11ISC	106.69%	103.24%	100.86%	112.16%	128.88%	96.09%	111.42%	100.02%	104.43%	112.13%	98.74%	120.74%	123.35%	105.94%	103.09%	126.38%	104.69%	97.74%	102.47%
PFC103117012	WPF171018-09ICV	96.65%	98.11%	95.76%	96.21%	90.88%	104.53%	87.58%	91.71%	95.12%	103.84%	99.43%	92.36%	95.30%	91.21%	88.34%	103.16%	95.63%	83.83%	99.47%
PFC103117013	Technical PFOA	5.27%	0.07%	0.11%	0.21%	0.57%	0.74%	0.61%	0.43%	0.13%	4.53%	0.11%	1.02%	3.16%	0.22%	0.35%	#VALUE!	0.39%	0.32%	0.35%
PFC103117014	Carry Over Std	95.18%	93.84%	94.33%	89.43%	106.75%	92.73%	95.49%	95.52%	97.43%	90.33%	88.59%	97.60%	90.51%	98.55%	93.30%	112.57%	97.06%	92.43%	102.32%
PFC103117015	PFCIBLK02	116.00%	111.91%	117.43%	119.65%	124.56%	120.51%	115.71%	119.18%	122.21%	123.75%	114.58%	114.47%	107.56%	105.45%	112.10%	87.39%	112.17%	110.61%	121.72%
PFC103117016	1203907522	99.67%	104.86%	108.16%	96.99%	107.47%	103.31%	98.84%	100.72%	99.81%	94.68%	90.32%	99.94%	105.39%	103.82%	107.02%	111.99%	108.77%	93.46%	107.63%
PFC103117017	1203907523	101.00%	103.45%	95.80%	102.09%	134.46%	115.33%	108.01%	104.88%	102.82%	91.37%	96.61%	103.65%	121.67%	107.65%	98.50%	105.25%	97.95%	101.52%	103.24%
PFC103117018	436205001	6.59%	0.07%	0.22%	0.05%	0.57%	0.42%	0.41%	26.47%	348.01%	3.55%	0.11%	0.37%	37.19%	0.11%	0.12%	#VALUE!	0.21%	0.79%	0.19%
PFC103117019	1203907526	6.96%	0.06%	0.11%	0.06%	1.13%	1.25%	0.25%	28.76%	359.50%	4.96%	0.05%	1.82%	33.14%	0.11%	0.11%	#VALUE!	0.63%	1.37%	0.08%
PFC103117020	1203907529	6.29%	0.06%	0.12%	0.11%	0.69%	0.42%	0.30%	19.50%	323.62%	5.92%	0.11%	1.41%	32.13%	#VALUE!	#VALUE!	#VALUE!	0.20%	0.79%	0.08%
PFC103117021	1203907529	104.15%	104.05%	88.90%	67.77%	102.78%	104.87%	106.26%	69.03%	115.08%	132.22%	97.97%	104.04%	98.59%	91.09%	56.38%	59.59%	31.78%	102.56%	101.55%
PFC103117022	436205002	6.51%	0.07%	#VALUE!	0.05%	#VALUE!	0.42%	0.15%	7.44%	0.30%	4.39%	0.10%	0.46%	46.37%	0.11%	0.11%	#VALUE!	0.20%	0.20%	0.27%
PFC103117023	1203907527	6.18%	0.13%	0.12%	0.05%	#VALUE!	0.88%	0.10%	5.38%	0.13%	5.75%	0.11%	2.92%	55.15%	0.11%	0.11%	#VALUE!	0.64%	0.11%	0.12%
PFC103117024	1203907530	5.92%	0.05%	#VALUE!	0.05%	1.89%	1.25%	0.10%	5.12%	0.13%	2.18%	0.05%	1.30%	52.74%	0.12%	0.11%	#VALUE!	#VALUE!	#VALUE!	0.02%
PFC103117025	1203907530	99.93%	102.13%	91.67%	49.41%	105.05%	109.71%	87.96%	70.18%	104.94%	119.02%	93.86%	92.73%	117.37%	76.23%	55.93%	53.05%	24.19%	91.45%	98.16%
PFC103117026	WPF171018-09CCV	98.66%	104.14%	100.29%	102.11%	107.34%	98.71%	96.86%	92.54%	98.33%	105.45%	98.74%	99.22%	107.80%	89.33%	100.55%	86.53%	96.79%	94.30%	95.31%
PFC103117027	PFCIBLK03	133.47%	140.27%	121.27%	142.69%	153.10%	142.01%	133.51%	122.11%	134.15%	117.17%	130.72%	146.15%	151.91%	136.67%	132.31%	142.98%	140.56%	146.68%	137.81%
PFC103117028	436205003	6.05%	0.04%	0.11%	0.10%	1.20%	1.68%	0.18%	2.32%	0.09%	4.79%	0.16%	1.02%	56.80%	0.11%	0.11%	#VALUE!	0.40%	0.32%	0.37%
PFC103117029	1203907525	6.14%	0.10%	0.12%	0.05%	1.12%	0.83%	0.15%	2.61%	0.10%	3.09%	0.16%	3.87%	52.25%	0.11%	0.11%	#VALUE!	0.40%	0.11%	0.05%
PFC103117030	1203907528	5.93%	0.03%	0.11%	0.05%	0.63%	0.76%	0.15%	6.57%	0.04%	2.49%	0.16%	4.08%	57.89%	0.11%	#VALUE!	#VALUE!	0.23%	#VALUE!	0.04%
PFC103117031	1203907528	104.62%	101.45%	102.12%	30.37%	111.31%	82.50%	89.33%	52.18%	104.04%	112.79%	100.92%	87.00%	112.34%	81.82%	48.51%	54.93%	21.03%	99.41%	107.48%
PFC103117032	BLANK	97.05%	93.89%	88.65%	99.55%	94.28%	115.80%	100.54%	94.32%	94.22%	107.34%	93.70%	104.17%	90.61%	104.35%	105.88%	102.35%	91.14%	94.55%	98.16%
PFC103117033	BLANK	99.67%	100.21%	90.82%	98.33%	120.95%	106.56%	92.69%	92.84%	100.00%	124.63%	99.03%	99.27%	108.93%	105.86%	94.24%	120.25%	92.43%	92.53%	105.86%
PFC103117034	436205001	103.35%	106.14%	96.86%	65.29%	113.89%	115.78%	114.44%	72.40%	106.16%	141.17%	100.72%	111.68%	110.27%	95.37%	57.12%	52.97%	39.79%	109.19%	106.56%
PFC103117035	1203907526	102.54%	108.66%	102.00%	64.47%	110.18%	118.66%	114.11%	79.10%	114.44%	121.07%	98.67%	109.89%	116.58%	94.19%	58.35%	71.20%	38.14%	106.93%	108.40%
PFC103117036	1203907529	100.54%	110.84%	101.27%	61.20%	113.57%	122.47%	115.38%	84.84%	102.63%	127.91%	100.29%	114.10%	100.88%	86.19%	59.54%	61.80%	43.93%	96.07%	100.32%
PFC103117037	436205002	105.49%	103.37%	102.53%	49.94%	112.41%	90.31%	102.68%	71.91%	100.39%	112.76%	98.57%	91.73%	120.12%	90.60%	53.72%	48.35%	31.71%	95.53%	103.01%
PFC103117038	1203907527	102.48%	107.51%	107.88%	50.18%	92.37%	102.05%	94.88%	57.69%	100.77%	129.80%	103.61%	98.57%	97.59%	86.27%	55.93%	77.17%	31.92%	96.95%	105.25%
PFC103117039	1203907530	99.80%	102.39%	87.71%	47.66%	121.57%	118.97%	89.72%	69.54%	101.60%	99.84%	92.34%	103.38%	117.01%	78.03%	51.59%	47.00%	27.38%	94.50%	101.24%
PFC103117040	WPF171018-09CCV	94.58%	96.92%	97.84%	95.82%	110.92%	91.66%	95.21%	89.86%	94.87%	99.31%	86.74%	106.45%	88.44%	96.35%	88.50%	87.02%	94.14%	95.77%	95.85%
PFC103117041	PFCIBLK04	96.99%	99.57%	92.33%	100.15%	113.64%	98.31%	95.87%	87.21%	91.14%	90.46%	90.15%	99.23%	103.14%	96.31%	93.67%	89.31%	95.57%	93.76%	105.94%
PFC103117042	436205003	101.61%	100.46%	88.65%	27.59%	104.52%	114.58%	90.16%	70.67%	97.75%	111.28%	100.16%	105.27%	87.83%	76.35%	44.17%	52.48%	21.75%	90.42%	99.40%
PFC103117043	1203907525	98.46%	97.22%	88.45%	27.88%	102.21%	94.06%	88.40%	53.38%	99.61%	93.29%	96.42%	105.77%	77.86%	81.17%	43.02%	47.29%	11.20%	94.64%	96.85%
PFC103117044	1203907528	95.98%	95.77%	87.59%	29.07%	109.61%	94.60%	84.55%	57.51%	103.79%	66.99%	93.40%	99.66%	106.79%	77.01%	45.97%	39.43%	20.00%	84.18%	93.00%
PFC103117045	1203906756	105.56%	103.20%	108.37%	104.54%	114.72%	104.71%	95.60%	113.24%	104.56%	95.06%	88.93%	116.39%	75.18%	100.39%	101.41%	100.06%	94.54%	101.03%	103.24%
PFC103117046	1203906757	92.30%	96.41%	96.94%	95.48%	124.33%	103.31%	93.01%	93.97%	91.72%	74.43%	86.94%	104.29%	103.38%	101.00%	92.48%	92.70%	93.86%	96.95%	93.31%
PFC103117047	435984002	104.22%	101.57%	99.96%	106.07%	120.40%	104.81%	99.50%	103.45%	105.13%	89.10%	100.59%	100.72%	105.91%	97.29%	99.16%	99.65%	101.96%	106.44%	108.33%
PFC103117048	435984003	100.87%	97.43%	99.63%	100.23%	92.01%	95.97%	91.26%	103.00%	92.62%	86.52%	94.23%	102.08%	102.40%	95.90%	87.73%	91.76%	95.36%	95.72%	98.09%
PFC103117049	435706001	89.76%	95.00%	77.18%	80.77%	99.94%	110.04%	80.10%	69.94%	88.06%	91.21%	77.92%	77.69%	99.93%	81.37%	75.35%	70.71%	73.44%	102.70%	102.55%
PFC103117050	435706002	91.03%	90.64%	80.16%	81.28%	93.79%	101.26%	84.94%	84.21%	92.23%	93.04%	78.58%	89.32%	113.41%	76.93%	74.24%	69.20%	86.38%	107.17%	94.78%
PFC103117051	435706003	93.44%	95.51%	79.63%	87.69%	107.49%	92.98%	83.35%	80.82%	90.82%	77.01%	85.88%	96.86%	85.03%	86.19%	94.28%	78.85%	84.95%	76.61%	82.46%
PFC103117052	WPF171018-09CCV	93.98%	91.15%	91.80%	95.46%	119.83%	86.67%	83.45%	90.98%	93.00%	78.71%	94.00%	108.62%	88.29%	89.45%	78.92%	93.80%	88.96%	85.16%	90.70%
PFC103117053	PFCIBLK07	93.37%	100.89%	96.65%	95.66%	101.66%	102.90%	89.72%	98.86%	95.12%	81.80%	90.18%	100.28%	70.00%	94.96%	91.37%	85.22%	90.46%	90.42%	89.85%

Extraction ISTD Recoveries against ICAL

PFC103117054	435706004	86.55%	87.99%	80.78%	79.58%	135.25%	111.24%	81.70%	65.03%	89.47%	86.33%	77.99%	74.02%	79.60%	64.52%	80.10%	79.62%	81.54%	90.86%	97.86%
PFC103117055	1203906758	83.73%	83.76%	85.76%	80.64%	114.00%	97.07%	88.45%	75.93%	85.11%	92.54%	84.62%	79.36%	74.72%	65.29%	79.65%	95.73%	75.49%	101.72%	96.78%
PFC103117056	1203906759	87.01%	85.51%	81.39%	76.87%	94.83%	106.20%	84.28%	71.06%	88.45%	81.13%	73.75%	87.36%	84.14%	67.70%	74.49%	87.39%	74.47%	92.78%	86.69%
PFC103117057	436205001	101.14%	98.54%	89.55%	56.65%	97.71%	88.52%	103.18%	70.67%	116.30%	118.20%	95.98%	94.39%	103.26%	85.37%	60.64%	63.84%	35.82%	99.36%	102.09%
PFC103117058	436205002	102.34%	103.92%	98.65%	41.97%	122.67%	89.24%	92.14%	74.07%	105.46%	85.80%	89.99%	102.16%	106.49%	81.33%	55.19%	59.31%	28.40%	79.85%	94.93%
PFC103117059	436205003	101.20%	102.22%	99.31%	23.08%	91.99%	99.61%	86.70%	65.12%	105.84%	79.02%	91.11%	98.58%	114.87%	75.95%	47.78%	53.71%	17.96%	84.28%	100.09%
PFC103117060	1203907529	103.68%	103.33%	103.71%	51.58%	114.76%	117.89%	106.53%	80.03%	127.15%	137.92%	100.33%	112.53%	96.52%	88.47%	60.85%	61.76%	38.76%	98.18%	100.78%
PFC103117061	1203907530	103.88%	104.82%	92.29%	40.42%	119.28%	111.87%	91.70%	81.82%	97.95%	86.20%	95.16%	101.30%	104.42%	80.60%	57.94%	56.86%	35.12%	90.96%	103.40%
PFC103117062	1203907528	101.20%	108.88%	95.18%	21.27%	110.18%	98.31%	86.48%	73.84%	110.14%	95.28%	95.79%	96.82%	109.69%	81.21%	46.01%	26.01%	21.62%	92.58%	102.47%
PFC103117063	WPF171018-09CCV	99.53%	104.78%	101.80%	97.72%	111.62%	114.90%	97.96%	103.77%	95.89%	82.99%	93.93%	96.07%	76.89%	96.96%	93.38%	89.59%	95.84%	93.46%	94.01%
PFC103117064	PFCIBLK08	104.42%	99.44%	105.18%	101.03%	104.48%	98.81%	90.43%	98.51%	96.53%	119.87%	93.63%	102.72%	88.11%	102.10%	94.77%	77.62%	90.87%	91.40%	92.00%
PFC103117065	1203907530	104.02%	102.68%	94.61%	45.35%	109.86%	107.05%	91.31%	64.88%	101.54%	99.84%	99.43%	97.31%	121.43%	79.99%	54.45%	64.87%	32.22%	90.96%	98.16%
PFC103117066	1203907528	100.07%	104.14%	99.76%	21.56%	122.71%	106.24%	88.40%	67.66%	102.25%	96.41%	98.54%	98.92%	106.98%	80.43%	48.23%	56.65%	25.80%	87.86%	98.16%
PFC103117067	436205002	99.20%	99.78%	88.00%	66.35%	103.25%	99.18%	89.94%	77.10%	93.20%	93.73%	96.18%	110.60%	111.40%	87.41%	72.77%	79.46%	61.91%	91.74%	95.16%
PFC103117068	1203907527	102.54%	101.06%	105.80%	66.46%	99.98%	97.11%	98.29%	68.66%	94.09%	91.75%	96.58%	103.03%	115.45%	90.47%	78.83%	79.25%	58.63%	91.40%	98.63%
PFC103117069	1203907530	97.86%	99.61%	102.61%	66.71%	130.67%	90.86%	97.46%	91.34%	100.51%	96.63%	89.79%	102.04%	97.22%	86.27%	77.44%	81.62%	51.86%	86.19%	89.08%
PFC103117070	1203907528	96.45%	100.55%	102.45%	52.63%	103.35%	102.48%	88.12%	78.11%	95.89%	97.89%	100.66%	116.09%	93.81%	88.23%	70.89%	58.90%	42.22%	92.68%	95.39%
PFC103117071	1203907525	100.67%	95.34%	93.71%	55.37%	107.95%	92.27%	95.43%	74.86%	100.58%	96.88%	92.44%	98.81%	105.21%	85.50%	69.90%	59.47%	46.12%	84.52%	92.47%
PFC103117072	436205003	95.31%	94.06%	101.35%	54.60%	116.88%	108.54%	84.99%	78.56%	91.72%	95.84%	91.94%	88.65%	80.21%	88.60%	72.28%	67.73%	47.08%	86.09%	89.23%
PFC103117073	WPF171018-09CCV	96.45%	92.09%	101.02%	89.81%	100.36%	122.06%	92.63%	86.87%	88.38%	79.75%	84.15%	83.50%	113.59%	86.23%	93.05%	107.42%	89.98%	82.01%	94.93%
PFC103117074	PFCIBLK09	109.77%	112.72%	115.06%	110.77%	128.42%	131.33%	109.99%	103.02%	117.27%	122.80%	111.46%	112.57%	108.84%	120.02%	111.29%	98.38%	103.33%	102.16%	119.49%
PFC103117075	436205001	108.10%	99.48%	100.29%	24.83%	134.44%	128.99%	121.09%	74.23%	114.96%	177.39%	99.10%	85.06%	102.40%	74.35%	56.26%	52.85%	26.46%	120.59%	106.25%
PFC103117076	1203907526	109.57%	100.25%	86.04%	86.91%	103.33%	118.03%	125.92%	39.05%	145.57%	155.81%	96.65%	113.49%	123.90%	65.50%	58.96%	45.33%	26.42%	97.00%	103.63%
PFC103117077	1203907529	107.50%	106.79%	90.94%	56.99%	109.42%	112.48%	113.67%	39.81%	137.80%	144.72%	97.14%	89.05%	98.78%	82.03%	37.30%	32.51%	26.31%	108.21%	101.09%
PFC103117078	436205002	104.42%	101.70%	82.33%	29.44%	102.80%	93.32%	88.40%	45.45%	96.34%	105.20%	94.23%	93.30%	118.99%	59.50%	32.96%	50.93%	12.10%	85.45%	99.47%
PFC103117079	1203907527	105.09%	103.88%	85.55%	24.89%	109.59%	89.20%	93.23%	50.74%	100.39%	104.50%	85.35%	90.67%	138.47%	61.42%	33.58%	39.69%	18.06%	85.36%	100.24%
PFC103117080	1203907530	107.03%	114.47%	86.73%	24.72%	105.05%	109.23%	88.89%	52.96%	107.25%	106.80%	109.28%	99.51%	103.04%	57.17%	38.46%	41.28%	20.96%	100.54%	100.78%
PFC103117081	436205003	106.22%	101.02%	87.59%	7.85%	93.09%	107.07%	78.46%	46.91%	101.03%	105.39%	93.37%	83.99%	133.62%	56.97%	28.08%	30.05%	14.77%	86.78%	98.09%
PFC103117082	1203907525	104.89%	100.89%	76.16%	6.92%	107.34%	95.80%	79.33%	50.48%	91.98%	113.76%	87.14%	79.95%	93.62%	54.19%	30.09%	30.38%	13.18%	84.62%	98.09%
PFC103117083	1203907528	102.68%	96.49%	76.57%	7.71%	98.24%	83.70%	76.15%	56.99%	96.66%	98.71%	88.06%	84.19%	94.45%	47.67%	29.88%	39.34%	14.83%	82.65%	90.39%
PFC103117084	Blank	95.85%	94.53%	105.27%	86.25%	89.74%	89.95%	100.65%	93.22%	94.93%	103.62%	98.27%	100.57%	90.51%	97.41%	94.53%	64.99%	101.42%	92.04%	98.24%
PFC103117085	Blank	97.79%	93.12%	97.39%	96.83%	107.34%	101.21%	90.60%	85.70%	101.03%	96.82%	94.69%	95.16%	118.14%	92.88%	94.81%	103.16%	87.60%	91.30%	93.85%
PFC103117086	WPF171018-09CCV	95.45%	95.59%	99.10%	97.30%	102.40%	112.91%	92.41%	85.31%	97.63%	95.69%	90.12%	93.95%	89.17%	95.86%	87.60%	84.44%	86.24%	91.89%	96.47%
PFC103117087	PFCIBLK10	93.11%	91.66%	99.02%	95.22%	93.73%	99.14%	92.47%	89.47%	94.93%	87.87%	81.80%	100.27%	111.00%	97.98%	84.37%	100.30%	105.30%	86.54%	101.70%
PFC103117088	1203908641	92.97%	103.58%	114.53%	81.72%	96.55%	94.34%	86.92%	105.26%	108.54%	106.96%	103.61%	104.99%	114.42%	105.21%	108.17%	105.58%	95.50%	97.25%	100.24%
PFC103117089	1203908642	102.41%	110.03%	119.63%	90.67%	104.71%	99.53%	91.92%	100.74%	112.26%	122.80%	108.25%	117.57%	107.65%	111.49%	105.67%	109.46%	113.26%	95.82%	97.09%
PFC103117090	436081001	104.02%	107.90%	107.47%	104.38%	107.34%	94.34%	99.44%	109.84%	103.02%	102.58%	94.82%	113.91%	107.31%	95.04%	109.85%	113.59%	110.20%	97.59%	103.94%
PFC103117091	1203908643	107.36%	106.91%	100.86%	96.21%	123.22%	118.83%	105.38%	98.50%	108.86%	103.06%	103.97%	93.15%	110.30%	110.76%	110.51%	103.53%	107.00%	101.52%	104.32%
PFC103117092	1203908645	107.70%	110.54%	115.47%	107.35%	118.45%	105.89%	107.13%	91.30%	108.73%	106.30%	102.18%	110.90%	121.37%	109.33%	106.37%	101.41%	113.60%	98.08%	109.56%
PFC103117093	436081002	109.30%	107.38%	123.35%	105.43%	126.74%	122.49%	106.42%	121.44%	102.76%	103.56%	102.28%	118.75%	123.90%	105.12%	115.46%	115.35%	118.30%	95.63%	105.25%
PFC103117094	436081003	110.37%	109.39%	114.20%	111.10%	115.69%	108.33%	116.47%	108.64%	102.95%	99.02%	104.11%	101.67%	88.32%	96.51%	108.58%	111.09%	92.23%	103.14%	109.02%
PFC103117095	436488001	92.24%	105.72%	100.16%	69.53%	75.55%	85.07%	72.91%	71.03%	107.83%	156.69%	96.95%	110.71%	129.48%	91.29%	86.78%	96.13%	81.27%	79.61%	68.54%
PFC103117096	1203908644	88.22%	104.09%	101.02%	79.63%	95.87%	72.13%	77.91%	79.52%	105.91%	143.69%	93.00%	96.14%	113.56%	99.90%	94.20%	103.00%	86.24%	83.39%	77.76%
PFC103117097	1203908646	89.22%	101.45%	106.86%	81.55%	99.03%	91.19%	75.27%	79.13%	105.58%	165.04%	99.03%	109.37%	115.21%	100.72%	91.99%	102.35%	90.32%	81.62%	80.30%
PFC103117098	WPF171018-09CCV	102.61%	100.04%	101.14%	95.28%	111.03%	98.73%	92.79%	86.10%	101.09%	97.26%	91.38%	92.41%	100.82%	99.82%	95.26%	84.98%	100.13%	100.54%	99.32%
PFC103117099	PFCIBLK11	99.73%	102.77%	104.08%	96.35%	107.34%	97.29%	96.97%	98.86%	95.89%	86.36%	100.16%	95.13%	122.25%	91.82%	98.75%	91.43%	94.75%	98.23%	92.70%
PFC103117100	436488002	83.33%	102.22%	100.33%	82.23%	106.77%	86.29%	86.26%	84.13%	106.61%	139.43%	96.18%	102.61%	125.60%	104.80%	93.99%	112.61%	88.35%	78.77%	90.16%
PFC103117101	436488003	96.32%	108.84%	95.96%	89.23%	109.67%	93.49%	93.62%	103.40%	115.60%	141.64%	101.49%	105.86%	129.26%	100.92%	97.03%	104.96%	94.27%	88.21%	97.86%
PFC103117102	436488004	88.55%	98.84%	102.33%	63.74%	74.73%	89.16%	74.06%	78.20%	101.60%	117.76%	90.65%	98.48%	107.13%	95.49%	89.86%	78.11%	95.23%	75.63%	52.48%
PFC103117103	436488005	108.43%	107.30%	101.35%	86.08%	92.01%	95.46%	86.81%	83.07%	111.42%	115.02%	100.66%	107.81%	125.36%	110.63%	105.71%	123.68%	96.45%	84.72%	95.47%
PFC103117104	436488006	94.38%	107.08%	96.29%	75.72%	104.46%	97.86%	88.29%	76.62%	113.29%	154.65%	97.54%	109.68%	142.28%	87.86%	85.18%	98.87%	89.71%	80.84%	89.54%
PFC103117105	436488007	96.32%	105.59%	95.14%	93.58%	105.09%	112.79%	97.63%	91.56%	108.15%	115.53%	102.45%	106.12%	123.10%	101.57%	105.96%	126.99%	97.34%	103.59%	97.32%
PFC103117106	436518001	92.64%	107.17%	110.00%	82.69%	90.91%	101.42%	94.17%	83.14%	108.99%	158.49%	98.11%	91.40%	117.56%	98.31%	90.06%	74.23%	96.45%	87.27%	86.00%
PFC103117107	436518002	97.19%	80.56%	88.57%	87.22%	99.39%	90.37%	86.70%	94.98%	116.17%	134.65%	79.55%	90.70%	710.64%	83.50%	88.42%	141.01%	89.24%	83.00%	55.26%
PFC103117108	436518003	96.32%	102.09%	108.16%	80.46%	103.35%	77.50%	90.32%	93.61%	110.01%	136.09%	101.42%	106.19%	110.73%	98.47%	88.05%	80.03%	82.16%	81.72%	89.23%
PFC103117109	436518004	104.55%	107.08%	96.53%	87.66%	85.75%	85.15%	91.31%	78.20%	109.31%	115.84%	98.93%	115.94%	114.51%	106.43%	98.87%	95.73%	88.76%	77.49%	95.24%
PFC103117110	WPF171018-09CCV	96.45%	89.23%	90.29%	88.28%	118.77%	97.86%	92.63%	80.61%	98.27%	97.86%	90.98%	97.19%	119.69%	93.94%	83.42%	68.83%	89.17%	76.66%	92.31%
PFC103117111	PFCIBLK12	96.52%	95.25%	98.57%	92.68%	111.33%	105.79%	92.58%	78.56%	95.57%	108.76%	92.47%	91.24%	101.73%	93.37%	108.83%	91.39%	91.35%	83.83%	100.40%
PFC103117112	436518005	93.71%	101.75%	104.29%	84.02%	110.18%	87.55%	92.74%	98.19%	104.81%	118.08%	106.69%	97.62%	104.57%	100.15%	107.39%	107.87%	95.84%	93.37%	96.32%
PFC103117113	436518006	73.76%	109.31%	95.35%	91.82%	134.95%	98.25%	97.74%	80.09%	104.36%	145.89%	100.63%	96.53%	119.60%	103.57%	101.62%	123.60%	105.98%	90.07%	92.39%
PFC103117114	436081001	101.47%	109.60%	82.61%	95.73%	120.95%	108.11%	104.17%	83.04%	107.96%	128.82%	88.86%	100.50%	162.13%	101.08%	91.04%	107.46%	98.63%	89.43%	96.32%
PFC103117115	1203908643	98.26%	103.97%	92.41%	92.57%	118.68%	97.90%	98.78%	85.34%	108.22%	122.74%	88.93%	96.12%	126.85%	97.86%	85.72%	95.44%	90.60%	98.18%	89.77%
PFC103117116	1203908645	100.54%	102.51%	92.24%	87.24%	100.51%	114.35%	89.33%	90.22%	108.34%	122.46%	90.42%	83.89%	136.24%	99.13%	91.62%	96.34%	84.81%	85.21%	87.85%
PFC103117117	436081002	100.74%	96.02%	83.27%	100.41%	100.60%	105.40%	97.25%	107.13%	95.96%	91.62%	83.89%	78.68%	176.79%	86.56%	84.45%	108.11%	103.12%	96.41%	98.16%
PFC103117118	436081003	101.27%	94.95%	87.84%	100.30%	106.81%	95.34%	88.56%	101.87%	104.17%	108.03%	83.85%	70.96%	171.85%	91.29%	95.06%	117.02%	93.93%	83.93%	89.08%
PFC103117119	Blank	95.25%	94.74%	102.78%	93.96%	101.08%	98.96%	87.41%	97.36%	93.84%	82.99%	89.42%	92.07%	71.77%	82.35%	86.09%	80.19%	97.68%	92.04%	88.62%
PFC103117120	Blank	92.50%	92.90%	90.82%	92.33%	110.18%	104.59%	97.63%	88.62%	95.83%	87.78%	95.19%	93.45%	102.37%	88.60%	100.35%	100.34%	90.73%	89.04%	94.39%
PFC103117121	WPF171018-09CCV	96.05%	92.48%	94.78%	88.09%	124.09%	99.63%	87.58%	84.58%	91.66%	98.68%	87.57%	101.02%	111.61%	96.23%	93.13%	87.84%	93.73%	85.45%	94.01%
PFC103117122	PFCIBLK13	74.50%	72.23%	74.12%	62.22%	80.03%	78.32%	66.59%	60.92%	70.73%	68.72%	68.61%	76.63%	73.78%	69.91%	60.72%	57.84%	61.60%	60.98%	62.54%
PFC103117123	436081001	104.89%	98.58%	102.24%	96.81%	104.01%	101.25%	93.34%	84.21%	99.49%	104.13%	98.70%	100.92%	120.21%	97.25%	99.77%	99.61%	93.05%	95.14%	95.93%
PFC103117124	1203908643	97.72%	86.07%	94.37%	80.58%	89.68%	107.46%	85.93%	84.34%	93.32%	78.71%	89.02%	94.28%	96.15%	91.94%	85.51%	71.16%	89.03%	86.54%	84.61%
PFC103117125	1203908645	113.65%	116.27%	115.63%	104.05%	115.84%	113.38%	108.89%	105.24%	105.91%	94.27%	106.19%	122.22%	123.50%	108.14%	111.53%	125.44%	103.80%	99.95%	105.86%

Extraction ISTD Recoveries against ICAL

PFC103117126	436081002	121.49%	122.89%	123.35%	122.15%	118.15%	139.55%	123.56%	113.89%	119.83%	113.76%	115.54%	125.53%	103.90%	125.57%	113.05%	114.00%	119.25%	105.60%	119.72%
PFC103117127	436081003	104.82%	104.09%	97.63%	97.16%	108.97%	107.05%	98.18%	88.96%	107.32%	105.39%	97.64%	107.33%	93.47%	96.31%	100.10%	81.54%	97.88%	90.86%	92.16%
PFC103117128	436488002	108.10%	109.73%	121.84%	105.84%	121.46%	122.89%	103.07%	95.01%	126.44%	102.24%	104.54%	114.10%	135.06%	115.29%	105.84%	138.52%	103.73%	95.92%	113.02%
PFC103117129	436488003	117.67%	121.05%	108.90%	103.97%	139.42%	123.56%	103.34%	102.20%	106.10%	105.51%	109.64%	128.52%	115.36%	116.71%	99.44%	107.01%	114.90%	96.46%	112.48%
PFC103117130	436488004	83.27%	84.40%	82.12%	66.84%	83.95%	68.25%	66.37%	71.03%	81.84%	73.70%	80.34%	78.90%	67.68%	70.80%	75.02%	91.56%	67.22%	61.43%	64.66%
PFC103117131	436518001	82.86%	78.68%	81.02%	69.24%	89.74%	89.72%	69.66%	75.90%	77.02%	88.25%	73.58%	77.42%	79.63%	73.99%	78.92%	84.61%	74.94%	66.00%	69.61%
PFC103117132	436518002	78.11%	73.17%	73.59%	70.77%	80.60%	76.00%	68.40%	68.42%	75.74%	75.28%	72.95%	72.96%	103.62%	74.84%	72.36%	76.88%	62.78%	60.39%	64.96%
PFC103117133	WPF171018-09CCV	101.74%	105.55%	98.04%	106.04%	106.17%	110.87%	96.97%	101.51%	103.66%	98.58%	105.30%	99.94%	108.53%	98.59%	103.54%	109.25%	98.42%	95.18%	104.78%
PFC103117134	PFCIBLK14	107.30%	108.28%	120.82%	104.01%	127.21%	114.58%	104.06%	101.65%	107.51%	108.69%	103.87%	107.53%	126.95%	104.92%	108.58%	128.06%	104.55%	102.95%	105.09%
PFC103117135	436518003	90.56%	84.36%	80.41%	72.98%	90.86%	79.19%	67.47%	73.67%	85.88%	96.06%	78.09%	75.95%	74.42%	77.82%	70.80%	68.38%	75.89%	72.63%	71.97%
PFC103117136	436518003	82.80%	91.54%	87.59%	66.79%	85.24%	66.58%	69.06%	72.55%	100.06%	131.84%	84.48%	96.67%	99.29%	93.78%	77.40%	102.39%	66.40%	74.35%	71.90%
PFC103117137	Blank	95.92%	99.78%	90.49%	91.82%	116.39%	105.32%	89.83%	92.42%	90.50%	86.43%	89.89%	84.50%	94.66%	88.92%	96.74%	91.47%	92.98%	80.74%	87.31%
PFC103117138	436205001	105.76%	108.92%	115.18%	83.85%	122.65%	132.72%	101.20%	97.67%	117.65%	115.84%	99.60%	95.40%	108.14%	101.08%	86.13%	78.52%	71.81%	97.99%	97.16%
PFC103117139	1203907526	83.33%	82.44%	77.59%	62.88%	85.22%	67.80%	67.25%	74.16%	88.45%	89.39%	84.29%	88.18%	67.22%	79.58%	64.41%	56.81%	60.55%	77.25%	73.49%
PFC103117140	1203907529	122.29%	120.54%	126.37%	97.36%	137.47%	132.47%	119.28%	84.58%	140.63%	132.41%	117.73%	132.27%	139.17%	109.33%	96.29%	70.38%	75.28%	122.41%	119.80%
PFC103117141	436205001	117.07%	106.49%	104.94%	76.02%	135.71%	151.32%	133.84%	66.38%	134.34%	210.39%	110.83%	101.82%	117.16%	90.19%	53.39%	59.55%	24.12%	116.61%	114.49%
PFC103117142	1203907526	109.17%	101.70%	101.71%	30.33%	123.35%	129.97%	121.09%	67.73%	123.88%	204.91%	107.12%	88.91%	107.28%	73.29%	52.32%	54.73%	24.65%	115.23%	106.79%
PFC103117143	1203907529	122.22%	114.69%	109.55%	29.51%	144.34%	138.39%	134.39%	76.46%	145.12%	278.83%	114.15%	127.89%	112.62%	92.96%	54.99%	49.38%	23.84%	122.31%	115.49%
PFC103117144	WPF171018-09CCV	103.68%	99.40%	106.04%	90.23%	100.53%	103.76%	102.52%	92.84%	116.62%	100.54%	98.30%	95.40%	113.14%	97.74%	99.32%	105.62%	83.11%	92.19%	93.31%
PFC103117145	PFCIBLK15	101.61%	102.56%	106.86%	91.11%	117.94%	100.81%	86.75%	76.31%	105.01%	99.34%	98.97%	97.43%	111.76%	85.66%	87.32%	126.09%	98.97%	98.08%	92.00%
PFC103117146	1203910649	81.86%	93.67%	92.37%	72.63%	114.15%	84.58%	80.21%	78.87%	90.05%	92.82%	89.99%	84.04%	94.36%	85.33%	85.43%	95.85%	91.89%	67.22%	74.44%
PFC103117147	1203910650	80.52%	92.05%	95.67%	71.10%	88.00%	74.15%	73.90%	76.54%	88.51%	89.20%	88.43%	81.72%	76.34%	85.90%	91.13%	84.81%	94.27%	68.26%	73.66%
PFC103117148	436646001	81.39%	82.22%	75.76%	75.43%	73.81%	87.91%	74.88%	72.94%	91.91%	72.82%	75.63%	92.08%	85.64%	75.09%	76.29%	66.50%	69.50%	75.14%	70.89%
PFC103117149	1203910651	69.08%	72.96%	72.73%	70.55%	76.10%	76.30%	60.00%	65.63%	80.42%	64.06%	66.75%	80.14%	58.63%	78.11%	66.42%	55.67%	63.81%	59.31%	58.62%
PFC103117150	1203910652	70.75%	74.15%	78.49%	71.50%	70.15%	69.55%	66.86%	68.42%	77.92%	51.46%	64.03%	89.32%	70.21%	68.52%	63.10%	71.57%	63.27%	63.24%	62.79%
PFC103117151	1203911346	85.54%	99.27%	93.43%	77.81%	98.33%	73.92%	87.19%	78.08%	89.60%	89.07%	99.83%	90.81%	85.06%	96.43%	83.34%	91.23%	84.74%	76.02%	75.65%
PFC103117152	Filter Paper MB	75.30%	89.14%	99.80%	66.75%	76.00%	72.07%	65.65%	63.44%	78.88%	95.87%	75.17%	79.41%	103.17%	87.70%	75.43%	96.75%	77.87%	70.37%	64.73%
PFC103117153	1203911347	84.47%	91.24%	95.02%	70.24%	94.72%	69.55%	71.09%	60.60%	99.94%	105.10%	92.87%	83.76%	88.14%	84.60%	95.80%	92.46%	69.84%	74.55%	72.21%
PFC103117154	1203911348	84.14%	89.87%	94.00%	74.12%	87.00%	79.17%	75.21%	82.36%	89.92%	97.17%	91.15%	82.19%	87.13%	95.45%	84.57%	77.05%	69.43%	75.04%	73.83%
PFC103117155	435984001	88.62%	99.82%	102.73%	79.54%	88.68%	79.25%	82.08%	78.56%	94.99%	104.85%	104.20%	95.14%	110.54%	95.78%	100.71%	92.50%	87.47%	70.81%	81.84%
PFC103117156	436427004	83.87%	92.73%	95.88%	68.74%	91.46%	73.11%	82.58%	74.49%	88.58%	105.04%	95.82%	90.46%	97.89%	87.82%	87.19%	82.77%	75.28%	74.20%	71.37%
PFC103117157	WPF171018-09CCV	86.01%	86.92%	91.96%	81.37%	88.32%	78.72%	83.89%	82.33%	80.62%	94.65%	89.92%	90.11%	85.15%	87.82%	83.91%	78.52%	70.18%	71.74%	82.46%
PFC103117158	PFCIBLK16	93.17%	93.03%	94.29%	93.48%	84.08%	87.08%	87.19%	87.21%	94.74%	94.93%	91.41%	97.74%	78.38%	88.15%	94.61%	75.04%	88.28%	87.57%	84.92%
PFC103117159	Rinse	80.32%	86.03%	0.23%	49.28%	71.86%	64.83%	0.10%	1.01%	0.19%	3.98%	0.11%	0.93%	4.51%	0.12%	#VALUE!	#VALUE!	#VALUE!	58.97%	66.38%
PFC103117160	PFCIBLK17	92.50%	84.79%	84.86%	74.74%	71.02%	63.51%	71.04%	75.16%	89.99%	178.68%	86.07%	97.04%	106.70%	76.60%	82.32%	71.77%	70.72%	66.14%	76.37%
PFC103117161	WPF171018-08DISC	116.87%	117.85%	127.84%	116.71%	110.65%	83.42%	108.34%	115.23%	123.17%	163.37%	116.87%	122.74%	121.95%	103.33%	111.90%	138.52%	99.79%	85.50%	110.64%
PFC103117162	PFCIBLK18	116.06%	118.87%	116.65%	108.21%	94.17%	93.85%	112.57%	115.48%	121.89%	135.81%	107.35%	118.51%	128.77%	106.84%	101.45%	105.49%	98.97%	94.79%	111.71%
PFC103117163	1203911346	106.83%	107.98%	124.45%	101.49%	103.88%	84.52%	95.49%	103.40%	113.29%	148.50%	105.99%	110.90%	115.39%	102.76%	100.18%	110.07%	92.09%	90.02%	94.78%
PFC103117164	Filter Paper MB	105.02%	99.18%	110.12%	99.00%	111.35%	78.78%	95.93%	106.78%	103.15%	159.34%	101.19%	103.37%	122.56%	88.80%	96.33%	82.81%	82.50%	85.26%	99.24%
PFC103117165	1203911347	106.63%	95.17%	103.10%	98.09%	101.17%	86.43%	99.44%	92.08%	117.20%	136.31%	102.98%	105.71%	107.22%	94.55%	94.45%	110.85%	94.82%	81.67%	97.86%
PFC103117166	1203911348	105.49%	106.74%	109.76%	99.57%	77.89%	91.66%	98.73%	99.22%	114.51%	127.72%	102.25%	106.40%	119.75%	97.90%	99.28%	108.15%	83.59%	86.24%	101.94%
PFC103117167	435984001	105.96%	99.57%	124.12%	95.38%	99.94%	92.41%	105.05%	100.75%	122.53%	138.49%	104.27%	124.30%	114.42%	98.02%	99.85%	103.94%	88.62%	98.28%	99.32%
PFC103117168	436427004	95.92%	92.86%	99.31%	94.07%	90.72%	89.99%	95.76%	83.45%	96.53%	109.35%	89.99%	108.33%	88.41%	86.39%	81.25%	91.07%	87.74%	84.08%	91.93%
PFC103117169	WPF171018-09CCV	101.54%	102.86%	105.55%	94.18%	103.67%	85.49%	95.43%	86.08%	110.78%	124.25%	95.26%	103.34%	82.77%	97.41%	90.27%	103.08%	78.69%	81.72%	89.16%
PFC103117170	PFCIBLK19	111.85%	116.05%	120.86%	105.89%	114.61%	96.98%	113.95%	101.13%	118.36%	146.02%	120.21%	119.28%	86.89%	99.08%	107.35%	100.75%	100.67%	97.89%	117.95%
PFC103117171	1203905293	95.38%	102.98%	96.29%	79.07%	92.01%	84.78%	81.86%	90.60%	107.57%	140.25%	95.16%	96.53%	92.13%	90.88%	91.66%	97.48%	94.82%	83.49%	94.31%
PFC103117172	1203905294	96.59%	103.37%	100.90%	77.97%	88.98%	88.81%	89.44%	100.39%	114.06%	133.92%	99.63%	103.87%	104.60%	96.02%	100.51%	89.06%	75.15%	81.38%	82.53%
PFC103117173	1203905295	100.33%	100.16%	105.96%	74.59%	98.86%	84.64%	88.18%	79.70%	111.75%	155.87%	105.83%	111.54%	112.16%	87.70%	96.45%	108.31%	90.26%	83.05%	83.92%
PFC103117174	435706005	99.46%	97.82%	104.24%	76.47%	95.25%	80.41%	93.95%	89.64%	108.99%	143.65%	104.77%	113.58%	117.01%	90.56%	88.75%	114.45%	87.87%	82.11%	90.85%
PFC103117175	435983002	93.78%	101.57%	108.04%	87.16%	98.82%	75.47%	87.25%	73.23%	104.17%	141.01%	94.73%	109.11%	119.35%	97.82%	89.41%	107.99%	91.55%	82.80%	88.77%
PFC103117176	435983003	94.98%	102.26%	118.04%	79.14%	90.04%	75.63%	89.61%	92.11%	116.62%	140.54%	101.32%	107.78%	105.79%	93.25%	89.61%	101.20%	89.44%	87.22%	94.78%
PFC103117177	436081001	110.91%	97.82%	108.98%	101.05%	107.93%	84.58%	102.41%	75.19%	106.74%	119.18%	108.51%	123.95%	111.09%	98.68%	95.26%	146.12%	99.58%	92.83%	102.40%
PFC103117178	436081002	111.11%	102.94%	104.65%	96.35%	125.85%	91.25%	99.17%	102.23%	113.67%	137.17%	106.76%	101.24%	104.14%	103.04%	94.73%	91.76%	92.23%	97.35%	97.01%
PFC103117179	436081003	113.79%	108.24%	95.35%	104.94%	100.02%	97.82%	103.07%	106.03%	112.13%	118.71%	102.08%	110.02%	112.28%	102.72%	105.51%	98.22%	106.80%	103.73%	104.78%
PFC103117180	436081005	98.80%	100.63%	97.92%	84.91%	84.01%	80.45%	88.23%	100.39%	106.74%	121.01%	95.12%	95.53%	111.52%	99.04%	90.47%	101.00%	102.51%	90.42%	95.70%
PFC103117181	WPF171018-09CCV	106.63%	98.50%	107.71%	94.73%	98.82%	98.63%	95.71%	88.73%	107.38%	112.16%	96.65%	93.04%	107.77%	91.09%	99.03%	99.69%	90.46%	90.76%	94.54%
PFC103117182	PFCIBLK20	117.14%	113.06%	121.55%	108.67%	106.79%	99.95%	114.22%	101.56%	119.77%	129.54%	119.19%	123.15%	122.22%	112.84%	103.75%	106.88%	105.71%	100.34%	111.79%
PFC103117183	436081006	95.98%	102.17%	96.37%	81.73%	106.49%	88.69%	92.08%	98.54%	98.78%	145.57%	100.23%	119.52%	120.67%	87.41%	97.93%	100.14%	84.33%	91.15%	98.16%
PFC103117184	436081001	105.42%	102.64%	92.98%	101.74%	96.63%	93.69%	98.45%	86.18%	103.40%	136.22%	95.52%	109.10%	102.83%	101.86%	95.59%	109.09%	93.39%	87.32%	99.09%
PFC103117185	436081002	112.45%	108.32%	97.14%	103.13%	101.08%	102.48%	94.88%	95.11%	113.86%	120.25%	92.94%	105.54%	108.84%	97.53%	94.61%	98.06%	97.81%	95.38%	103.24%
PFC103117186	436081003	107.50%	106.10%	103.27%	94.36%	103.93%	86.27%	101.70%	104.14%	116.37%	113.10%	108.88%	117.57%	122.56%	92.02%	102.31%	130.47%	105.98%	87.76%	99.86%
PFC103117187	436081001	68.01%	81.97%	58.12%	86.49%	98.29%	87.14%	81.81%	74.48%	87.36%	125.61%	65.23%	58.00%	221.30%	71.91%	64.21%	86.57%	78.28%	74.55%	63.16%
PFC103117188	436081002	61.53%	64.71%	52.82%	78.98%	104.56%	87.87%	86.09%	76.41%	64.25%	103.09%	47.89%	43.09%	384.13%	63.17%	59.33%	99.20%	71.81%	77.89%	72.79%
PFC103117189	436081003	64.32%	67.10%	51.59%	79.23%	94.66%	69.33%	80.76%	53.12%	69.51%	99.69%	46.90%	31.64%	340.84%	60.23%	66.21%	84.49%	86.58%	76.66%	71.66%
PFC103117190	BLANK	117.80%	111.10%	104.90%	107.99%	96.33%	107.88%	97.90%	107.52%	113.80%	124.47%	114.58%	120.06%	113.01%	97.04%	112.80%	111.58%	100.81%	95.68%	111.41%
PFC103117191	BLANK	112.85%	111.48%	112.98%	99.02%	97.12%	106.69%	99.39%	118.08%	110.27%	138.55%	110.63%	109.12%	98.93%	111.49%	106.57%	125.11%	107.34%	103.93%	102.09%
PFC103117192	436518002	115.13%	114.22%	100.04%	95.33%	97.63%	112.54%	103.29%	97.41%	121.31%	133.10%	100.06%	120.85%	186.61%	105.08%	105.67%	108.85%	96.11%	96.41%	103.17%
PFC103117193	BLANK	113.52%	111.78%	118.33%	104.45%	106.79%	102.90%	106.37%	90.24%	108.28%	128.09%	104.67%	119.61%	136.67%	104.96%	100.59%	94.91%	80.73%	104.32%	114.02%
PFC103117194	WPF171018-09CCV	118.21%	112.51%	105.84%	102.71%	117.37%	103.47%	100.71%	108.32%	120.60%	142.39%	115.77%	117.28%	100.76%	114.84%	112.97%	109.79%	109.18%	107.76%	111.79%
PFC103117195	PFCIBLK21	121.95%	114.77%	121.84%	117.17%	122.12%	124.19%	115.87%	107.55%	117.20%	120.88%	117.99%	124.72%	139.26%	111.61%	117.80%	120.17%	105.16%	101.97%	121.88%
PFC103117196	436205001	101.74%	102.86%	98.61%	94.45%	95.38%	96.88%	95.43%	78.84%	109.95%	113.64%	98.27%	98.05%	108.53%	96.35%	71.91%	78.93%	59.22%	87.08%	99.55%
PFC103117197	1203907526	111.71%	99.65%	104.69%	88.92%	106.77%	94.20%	97.46%	84.16%	112.90%	137.32%	95.59%	106.21%	102.86%	97.21%	81.70%	96.63%	65.62%	99.46%	104.25%

Extraction ISTD Recoveries against ICAL

PFC103117198	1203907529	103.55%	95.04%	109.51%	92.11%	100.49%	97.51%	106.42%	79.47%	110.72%	133.29%	103.48%	114.23%	130.36%	97.00%	74.24%	78.52%	72.08%	98.33%	108.17%
PFC103117199	436205002	107.43%	106.40%	99.67%	83.00%	97.69%	113.34%	94.88%	77.90%	103.79%	128.72%	102.18%	103.64%	116.46%	99.57%	74.37%	63.56%	62.78%	102.85%	98.16%
PFC103117200	1203907527	104.55%	103.20%	101.14%	88.81%	102.40%	91.25%	106.31%	85.75%	110.33%	101.26%	106.76%	101.87%	123.71%	98.68%	80.84%	73.04%	62.61%	88.99%	108.79%
PFC103117201	1203907530	110.17%	103.71%	96.65%	89.52%	112.43%	108.74%	98.07%	90.67%	113.48%	106.46%	99.07%	107.49%	105.39%	101.29%	70.23%	78.35%	55.79%	84.91%	101.78%
PFC103117202	436205003	108.90%	110.63%	112.04%	82.32%	98.37%	107.32%	98.29%	90.69%	111.42%	124.25%	103.14%	111.92%	88.38%	98.64%	68.22%	63.56%	45.84%	96.36%	100.78%
PFC103117203	1203907525	106.76%	104.69%	105.63%	84.49%	115.84%	87.43%	95.65%	83.11%	104.94%	104.19%	95.95%	85.77%	111.03%	83.74%	72.81%	66.54%	46.46%	85.11%	99.47%
PFC103117204	1203907528	105.76%	109.69%	105.47%	80.05%	106.17%	78.32%	97.41%	79.38%	100.83%	116.69%	102.08%	108.80%	110.82%	94.47%	75.31%	71.81%	48.70%	92.97%	96.78%
PFC103117205	WPF171018-09CCV	99.67%	97.77%	104.73%	97.18%	95.19%	83.62%	97.14%	96.30%	97.50%	115.84%	94.03%	113.71%	120.12%	85.29%	88.50%	94.01%	83.18%	98.53%	89.46%
PFC103117206	PFCIBLK22	114.46%	108.62%	100.94%	92.39%	134.97%	128.34%	110.10%	95.85%	116.05%	137.26%	116.17%	107.17%	117.07%	103.57%	96.41%	105.49%	89.98%	104.86%	103.09%
PFC103117207	PFCIBLK23	106.22%	103.71%	108.86%	93.39%	98.50%	85.09%	96.92%	93.10%	106.80%	148.88%	107.09%	105.13%	106.55%	107.78%	95.76%	135.54%	98.83%	88.60%	0.11%
PFC103117208	WPF171018-08DISC	93.37%	87.78%	111.76%	85.90%	83.06%	89.52%	84.94%	91.21%	95.83%	145.32%	85.68%	101.71%	93.44%	80.39%	81.62%	89.76%	80.05%	83.29%	93.70%
PFC103117209	PFCIBLK24	102.01%	99.40%	124.86%	94.27%	90.84%	87.67%	97.25%	94.54%	100.00%	158.36%	98.01%	117.16%	119.45%	104.10%	99.08%	94.58%	90.94%	88.70%	100.63%
PFC103117210	1203916041	93.64%	105.29%	113.59%	77.35%	78.78%	72.26%	82.69%	87.85%	102.89%	199.06%	95.89%	108.37%	108.62%	91.29%	92.72%	65.52%	90.60%	88.35%	90.70%
PFC103117211	1203916042	94.85%	102.17%	119.43%	79.36%	81.81%	81.55%	85.43%	87.45%	108.22%	146.99%	110.30%	97.44%	103.07%	88.47%	100.71%	93.89%	88.21%	85.36%	94.62%
PFC103117212	1203916043	91.83%	101.75%	114.16%	76.60%	85.05%	82.61%	92.74%	87.59%	109.31%	164.47%	102.98%	100.01%	115.06%	88.35%	101.53%	114.04%	93.18%	88.55%	92.47%
PFC103117213	437370001	94.51%	100.34%	115.39%	81.46%	86.96%	88.38%	87.80%	93.84%	108.47%	147.06%	101.95%	105.69%	119.51%	96.68%	100.47%	88.70%	91.48%	79.26%	88.85%
PFC103117214	437288009	95.78%	99.78%	122.61%	78.68%	94.83%	88.18%	87.25%	86.85%	102.82%	140.22%	101.42%	115.31%	105.51%	94.19%	106.20%	100.71%	79.64%	81.28%	93.24%
PFC103117215	437288001	94.38%	105.38%	123.80%	81.53%	96.55%	86.92%	87.25%	78.35%	117.20%	153.54%	105.80%	106.49%	87.28%	93.33%	89.04%	92.70%	82.57%	77.35%	94.62%
PFC103117216	437288002	95.92%	102.26%	118.94%	73.33%	85.77%	82.00%	89.88%	73.81%	105.39%	132.09%	95.42%	108.88%	111.92%	94.15%	99.03%	84.77%	91.01%	72.83%	85.54%
PFC103117217	437288003	99.53%	102.51%	126.29%	81.94%	76.64%	75.37%	89.88%	91.36%	108.54%	143.37%	96.48%	100.23%	121.88%	96.23%	102.07%	82.11%	85.83%	75.92%	84.77%
PFC103117218	437288004	102.54%	100.63%	120.20%	82.25%	84.06%	77.91%	82.91%	86.24%	101.03%	147.09%	98.64%	92.25%	109.66%	87.58%	98.87%	63.39%	81.68%	73.96%	89.16%
PFC103117219	437288005	95.78%	93.29%	104.29%	72.74%	80.07%	76.55%	83.56%	82.55%	104.30%	158.46%	93.90%	95.35%	98.84%	91.70%	93.99%	88.57%	88.76%	77.69%	79.07%
PFC103117220	WPF171108-09CCV	98.26%	98.97%	121.43%	96.30%	89.72%	87.41%	91.48%	76.65%	102.31%	136.82%	98.90%	112.78%	111.21%	97.74%	97.07%	93.97%	83.72%	90.86%	99.55%
PFC103117221	PFCIBLK25	104.69%	102.04%	126.90%	97.69%	98.84%	93.24%	98.56%	88.46%	107.12%	140.66%	107.49%	109.46%	109.39%	92.56%	100.67%	111.99%	97.54%	94.89%	107.71%
PFC103117222	437288006	104.02%	102.73%	116.24%	79.10%	91.12%	78.62%	88.67%	90.34%	106.55%	138.68%	103.74%	107.17%	111.46%	95.25%	95.67%	76.31%	88.83%	77.44%	91.23%
PFC103117223	437288007	93.17%	101.10%	104.16%	76.05%	94.68%	65.38%	77.36%	79.28%	102.95%	131.43%	91.84%	102.77%	107.50%	90.92%	90.31%	80.32%	79.98%	71.65%	75.90%
PFC103117224	437288008	95.78%	95.81%	110.61%	80.07%	74.96%	75.22%	90.21%	75.58%	103.85%	138.74%	97.21%	105.23%	110.03%	93.98%	95.31%	109.13%	84.61%	71.45%	86.85%
PFC103117225	WPF171108-09CCV	101.54%	95.47%	134.24%	89.43%	95.76%	95.21%	102.35%	90.21%	105.01%	139.78%	96.15%	93.02%	116.79%	97.74%	98.05%	81.01%	83.86%	77.79%	94.01%
PFC103117226	PFCIBLK26	107.36%	107.47%	122.69%	101.31%	116.42%	95.62%	102.52%	85.54%	114.51%	130.20%	105.03%	117.27%	118.47%	104.31%	106.37%	88.33%	86.79%	88.06%	102.86%
PFC103117227	PFCIBLK27	113.92%	126.26%	131.02%	92.61%	91.88%	112.26%	107.35%	82.91%	127.60%	177.01%	94.56%	110.62%	91.98%	59.66%	80.84%	176.70%	103.73%	94.74%	0.07%
PFC103117228	PFCIBLK28	111.85%	117.08%	133.31%	103.08%	88.21%	97.49%	99.33%	97.42%	121.37%	179.12%	110.00%	121.83%	156.37%	106.35%	101.94%	114.45%	99.92%	92.19%	109.48%
PFC103117229	WPF171018-08DISC	97.39%	98.84%	112.37%	90.30%	84.63%	95.99%	85.16%	84.57%	101.73%	137.48%	91.08%	109.79%	110.39%	90.51%	96.53%	95.11%	76.98%	83.88%	100.16%
PFC103117230	PFCIBLK29	115.06%	115.33%	131.67%	101.07%	92.24%	110.81%	104.83%	99.06%	115.02%	138.46%	111.16%	104.68%	104.08%	106.47%	113.66%	98.06%	101.56%	95.43%	106.02%
PFC103117231	437288001	107.70%	102.51%	141.55%	91.35%	72.63%	94.16%	106.04%	73.40%	108.22%	157.17%	103.28%	128.11%	124.42%	100.80%	89.61%	107.70%	101.35%	87.86%	97.16%
PFC103117232	437288002	108.63%	104.35%	129.63%	90.96%	92.58%	76.67%	96.04%	89.02%	121.25%	153.95%	103.01%	107.58%	94.42%	97.21%	96.94%	130.59%	89.30%	89.29%	92.85%
PFC103117233	437288003	105.82%	108.66%	126.45%	99.04%	99.37%	81.87%	95.98%	92.78%	110.53%	182.46%	103.14%	115.23%	115.73%	96.68%	105.92%	126.91%	86.99%	88.40%	94.47%
PFC103117234	437288004	105.76%	110.97%	117.10%	89.28%	115.93%	95.81%	106.26%	90.98%	118.10%	168.25%	104.80%	101.71%	109.08%	96.92%	101.12%	87.18%	94.27%	93.96%	101.63%
PFC103117235	437288005	106.76%	110.42%	130.57%	89.83%	109.16%	110.35%	105.98%	90.50%	113.22%	131.43%	104.24%	105.08%	109.11%	96.84%	106.04%	97.65%	88.83%	89.04%	93.93%
PFC103117236	437288006	110.11%	114.99%	111.80%	88.88%	94.28%	93.26%	90.10%	89.42%	128.69%	141.67%	113.15%	106.79%	123.99%	100.43%	97.07%	105.78%	82.63%	85.60%	97.47%
PFC103117237	437288007	108.30%	106.06%	120.57%	94.64%	110.18%	85.35%	98.89%	78.56%	115.40%	157.80%	101.62%	112.99%	103.81%	97.98%	102.35%	149.96%	82.63%	100.00%	93.62%
PFC103117238	437288008	107.30%	105.97%	123.71%	95.26%	94.21%	96.78%	92.79%	85.75%	113.74%	148.44%	105.23%	113.00%	124.69%	91.00%	107.43%	120.50%	88.15%	92.24%	105.02%
PFC103117239	WPF171108-09CCV	109.71%	120.71%	109.67%	88.97%	102.25%	88.18%	96.48%	81.18%	119.90%	165.80%	102.65%	109.84%	117.77%	89.54%	98.34%	114.65%	95.36%	92.14%	101.94%
PFC103117240	PFCIBLK30	112.45%	117.21%	117.02%	106.84%	126.64%	103.76%	109.22%	90.22%	126.51%	175.69%	117.33%	109.53%	105.00%	101.78%	111.00%	129.00%	102.10%	94.15%	110.56%

Injection ISTD Recoveries against Calibration Midpoint

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-05	1668000	1105000	1680000	1289000

Red Highlighting if > 150% | Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117001	PFCIBLK01	99.52%	103.62%	101.61%	91.62%
PFC103117002	PFCIBLK01	99.04%	111.86%	107.44%	96.28%
PFC103117003	WPF171018-01	103.66%	114.93%	109.52%	102.25%
PFC103117004	WPF171018-02	98.50%	105.07%	107.08%	90.30%
PFC103117005	WPF171018-03	98.08%	105.97%	103.39%	90.69%
PFC103117006	WPF171018-04	103.78%	106.24%	104.11%	95.27%
PFC103117007	WPF171018-05	100.00%	100.00%	100.00%	100.00%
PFC103117008	WPF171018-06	99.70%	100.54%	97.74%	98.14%
PFC103117009	WPF171018-07	100.12%	97.92%	99.05%	91.54%
PFC103117010	WPF171018-08ISC	105.10%	115.48%	107.86%	93.10%
PFC103117011	WPF171018-11ISC	105.28%	107.87%	104.29%	101.55%
PFC103117012	WPF171018-09ICV	90.47%	97.01%	96.43%	85.88%
PFC103117013	Technical PFOA	99.64%	106.61%	97.86%	96.28%
PFC103117014	Carry Over Std	92.81%	90.77%	96.01%	85.26%
PFC103117015	PFCIBLK02	116.61%	113.57%	113.99%	110.63%
PFC103117016	1203907522	96.04%	95.02%	97.20%	88.36%
PFC103117017	1203907523	99.64%	101.72%	97.14%	93.56%
PFC103117018	436205001	42.09%	13.33%	106.90%	44.10%
PFC103117019	1203907526	41.10%	12.32%	101.43%	45.80%
PFC103117020	1203907529	40.83%	12.71%	105.00%	45.83%
PFC103117021	1203907529	65.05%	40.57%	97.98%	86.73%
PFC103117022	436205002	27.31%	10.37%	100.00%	28.83%
PFC103117023	1203907527	26.31%	9.81%	103.75%	27.01%
PFC103117024	1203907530	24.50%	10.28%	101.96%	28.14%
PFC103117025	1203907530	64.63%	30.39%	98.04%	79.91%
PFC103117026	WPF171018-09CCV	96.46%	96.83%	99.76%	95.58%
PFC103117027	PFCIBLK03	126.26%	133.21%	136.19%	124.05%
PFC103117028	436205003	22.31%	7.90%	101.96%	24.54%
PFC103117029	1203907525	22.81%	8.56%	101.85%	27.39%
PFC103117030	1203907528	21.49%	7.90%	98.63%	26.28%
PFC103117031	1203907528	58.62%	18.92%	98.27%	73.27%
PFC103117032	BLANK	101.32%	101.00%	104.23%	100.70%
PFC103117033	BLANK	99.28%	97.65%	104.23%	96.12%
PFC103117034	436205001	69.18%	40.47%	104.58%	87.51%
PFC103117035	1203907526	71.22%	39.86%	96.79%	88.13%
PFC103117036	1203907529	73.68%	40.11%	99.40%	86.42%
PFC103117037	436205002	63.91%	28.92%	92.92%	75.79%
PFC103117038	1203907527	67.33%	29.33%	97.68%	76.98%
PFC103117039	1203907530	67.09%	29.98%	101.01%	79.91%
PFC103117040	WPF171018-09CCV	96.76%	90.24%	95.18%	87.35%
PFC103117041	PFCIBLK04	95.92%	101.00%	97.98%	95.50%
PFC103117042	436205003	58.70%	20.05%	98.04%	73.80%
PFC103117043	1203907525	54.84%	19.86%	91.61%	71.80%
PFC103117044	1203907528	58.08%	19.41%	90.24%	71.56%
PFC103117045	1203906756	92.15%	82.73%	93.10%	80.45%
PFC103117046	1203906757	99.64%	95.93%	91.96%	90.38%

PFC103117047	435984002	90.53%	97.38%	93.33%	82.39%
PFC103117048	435984003	94.06%	96.47%	93.21%	85.73%
PFC103117049	435706001	91.13%	106.43%	107.14%	94.41%
PFC103117050	435706002	91.01%	90.14%	99.17%	77.45%
PFC103117051	435706003	94.18%	98.37%	100.95%	83.94%
PFC103117052	WPF171018-09CCV	92.99%	92.49%	95.24%	84.79%
PFC103117053	PFCIBLK07	97.66%	87.38%	97.02%	85.73%
PFC103117054	435706004	89.03%	97.01%	98.93%	77.53%
PFC103117055	1203906758	85.37%	87.82%	94.52%	68.25%
PFC103117056	1203906759	79.38%	90.68%	97.38%	67.46%
PFC103117057	436205001	63.01%	38.24%	93.45%	67.30%
PFC103117058	436205002	68.23%	29.16%	91.90%	74.03%
PFC103117059	436205003	56.98%	19.54%	95.30%	68.20%
PFC103117060	1203907529	65.83%	37.57%	92.80%	71.37%
PFC103117061	1203907530	66.85%	29.93%	95.36%	76.80%
PFC103117062	1203907528	61.03%	20.69%	92.68%	68.99%
PFC103117063	WPF171018-09CCV	98.50%	100.00%	100.18%	84.95%
PFC103117064	PFCIBLK08	97.96%	107.33%	106.61%	90.54%
PFC103117065	1203907530	63.43%	28.05%	95.71%	76.52%
PFC103117066	1203907528	61.93%	18.96%	97.02%	73.79%
PFC103117067	436205002	84.23%	57.95%	93.39%	84.72%
PFC103117068	1203907527	81.83%	57.97%	99.94%	85.34%
PFC103117069	1203907530	85.13%	58.39%	93.51%	89.76%
PFC103117070	1203907528	82.91%	42.37%	94.29%	84.48%
PFC103117071	1203907525	76.14%	46.42%	97.74%	80.99%
PFC103117072	436205003	79.44%	46.47%	96.37%	83.71%
PFC103117073	WPF171018-09CCV	89.39%	95.02%	95.18%	82.31%
PFC103117074	PFCIBLK09	108.69%	107.15%	113.57%	106.13%
PFC103117075	436205001	65.11%	20.58%	92.02%	65.00%
PFC103117076	1203907526	41.20%	29.58%	124.58%	84.10%
PFC103117077	1203907529	51.01%	36.88%	147.14%	104.81%
PFC103117078	436205002	65.89%	32.53%	167.92%	105.35%
PFC103117079	1203907527	69.90%	31.64%	161.37%	98.91%
PFC103117080	1203907530	44.66%	17.25%	102.92%	59.45%
PFC103117081	436205003	59.80%	16.02%	137.62%	79.13%
PFC103117082	1203907525	66.61%	19.16%	154.52%	88.98%
PFC103117083	1203907528	101.92%	25.19%	200.89%	117.53%
PFC103117084	Blank	90.95%	94.30%	95.24%	90.30%
PFC103117085	Blank	94.66%	95.29%	95.42%	84.17%
PFC103117086	WPF171018-09CCV	95.38%	98.10%	100.12%	91.08%
PFC103117087	PFCIBLK10	89.57%	100.45%	92.62%	90.92%
PFC103117088	1203908641	94.48%	102.99%	102.56%	92.32%
PFC103117089	1203908642	95.74%	99.55%	101.90%	96.43%
PFC103117090	436081001	98.44%	101.27%	97.20%	91.54%
PFC103117091	1203908643	96.64%	91.40%	101.43%	93.25%
PFC103117092	1203908645	97.06%	97.92%	99.46%	97.44%
PFC103117093	436081002	100.90%	107.60%	102.86%	93.48%
PFC103117094	436081003	94.30%	96.47%	96.61%	88.91%
PFC103117095	436488001	90.35%	92.22%	85.95%	91.93%
PFC103117096	1203908644	94.78%	90.86%	84.17%	88.29%
PFC103117097	1203908646	91.19%	96.20%	85.06%	99.69%
PFC103117098	WPF171018-09CCV	98.62%	100.81%	103.57%	100.00%
PFC103117099	PFCIBLK11	93.05%	96.38%	98.04%	84.33%
PFC103117100	436488002	92.57%	97.83%	83.27%	99.22%
PFC103117101	436488003	87.89%	104.98%	92.56%	91.70%

PFC103117102	436488004	94.48%	96.47%	88.81%	101.24%
PFC103117103	436488005	93.94%	95.11%	98.87%	96.20%
PFC103117104	436488006	90.35%	92.76%	89.35%	90.22%
PFC103117105	436488007	90.23%	97.74%	98.69%	95.03%
PFC103117106	436518001	92.93%	89.54%	89.46%	93.72%
PFC103117107	436518002	90.05%	91.95%	95.77%	86.81%
PFC103117108	436518003	89.69%	98.91%	87.38%	91.54%
PFC103117109	436518004	92.87%	95.48%	99.64%	94.18%
PFC103117110	WPF171018-09CCV	94.36%	97.29%	103.15%	96.74%
PFC103117111	PFCIBLK12	102.16%	106.88%	98.81%	98.60%
PFC103117112	436518005	94.18%	94.30%	99.76%	91.16%
PFC103117113	436518006	94.54%	99.64%	97.02%	89.68%
PFC103117114	436081001	92.39%	104.07%	98.04%	98.68%
PFC103117115	1203908643	85.07%	98.91%	98.99%	91.31%
PFC103117116	1203908645	94.00%	100.09%	100.24%	85.03%
PFC103117117	436081002	93.23%	96.56%	101.85%	87.20%
PFC103117118	436081003	86.15%	97.65%	93.45%	85.49%
PFC103117119	Blank	88.13%	94.75%	94.82%	84.56%
PFC103117120	Blank	90.17%	91.76%	92.50%	88.60%
PFC103117121	WPF171018-09CCV	98.20%	103.53%	102.44%	93.48%
PFC103117122	PFCIBLK13	67.21%	69.20%	78.27%	65.27%
PFC103117123	436081001	84.05%	86.67%	86.25%	86.89%
PFC103117124	1203908643	76.98%	77.48%	88.75%	80.45%
PFC103117125	1203908645	89.45%	97.29%	97.20%	95.27%
PFC103117126	436081002	105.76%	112.31%	103.69%	100.70%
PFC103117127	436081003	86.15%	92.76%	93.04%	85.73%
PFC103117128	436488002	98.74%	104.07%	105.71%	99.22%
PFC103117129	436488003	98.80%	102.08%	112.86%	103.49%
PFC103117130	436488004	66.37%	68.34%	73.33%	66.02%
PFC103117131	436518001	67.39%	71.96%	75.60%	69.52%
PFC103117132	436518002	60.31%	61.15%	72.56%	62.82%
PFC103117133	WPF171018-09CCV	103.00%	103.62%	107.86%	95.35%
PFC103117134	PFCIBLK14	102.40%	106.43%	110.83%	105.97%
PFC103117135	436518003	65.65%	74.60%	77.50%	66.45%
PFC103117136	436518003	70.80%	71.44%	76.96%	75.86%
PFC103117137	Blank	83.93%	85.21%	95.06%	85.88%
PFC103117138	436205001	75.48%	65.78%	93.10%	87.74%
PFC103117139	1203907526	64.93%	53.88%	77.38%	67.39%
PFC103117140	1203907529	101.50%	77.38%	116.49%	106.52%
PFC103117141	436205001	67.03%	23.67%	104.70%	70.16%
PFC103117142	1203907526	62.95%	22.67%	102.14%	72.16%
PFC103117143	1203907529	71.22%	23.21%	111.55%	81.46%
PFC103117144	WPF171018-09CCV	98.38%	96.47%	103.51%	91.23%
PFC103117145	PFCIBLK15	95.50%	100.81%	103.69%	97.98%
PFC103117146	1203910649	78.06%	76.41%	81.31%	80.06%
PFC103117147	1203910650	74.94%	80.07%	83.39%	76.87%
PFC103117148	436646001	78.54%	79.17%	83.39%	75.84%
PFC103117149	1203910651	78.18%	75.92%	80.18%	75.67%
PFC103117150	1203910652	72.42%	76.60%	86.13%	76.45%
PFC103117151	1203911346	77.28%	81.35%	85.24%	80.29%
PFC103117152	Filter Paper MB	70.38%	76.05%	78.04%	68.99%
PFC103117153	1203911347	75.72%	78.13%	83.45%	72.23%
PFC103117154	1203911348	74.46%	75.54%	80.48%	73.93%
PFC103117155	435984001	81.00%	88.29%	90.89%	82.39%
PFC103117156	436427004	77.22%	86.84%	80.00%	78.28%

PFC103117157	WPF171018-09CCV	82.25%	81.93%	85.71%	84.95%
PFC103117158	PFCIBLK16	91.43%	91.31%	95.95%	87.28%
PFC103117159	Rinse	0.03%	0.02%	0.01%	0.02%
PFC103117160	PFCIBLK17	69.54%	62.98%	82.44%	67.43%
PFC103117161	WPF171018-08DISC	101.56%	102.44%	119.29%	101.01%
PFC103117162	PFCIBLK18	91.37%	93.03%	105.54%	96.28%
PFC103117163	1203911346	96.16%	92.85%	101.49%	90.69%
PFC103117164	Filter Paper MB	95.68%	95.84%	109.17%	91.39%
PFC103117165	1203911347	98.86%	96.74%	103.81%	88.21%
PFC103117166	1203911348	90.77%	92.58%	102.68%	90.77%
PFC103117167	435984001	95.68%	90.22%	105.89%	94.49%
PFC103117168	436427004	94.66%	96.47%	103.63%	92.24%
PFC103117169	WPF171018-09CCV	100.72%	97.19%	106.55%	89.22%
PFC103117170	PFCIBLK19	95.62%	99.46%	103.93%	89.45%
PFC103117171	1203905293	92.75%	90.14%	99.70%	83.01%
PFC103117172	1203905294	94.96%	89.19%	105.24%	87.04%
PFC103117173	1203905295	97.54%	100.63%	108.57%	92.86%
PFC103117174	435706005	94.48%	102.26%	105.00%	87.28%
PFC103117175	435983002	89.93%	95.20%	105.12%	93.33%
PFC103117176	435983003	98.68%	100.18%	108.27%	89.29%
PFC103117177	436081001	104.50%	105.43%	116.01%	91.31%
PFC103117178	436081002	97.66%	98.10%	106.01%	88.36%
PFC103117179	436081003	96.70%	97.38%	107.68%	91.23%
PFC103117180	436081005	93.71%	98.01%	105.83%	86.73%
PFC103117181	WPF171018-09CCV	107.91%	100.18%	111.90%	93.17%
PFC103117182	PFCIBLK20	98.86%	100.27%	107.26%	89.37%
PFC103117183	436081006	92.87%	103.44%	105.30%	91.08%
PFC103117184	436081001	94.48%	98.37%	108.15%	82.47%
PFC103117185	436081002	106.53%	104.80%	114.17%	93.10%
PFC103117186	436081003	94.72%	93.21%	104.40%	84.95%
PFC103117187	436081001	66.55%	83.55%	84.35%	72.34%
PFC103117188	436081002	61.33%	94.30%	79.82%	64.84%
PFC103117189	436081003	64.75%	92.49%	79.52%	62.75%
PFC103117190	BLANK	91.97%	96.38%	102.20%	81.54%
PFC103117191	BLANK	96.04%	92.40%	105.77%	87.20%
PFC103117192	436518002	88.49%	95.93%	104.35%	80.29%
PFC103117193	BLANK	96.76%	96.47%	104.70%	85.18%
PFC103117194	WPF171018-09CCV	114.93%	112.94%	127.44%	102.72%
PFC103117195	PFCIBLK21	97.18%	105.97%	110.89%	87.20%
PFC103117196	436205001	87.11%	80.57%	109.76%	89.22%
PFC103117197	1203907526	85.01%	67.38%	103.04%	79.21%
PFC103117198	1203907529	87.17%	73.91%	110.77%	89.91%
PFC103117199	436205002	81.83%	65.25%	105.42%	82.23%
PFC103117200	1203907527	83.87%	69.63%	107.62%	88.52%
PFC103117201	1203907530	83.75%	63.30%	104.88%	88.36%
PFC103117202	436205003	83.69%	56.20%	113.63%	87.74%
PFC103117203	1203907525	78.06%	55.57%	110.00%	90.46%
PFC103117204	1203907528	80.46%	55.96%	108.99%	83.09%
PFC103117205	WPF171018-09CCV	97.96%	102.26%	107.32%	90.46%
PFC103117206	PFCIBLK22	91.25%	95.38%	102.44%	90.07%
PFC103117207	PFCIBLK23	89.57%	86.54%	95.06%	83.01%
PFC103117208	WPF171018-08DISC	89.99%	88.93%	96.19%	87.90%
PFC103117209	PFCIBLK24	88.55%	94.93%	94.05%	83.94%
PFC103117210	1203916041	81.77%	89.38%	91.49%	83.01%
PFC103117211	1203916042	81.83%	86.62%	93.57%	89.14%

PFC103117212	1203916043	82.43%	84.02%	93.33%	80.29%
PFC103117213	437370001	75.00%	75.56%	85.30%	77.19%
PFC103117214	437288009	86.75%	85.47%	95.77%	83.55%
PFC103117215	437288001	77.88%	85.38%	86.49%	78.20%
PFC103117216	437288002	83.03%	82.94%	91.73%	86.89%
PFC103117217	437288003	84.11%	88.46%	95.54%	84.79%
PFC103117218	437288004	86.15%	90.95%	99.82%	87.04%
PFC103117219	437288005	100.96%	103.53%	112.08%	101.86%
PFC103117220	WPF171108-09CCV	85.97%	92.22%	103.57%	91.16%
PFC103117221	PFCIBLK25	83.93%	92.94%	99.29%	101.24%
PFC103117222	437288006	91.49%	89.84%	105.06%	93.25%
PFC103117223	437288007	85.67%	86.78%	97.14%	88.29%
PFC103117224	437288008	82.61%	85.38%	97.14%	89.53%
PFC103117225	WPF171108-09CCV	83.93%	89.53%	98.63%	89.91%
PFC103117226	PFCIBLK26	83.15%	93.03%	95.54%	85.80%
PFC103117227	PFCIBLK27	85.43%	92.85%	107.32%	61.45%
PFC103117228	PFCIBLK28	96.10%	93.21%	103.10%	92.32%
PFC103117229	WPF171018-08DISC	94.60%	97.74%	104.82%	93.10%
PFC103117230	PFCIBLK29	92.75%	91.76%	102.74%	97.05%
PFC103117231	437288001	89.03%	96.38%	106.19%	92.16%
PFC103117232	437288002	93.88%	94.66%	107.68%	93.41%
PFC103117233	437288003	88.73%	88.67%	106.01%	95.81%
PFC103117234	437288004	82.61%	91.95%	105.30%	86.11%
PFC103117235	437288005	86.21%	87.12%	102.98%	89.14%
PFC103117236	437288006	93.65%	85.07%	103.81%	88.44%
PFC103117237	437288007	88.91%	95.20%	103.63%	84.72%
PFC103117238	437288008	86.87%	97.01%	105.12%	90.92%
PFC103117239	WPF171108-09CCV	85.73%	89.76%	101.90%	81.30%
PFC103117240	PFCIBLK30	99.58%	101.18%	108.99%	88.52%

Injection ISTD Recoveries against initial Daily CCV

10/31/2017

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-08DISC	1.69E+06	1.13E+06	2.00E+06	1.30E+06

Red Highlighting if > 150% Yellow Highlighting if < 50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117160	PFCIBLK17	68.48%	93.90%	71.31%	98.69%
PFC103117161	WPF171018-08DISC	100.00%	100.00%	100.00%	100.00%
PFC103117162	PFCIBLK18	89.96%	90.81%	88.47%	95.31%
PFC103117163	1203911346	94.69%	90.64%	85.08%	89.78%
PFC103117164	Filter Paper MB	94.21%	93.55%	91.52%	90.48%
PFC103117165	1203911347	97.34%	94.43%	87.03%	87.33%
PFC103117166	1203911348	89.37%	90.37%	86.08%	89.86%
PFC103117167	435984001	94.21%	88.07%	88.77%	93.55%
PFC103117168	436427004	93.21%	94.17%	86.88%	91.32%
PFC103117169	WPF171018-09CCV	99.17%	94.88%	89.32%	88.33%
PFC103117170	PFCIBLK19	94.16%	97.08%	87.13%	88.56%
PFC103117171	1203905293	91.32%	87.99%	83.58%	82.18%
PFC103117172	1203905294	93.51%	87.06%	88.22%	86.18%
PFC103117173	1203905295	96.04%	98.23%	91.02%	91.94%
PFC103117174	435706005	93.03%	99.82%	88.02%	86.41%
PFC103117175	435983002	88.55%	92.93%	88.12%	92.40%
PFC103117176	435983003	97.17%	97.79%	90.77%	88.40%
PFC103117177	436081001	102.89%	102.92%	97.26%	90.40%
PFC103117178	436081002	96.16%	95.76%	88.87%	87.48%
PFC103117179	436081003	95.22%	95.05%	90.27%	90.32%
PFC103117180	436081005	92.27%	95.67%	88.72%	85.87%
PFC103117181	WPF171018-09CCV	106.26%	97.79%	93.81%	92.24%
PFC103117182	PFCIBLK20	97.34%	97.88%	89.92%	88.48%
PFC103117183	436081006	91.44%	100.97%	88.27%	90.17%
PFC103117184	436081001	93.03%	96.02%	90.67%	81.64%
PFC103117185	436081002	104.90%	102.30%	95.71%	92.17%
PFC103117186	436081003	93.27%	90.99%	87.52%	84.10%
PFC103117187	436081001	65.53%	81.55%	70.71%	71.61%
PFC103117188	436081002	60.39%	92.05%	66.92%	64.19%
PFC103117189	436081003	63.75%	90.28%	66.67%	62.12%
PFC103117190	BLANK	90.55%	94.08%	85.68%	80.72%
PFC103117191	BLANK	94.57%	90.19%	88.67%	86.33%
PFC103117192	436518002	87.13%	93.64%	87.48%	79.49%
PFC103117193	BLANK	95.28%	94.17%	87.77%	84.33%
PFC103117194	WPF171018-09CCV	113.16%	110.25%	106.84%	101.69%
PFC103117195	PFCIBLK21	95.69%	103.45%	92.96%	86.33%
PFC103117196	436205001	85.77%	78.65%	92.02%	88.33%
PFC103117197	1203907526	83.71%	65.78%	86.38%	78.42%
PFC103117198	1203907529	85.83%	72.15%	92.86%	89.02%
PFC103117199	436205002	80.58%	63.69%	88.37%	81.41%
PFC103117200	1203907527	82.59%	67.97%	90.22%	87.63%
PFC103117201	1203907530	82.47%	61.79%	87.92%	87.48%
PFC103117202	436205003	82.41%	54.86%	95.26%	86.87%

Injection ISTD Recoveries against initial Daily CCV

PFC103117203	1203907525	76.86%	54.25%	92.22%	89.55%
PFC103117204	1203907528	79.22%	54.63%	91.37%	82.26%
PFC103117205	WPF171018-09CCV	96.46%	99.82%	89.97%	89.55%
PFC103117206	PFCIBLK22	89.85%	93.11%	85.88%	89.17%

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-08DISC	1.50E+06	9.83E+05	1.62E+06	1.13E+06

Red Highlighting if >	150%	Yellow Highlighting if <	50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117206	PFCIBLK22	101.40%	107.26%	106.50%	102.47%
PFC103117207	PFCIBLK23	99.53%	97.31%	98.82%	94.44%
PFC103117208	WPF171018-08DISC	100.00%	100.00%	100.00%	100.00%
PFC103117209	PFCIBLK24	98.40%	106.75%	97.77%	95.50%
PFC103117210	1203916041	90.87%	100.50%	95.11%	94.44%
PFC103117211	1203916042	90.94%	97.39%	97.28%	101.41%
PFC103117212	1203916043	91.61%	94.47%	97.03%	91.35%
PFC103117213	437370001	83.34%	84.96%	88.68%	87.82%
PFC103117214	437288009	96.40%	96.10%	99.57%	95.06%
PFC103117215	437288001	86.54%	96.00%	89.91%	88.97%
PFC103117216	437288002	92.27%	93.26%	95.36%	98.85%
PFC103117217	437288003	93.47%	99.47%	99.32%	96.47%
PFC103117218	437288004	95.74%	102.27%	103.77%	99.03%
PFC103117219	437288005	112.19%	116.41%	116.52%	115.89%
PFC103117220	WPF171108-09CCV	95.54%	103.69%	107.67%	103.71%
PFC103117221	PFCIBLK25	93.27%	104.51%	103.22%	115.18%
PFC103117222	437288006	101.67%	101.02%	109.22%	106.09%
PFC103117223	437288007	95.20%	97.58%	100.99%	100.44%
PFC103117224	437288008	91.81%	96.01%	100.99%	101.85%
PFC103117225	WPF171108-09CCV	93.27%	100.67%	102.54%	102.29%
PFC103117226	PFCIBLK26	92.41%	104.61%	99.32%	97.62%

	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
WPF171018-08DISC	1.58E+06	1.08E+06	1.76E+06	1.20E+06

Red Highlighting if >	150%	Yellow Highlighting if <	50%

FILE	Sample Name	13C4_PFOS	13C2_PFDA	13C3_PFBA	13C2_PFOA
PFC103117227	PFCIBLK27	90.30%	95.00%	102.39%	66.01%
PFC103117228	PFCIBLK28	101.58%	95.37%	98.35%	99.17%
PFC103117229	WPF171018-08DISC	100.00%	100.00%	100.00%	100.00%
PFC103117230	PFCIBLK29	98.04%	93.89%	98.01%	104.25%
PFC103117231	437288001	94.11%	98.61%	101.31%	99.00%
PFC103117232	437288002	99.24%	96.85%	102.73%	100.33%
PFC103117233	437288003	93.79%	90.72%	101.14%	102.92%
PFC103117234	437288004	87.33%	94.07%	100.45%	92.50%
PFC103117235	437288005	91.13%	89.14%	98.24%	95.75%
PFC103117236	437288006	98.99%	87.04%	99.03%	95.00%

Injection ISTD Recoveries against initial Daily CCV

PFC103117237	437288007	93.98%	97.41%	98.86%	91.00%
PFC103117238	437288008	91.83%	99.26%	100.28%	97.67%
PFC103117239	WPF171108-09CCV	90.62%	91.84%	97.22%	87.33%
PFC103117240	PFCIBLK30	105.26%	103.52%	103.98%	95.08%

PFC Initial Calibration

Lab Name: GEL Laboratories LLC **GEL Job No:** 437370

Lab Code: GEL **Run Date:** 31-OCT-17

LCMSMS Instrument ID: LCMSMS6 **Method:** EPA 537 Modified **Column:** Gemini 3u C-18

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	7	Ave RF	RSD	Q
Data File:	PFC103117003.w	PFC103117004.w	PFC103117005.w	PFC103117006.w	PFC103117007.w	PFC103117008.w	PFC103117009.w			
Parmname										
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propano	.5849668	.6198483	.7141331	.6031028	.6394398	.6007434	.5904075	.62180597	7.1794	
Fluorotelomer sulfonate 4:2 (4:2 FTS)	1.390177	1.458897	1.423942	1.374597	1.751106	1.304821	1.771538	1.4964397	12.503	
Fluorotelomer sulfonate 6:2 (6:2 FTS)	1.378648	1.026985	1.161315	1.438318	1.538647	1.357960	1.327679	1.3185074	13.050	
Fluorotelomer sulfonate 8:2 (8:2 FTS)	1.465309	1.487186	1.234455	1.210947	1.106261	1.232948	1.281892	1.2884282	10.799	
N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	1.124912	.9550892	1.072891	1.053736	.9525661	.9414350	1.003458	1.0148698	6.9658	
N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA	.9363395	.9059146	1.016971	.9116976	.9376254	1.059592	1.172078	.99145982	9.8771	
Perfluoro-n-[1,2-13C2] decanoic acid	1270	1161	1171	1174	1105	1111	1082	1153.4286	5.4492	
Perfluoro-n-[1,2-13C2] octanoic acid	1318	1164	1169	1228	1289	1265	1180	1230.4286	5.0455	
Perfluoro-n-[2,3,4-13C3] butanoic acid	1840	1799	1737	1749	1680	1642	1664	1730.1429	4.2086	
Perfluorobutanesulfonate (PFBS)	2.266060	2.563194	2.449766	2.377109	2.700261	2.372710	2.518170	2.4638958	5.8278	
Perfluorobutyric acid (PFBA)	1.771031	1.835737	1.797983	1.706720	1.809859	1.650044	1.761325	1.7618142	3.6226	
Perfluorodecanesulfonate (PFDS)	5.020604	4.733242	4.471266	4.826316	5.638069	4.230066	4.775074	4.8135200	9.2339	
Perfluorodecanoic acid (PFDA)	1.124684	1.354507	1.285966	1.511129	1.139190	1.292651	1.310426	1.2883647	10.196	
Perfluorododecanoic acid (PFDoA)	.9456944	.9243639	.9445058	1.010884	.9226376	.9359251	.9069163	.94156109	3.5611	
Perfluoroheptanesulfonate (PFHpS)	4.803003	4.730011	4.671698	4.607201	5.818830	4.441888	5.047272	4.8742718	9.3399	
Perfluoroheptanoic acid (PFHpA)	.9806736	1.150568	1.070395	1.013961	1.011538	1.037895	1.054606	1.0456624	5.2742	
Perfluorohexanesulfonate (PFHxS)	3.650924	5.000442	5.596832	5.166506	4.400645	5.487522	4.448484	4.8216220	14.366	
Perfluorohexanoic acid (PFHxA)	.9597407	1.023739	.9962620	.9021763	.9298887	.8915491	.9401528	.94907263	5.0627	
Perfluorononanesulfonate (PFNS)	3.717740	3.944093	3.668073	4.134676	4.599657	3.634230	3.926512	3.9464258	8.5792	
Perfluorononanoic acid (PFNA)	1.589721	1.067328	.6541827	.5574849	.5830208	.5277539	.5238362	.78618961	10.554	
Perfluorooctanesulfonamide (PFOSA)	.8298735	1.005853	1.054888	.9071343	.9650281	.8681089	.9165395	.93534655	8.3910	
Perfluorooctanesulfonate (PFOS)	3.965216	4.167255	3.884882	3.854363	4.834827	3.769091	3.956413	4.0617210	8.9417	
Perfluorooctanoic acid (PFOA)	1.137795	.9810993	1.112340	1.038228	1.090202	.9401371	1.083223	1.0547178	6.8325	
Perfluoropentanesulfonate (PFPeS)	4.414394	5.228117	6.220769	5.485678	4.696197	5.730877	4.860866	5.2338426	12.034	
Perfluoropentanoic acid (PFPeA)	1.135812	1.081761	1.085220	1.091145	1.063298	.9966358	1.075347	1.0756027	3.8576	
Perfluorotetradecanoic acid (PFTeDA)	.8799454	.8878522	.8844	.9581657	.9664782	.8407046	.8864183	.90056636	5.0226	
Perfluorotridecanoic acid (PFTrDA)	1.213506	1.273800	1.2596	1.249665	1.268578	1.175787	1.163862	1.2292570	3.676	
Perfluoroundecanoic acid (PFUdA)	.7665400	1.078190	.8883110	.8534186	.9305345	.8734812	.8410781	.89022191	10.896	
Sodium perfluoro-1-[1,2,3,4-13C4]octanesulfonate	1729	1643	1636	1731	1668	1663	1670	1677.1429	2.2741	

Q column used to flag RSD value outside of Limit : (>20%)

* Value outside of QC Limit

GC
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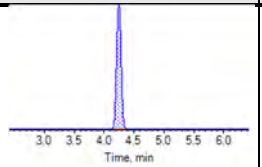
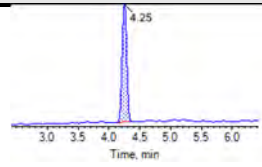
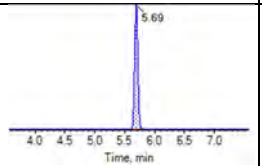
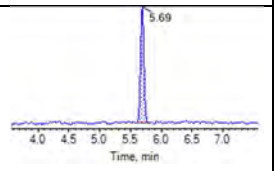
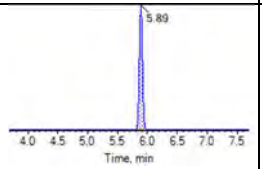
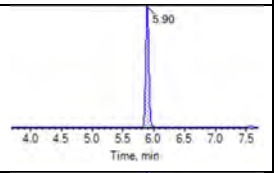
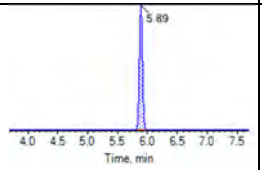
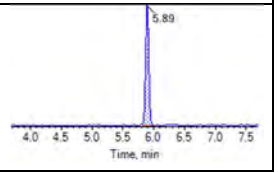
PFC103117003.wiff			
Sample Name	WPF171018-01	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117003.wiff
Acquisition Date	10/31/2017 16:55:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117003.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	112000	13C4_PFBA	158100	100.0	100.5	100.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	112400	13C5_PFPeA	247400	100.0	105.6	105.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	139500	13C3_PFBS	173900	88.5	81.4	92.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	64330	13C3_PFBS	173900	88.5	83.6	94.5	0.46/ 0.45		

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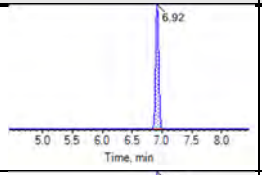
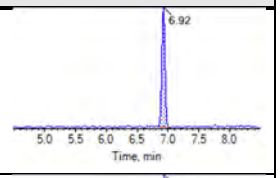
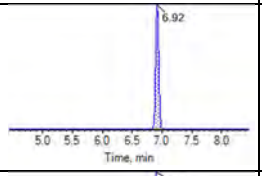
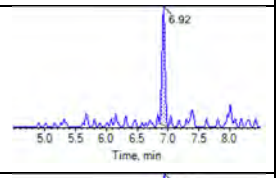
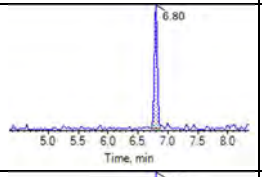
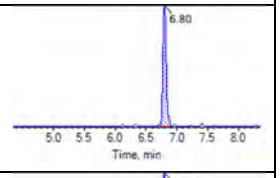
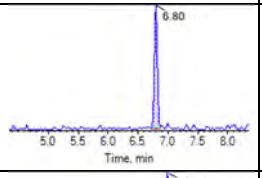
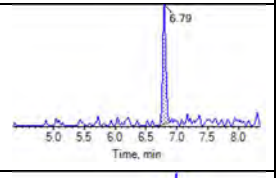
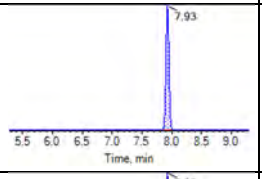
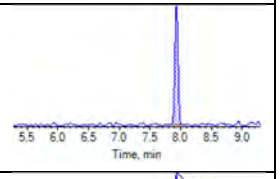
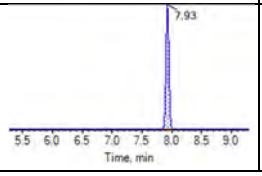
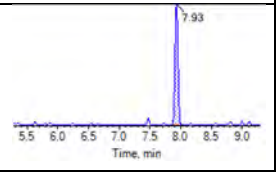
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	127300	13C5_PFHxA	331600	100.0	101.2	101.2	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	8116	13C5_PFHxA	331600	100.0	91.2	91.2	0.06/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	19700	13C2_4:2 FTS	37890	93.5	86.8	92.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	11290	13C2_4:2 FTS	37890	93.5	69.3	74.1	0.57/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	102500	13C4_PFHpA	261300	100.0	93.8	93.8	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	29820	13C4_PFHpA	261300	100.0	104.4	104.4	0.29/ 0.26		

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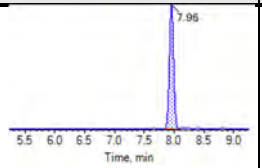
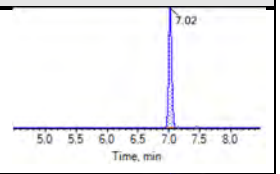
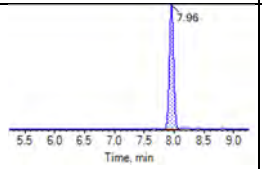
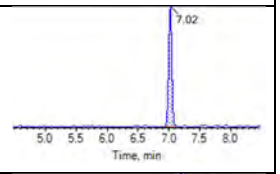
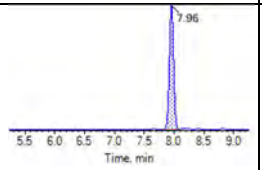
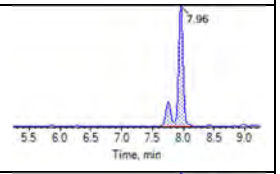
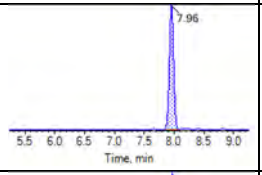
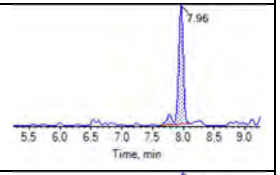
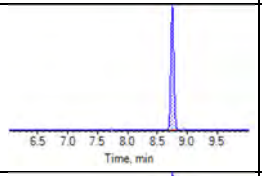
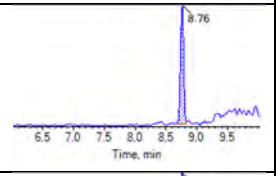
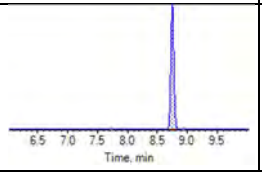
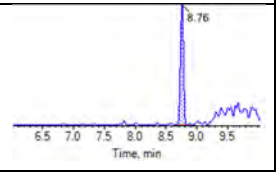
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	157400	13C3_PFHxS	94830	94.0	79.3	84.4	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	52340	13C3_PFHxS	94830	94.0	75.5	80.3	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	126300	13C3_PFHxS	94830	91.2	69.1	75.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31640	13C3_PFHxS	94830	91.2	68.5	75.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	115600	13C8_PFOA	254000	100.0	107.9	107.9	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	47060	13C8_PFOA	254000	100.0	117.7	117.7	0.41/ 0.37		

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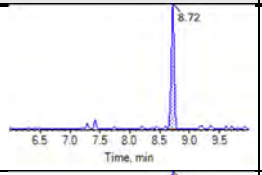
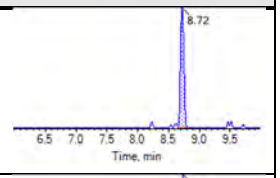
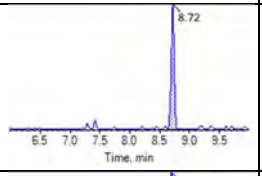
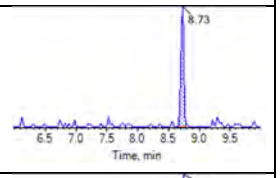
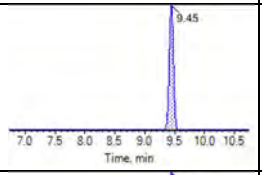
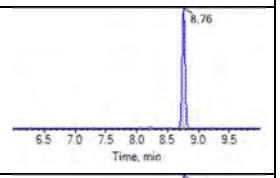
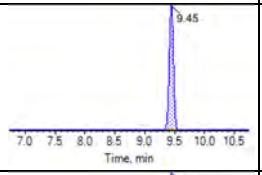
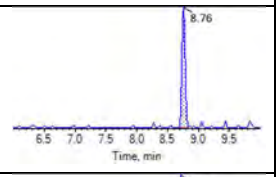
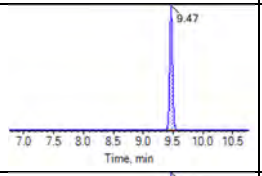
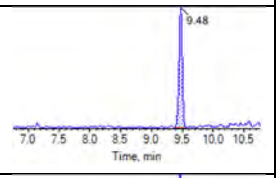
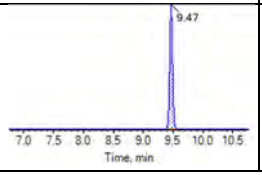
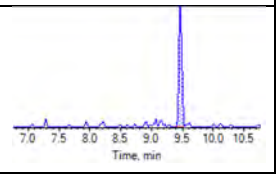
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	19520	13C2_6:2 FTS	37260	95.0	99.3	104.6	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	15470	13C2_6:2 FTS	37260	95.0	87.7	92.3	0.79/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	135900	13C8_PFOS	74460	95.0	93.6	98.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	25560	13C8_PFOS	74460	95.0	87.5	92.1	0.19/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	79250	13C9_PFNA	291600	100.0	80.9	80.9	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	19530	13C9_PFNA	291600	100.0	82.6	82.6	0.25/ 0.24		

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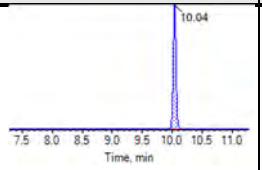
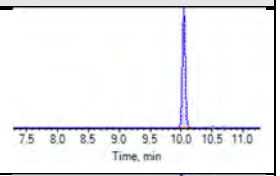
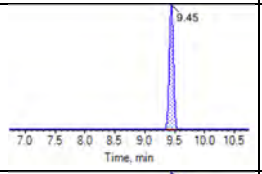
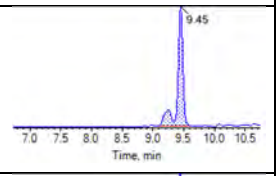
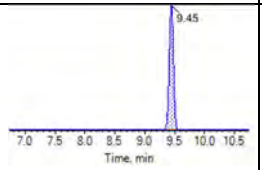
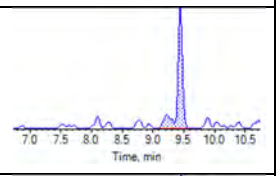
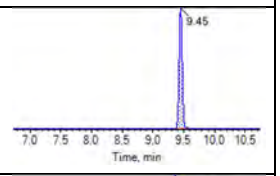
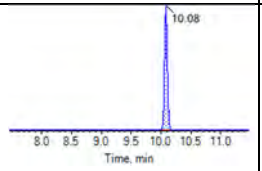
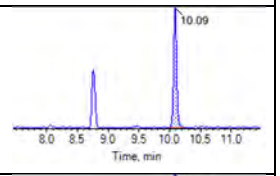
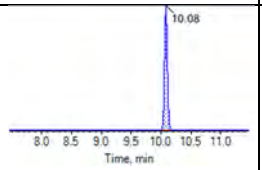
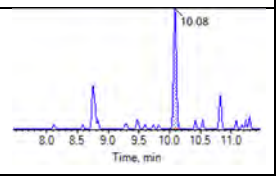
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	189800	13C8_PFOSA	617800	92.6	82.1	88.7	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	118100	13C8_PFOS	74460	100.0	97.6	97.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	17170	13C8_PFOS	74460	100.0	96.1	96.1	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.45 (9.45)	1729000	N/A	N/A	1000.0	1030.7	103.1	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	71260	13C6_PFDA	158400	100.0	87.3	87.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	11790	13C6_PFDA	158400	100.0	115.3	115.3	0.17/ 0.13		

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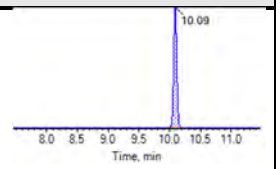
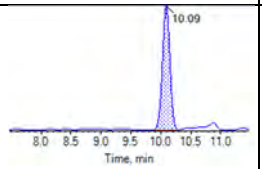
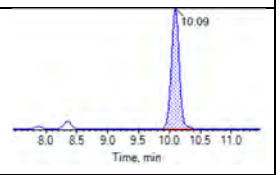
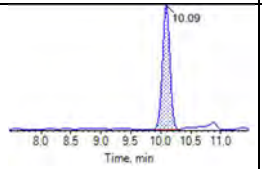
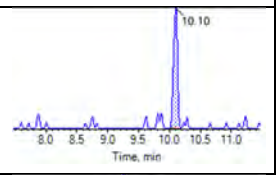
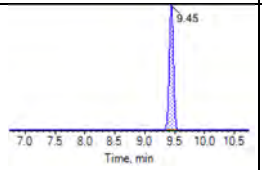
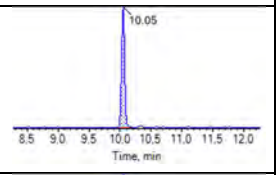
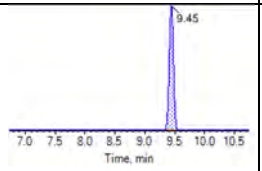
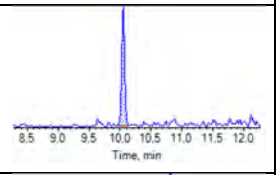
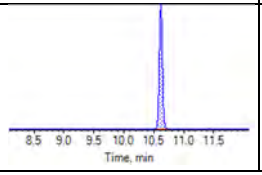
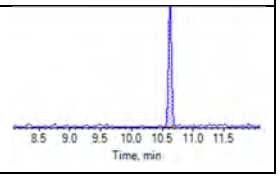
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1270000	N/A	N/A	1000.0	1101.2	110.1	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	13780	13C2_8:2 FTS	24490	96.0	109.2	113.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	12570	13C2_8:2 FTS	24490	96.0	102.8	107.1	0.91/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	106300	13C8_PFOS	74460	96.0	90.4	94.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	20110	13C8_PFOS	74460	96.0	93.9	97.8	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	68590	13C7_PFUdA	223700	100.0	86.1	86.1	1.00/ 1.00		

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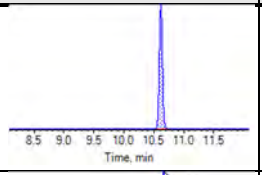
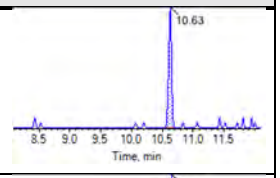
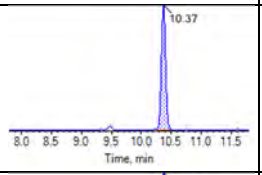
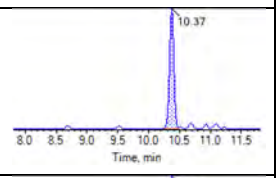
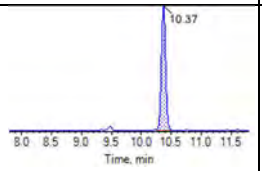
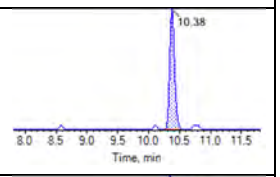
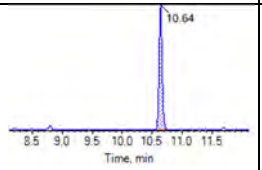
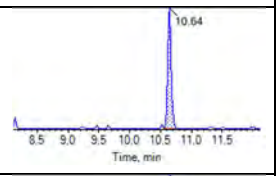
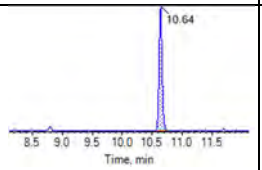
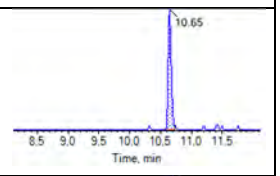
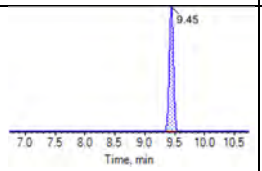
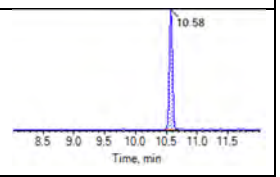
PFUdA_2	563.0 / 169.0	10.63 (10.62)	8116	13C7_PFUdA	223700	100.0	85.5	85.5	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	21180	d3-N-MeFOSAA	56550	100.0	94.4	94.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	10440	d3-N-MeFOSAA	56550	100.0	94.5	94.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	25630	d5-N-EtFOSAA	56960	100.0	110.8	110.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	10400	d5-N-EtFOSAA	56960	100.0	94.6	94.6	0.41/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	144300	13C8_PFOS	74460	96.5	100.7	104.3	1.00/ 1.00		

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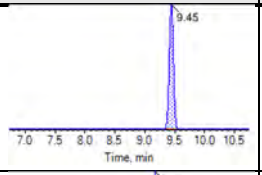
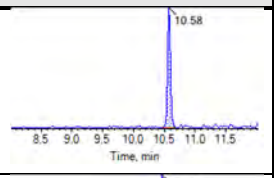
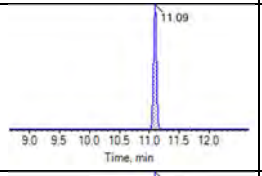
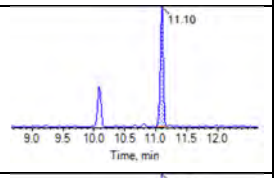
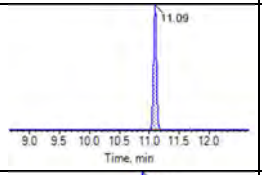
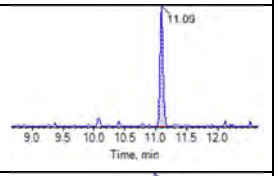
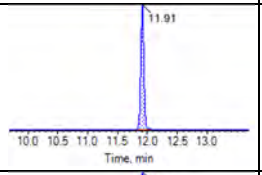
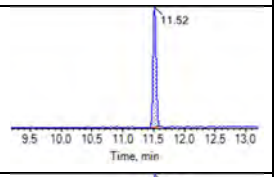
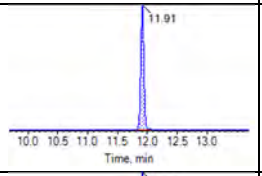
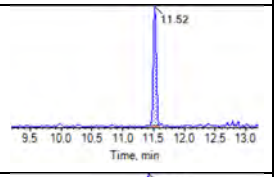
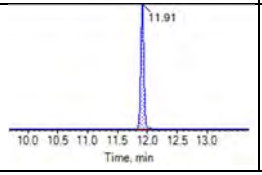
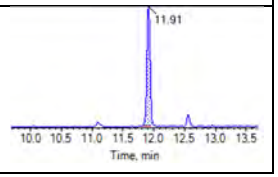
PFDS_2	599.0 / 99.0	10.58 (10.93)	41420	13C8_PFOS	74460	96.5	108.4	112.4	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	68090	13C2_PFDoA	180000	100.0	100.4	100.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.09 (11.09)	11510	13C2_PFDoA	180000	100.0	103.9	103.9	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	71160	13C2_PFTeDA	146600	100.0	98.7	98.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	14800	13C2_PFTeDA	146600	100.0	92.8	92.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.91 (11.91)	51600	13C2_PFTeDA	146600	100.0	97.7	97.7	1.00/ 1.00		

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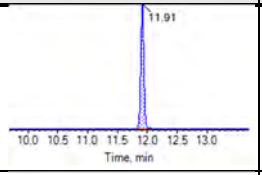
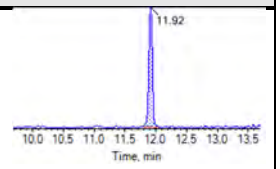
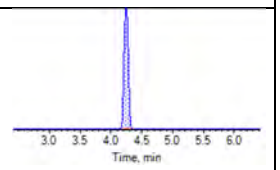
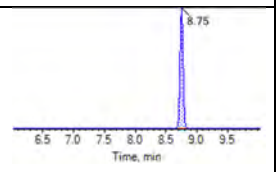
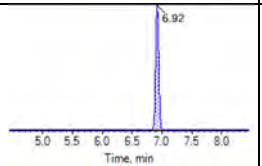
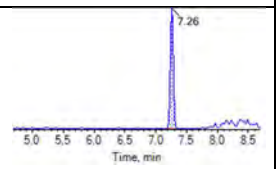
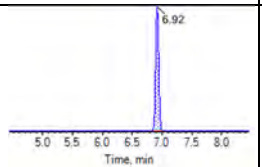
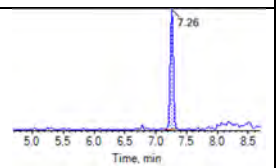
PFC103117003.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	11210	13C2_PFTeDA	146600	100.0	96.4	96.4	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1840000	N/A	N/A	1000.0	1063.4	106.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1318000	N/A	N/A	1000.0	1071.3	107.1	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	77590	13C5_PFHxA	331600	100.0	94.1	94.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	60170	13C5_PFHxA	331600	100.0	97.0	97.0	0.78/ 0.75		

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LCMSMS#6

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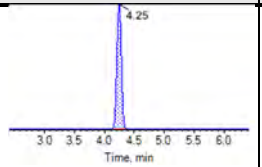
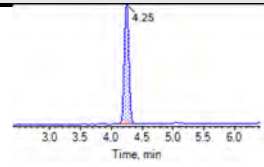
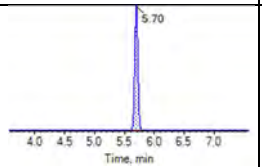
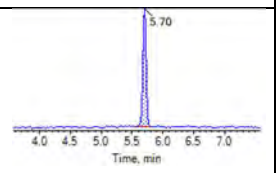
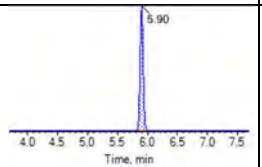
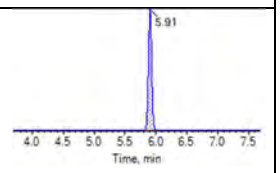
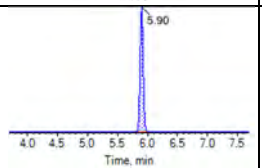
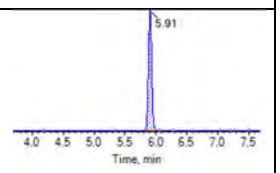
PFC103117004.wiff			
Sample Name	WPF171018-02	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117004.wiff
Acquisition Date	10/31/2017 17:17:20	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117004.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	229100	13C4_PFBA	156000	200.0	208.4	104.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	206400	13C5_PFPeA	238500	200.0	201.1	100.6	1.00/ 1.00		
PFBS	298.9 / 80.0	5.91 (5.89)	273300	13C3_PFBS	150600	177.0	184.1	104.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.91 (5.89)	113100	13C3_PFBS	150600	177.0	169.7	95.9	0.41/ 0.45		

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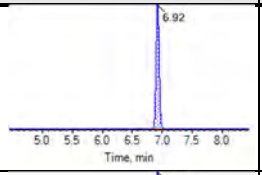
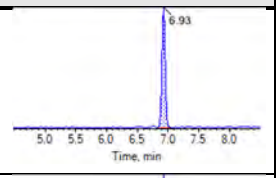
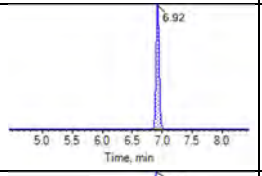
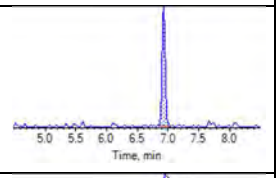
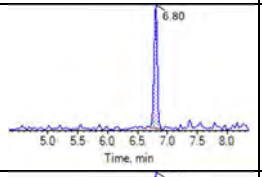
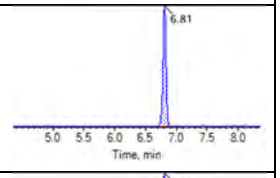
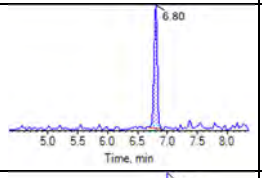
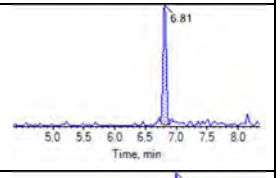
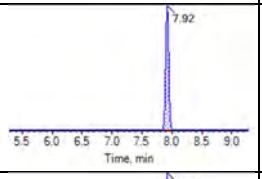
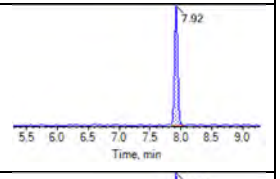
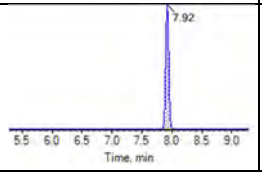
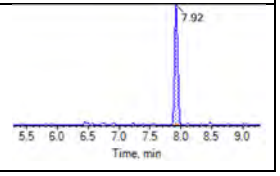
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	248400	13C5_PFHxA	303300	200.0	215.7	107.8	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	19570	13C5_PFHxA	303300	200.0	240.4	120.2	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	34440	13C2_4:2 FTS	31560	187.0	182.3	97.5	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	25070	13C2_4:2 FTS	31560	187.0	184.7	98.8	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	218700	13C4_PFHpA	237600	200.0	220.1	110.1	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	51990	13C4_PFHpA	237600	200.0	200.1	100.1	0.24/ 0.26		

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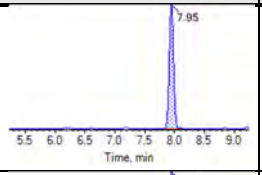
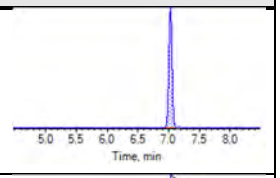
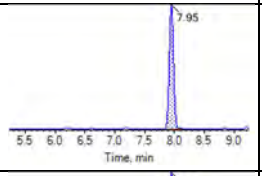
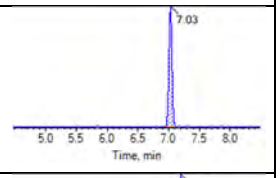
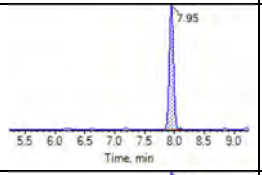
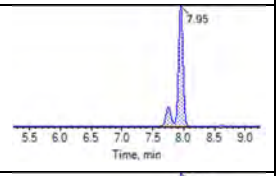
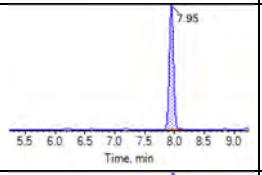
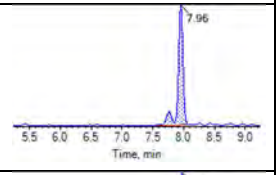
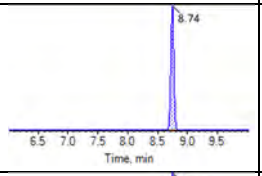
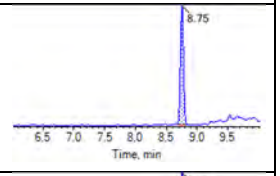
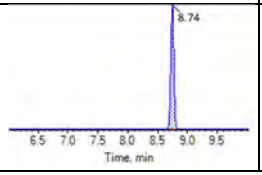
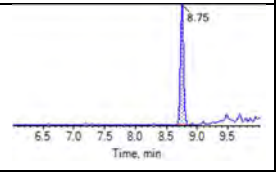
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	292900	13C3_PFHxS	74500	188.0	187.8	99.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	105900	13C3_PFHxS	74500	188.0	194.3	103.4	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	271800	13C3_PFHxS	74500	182.4	189.2	103.7	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	63450	13C3_PFHxS	74500	182.4	174.9	95.9	0.23/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	214900	13C8_PFOA	273800	200.0	186.0	93.0	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	87000	13C8_PFOA	273800	200.0	201.8	100.9	0.40/ 0.37		

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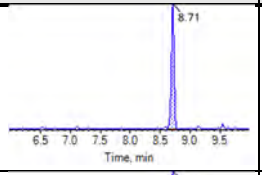
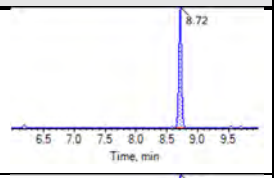
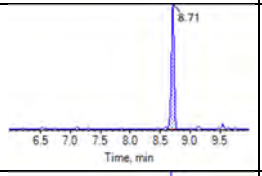
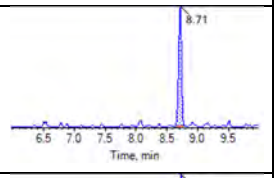
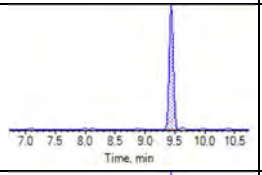
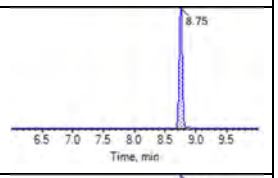
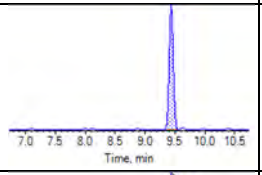
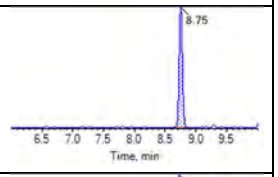
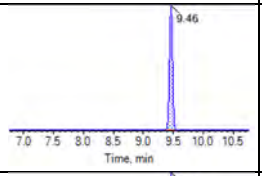
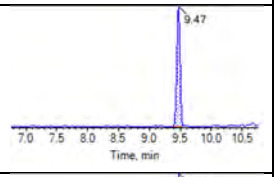
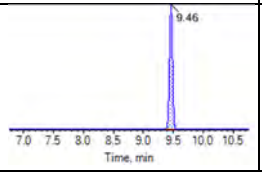
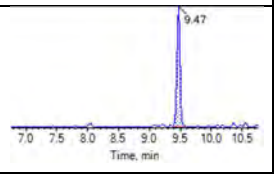
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.72 (8.72)	27950	13C2_6:2 FTS	35810	190.0	148.0	77.9	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	29860	13C2_6:2 FTS	35810	190.0	176.0	92.7	1.07/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	254800	13C8_PFOS	70880	190.0	184.4	97.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	54480	13C8_PFOS	70880	190.0	195.8	103.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	164900	13C9_PFNA	233000	200.0	210.6	105.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	41490	13C9_PFNA	233000	200.0	219.8	109.9	0.25/ 0.24		

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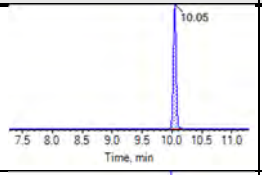
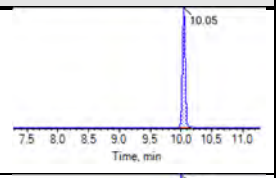
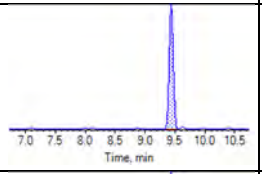
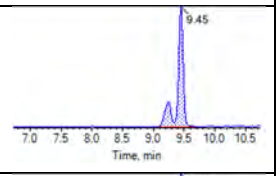
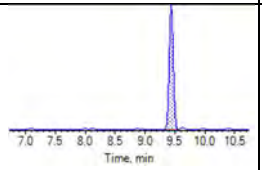
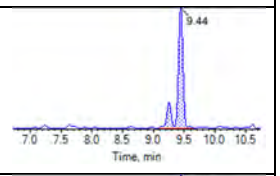
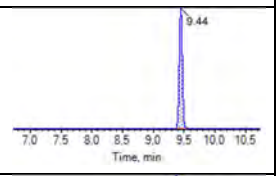
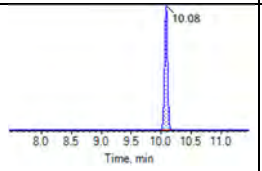
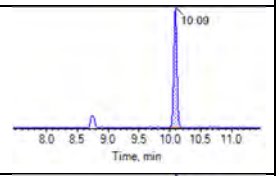
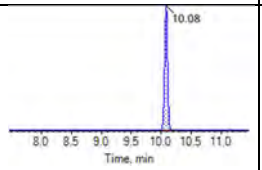
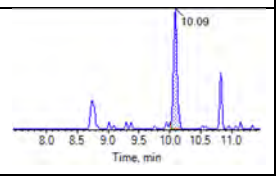
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.05 (10.04)	388900	13C8_PFOSA	522200	185.1	199.1	107.5	1.00/ 1.00		
PFOS	499.0 / 80.0	9.45 (9.45)	236300	13C8_PFOS	70880	200.0	205.2	102.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	38210	13C8_PFOS	70880	200.0	224.7	112.3	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1643000	N/A	N/A	1000.0	979.7	98.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.09 (10.08)	165900	13C6_PFDA	153100	200.0	210.3	105.1	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.09 (10.08)	18010	13C6_PFDA	153100	200.0	182.3	91.1	0.11/ 0.13		

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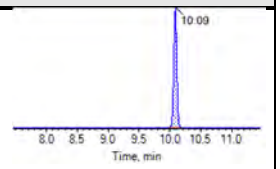
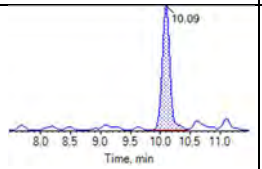
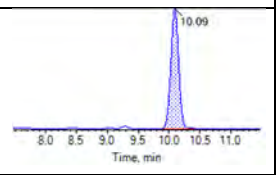
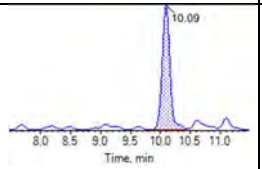
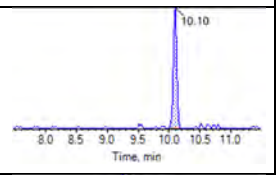
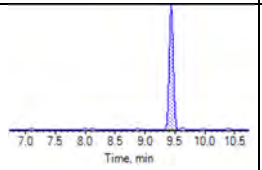
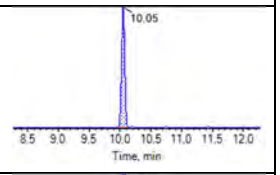
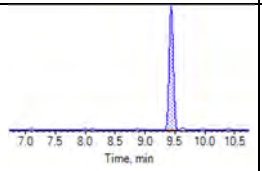
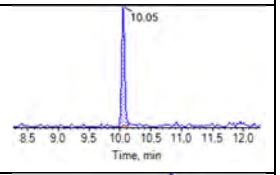
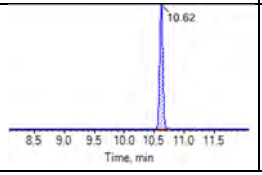
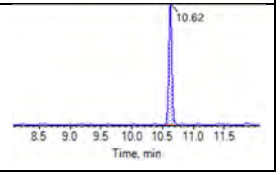
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.09 (10.02)	1161000	N/A	N/A	1000.0	1006.7	100.7	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	25710	13C2_8:2 FTS	22510	192.0	221.7	115.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.10 (10.09)	30560	13C2_8:2 FTS	22510	192.0	271.8	141.6	1.19/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	214700	13C8_PFOS	70880	192.0	191.9	99.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.05 (10.49)	34980	13C8_PFOS	70880	192.0	171.7	89.4	0.16/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	166300	13C7_PFUdA	192800	200.0	242.3	121.1	1.00/ 1.00		

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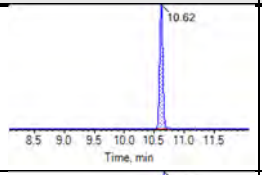
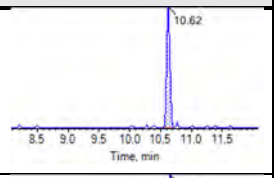
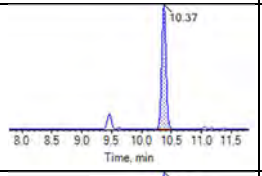
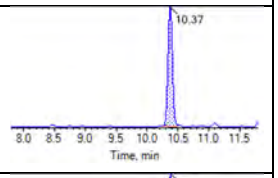
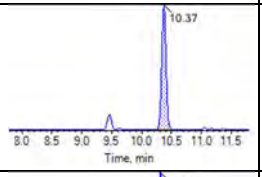
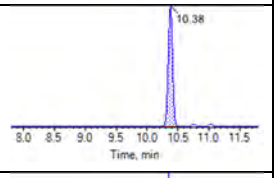
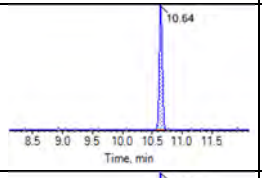
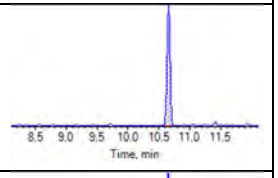
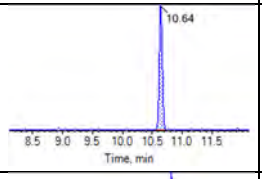
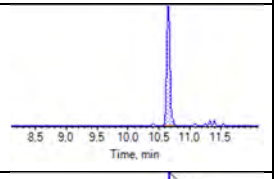
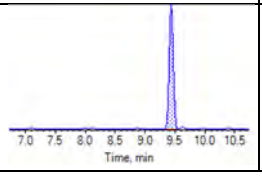
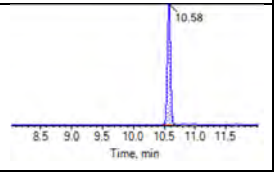
LCMSMS#6

Printed: 11/06/2017 10:34:00

PFC103117004.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.62 (10.62)	17550	13C7_PFUdA	192800	200.0	214.5	107.2	0.11/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	32410	d3-N-MeFOSAA	44720	200.0	182.8	91.4	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	15800	d3-N-MeFOSAA	44720	200.0	180.9	90.4	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.66 (10.64)	38960	d5-N-EtFOSAA	50990	200.0	188.2	94.1	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	18410	d5-N-EtFOSAA	50990	200.0	187.2	93.6	0.47/ 0.48		
PFDS	599.0 / 80.0	10.58 (10.93)	259000	13C8_PFOS	70880	193.0	189.8	98.3	1.00/ 1.00		

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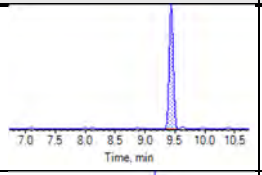
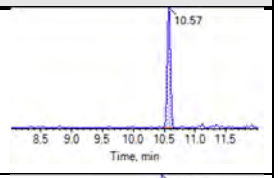
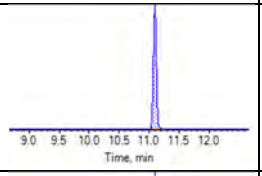
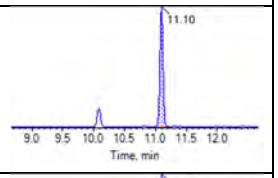
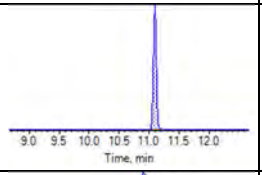
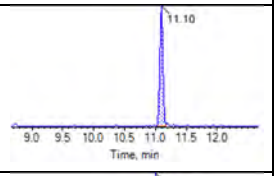
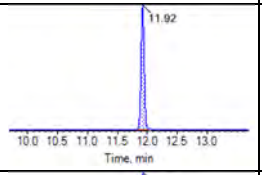
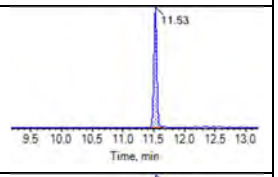
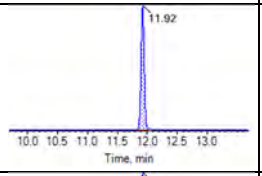
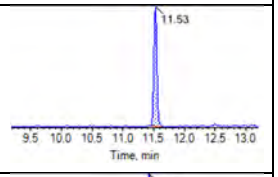
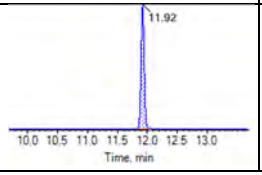
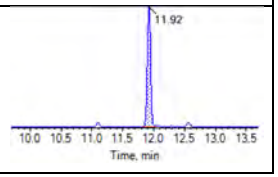
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.57 (10.93)	66390	13C8_PFOS	70880	193.0	182.6	94.6	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	133700	13C2_PFDoA	180800	200.0	196.3	98.2	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	21990	13C2_PFDoA	180800	200.0	197.6	98.8	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	133800	13C2_PFTeDA	131300	200.0	207.4	103.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	29530	13C2_PFTeDA	131300	200.0	206.9	103.5	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	93260	13C2_PFTeDA	131300	200.0	197.2	98.6	1.00/ 1.00		

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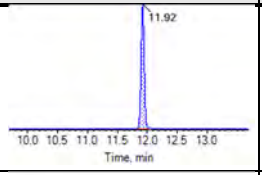
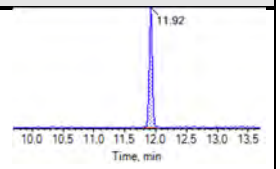
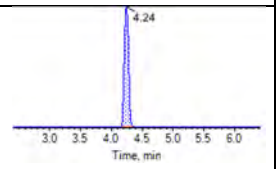
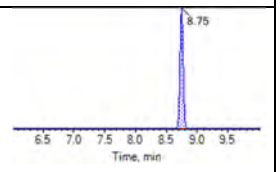
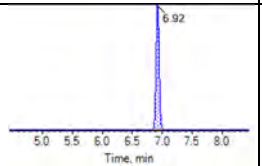
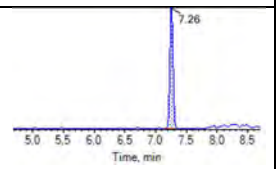
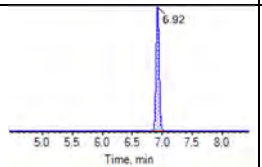
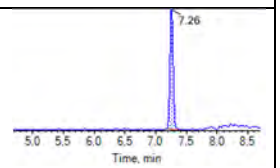
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21590	13C2_PFTeDA	131300	200.0	207.3	103.7	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1799000	N/A	N/A	1000.0	1040.0	104.0	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1164000	N/A	N/A	1000.0	946.1	94.6	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	150400	13C5_PFHxA	303300	200.0	199.3	99.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	109100	13C5_PFHxA	303300	200.0	192.1	96.1	0.73/ 0.75		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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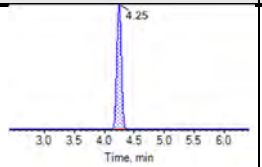
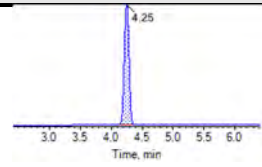
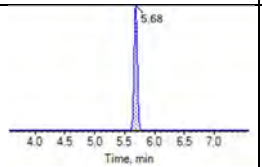
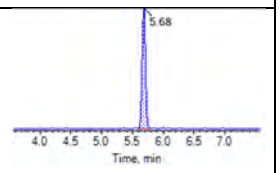
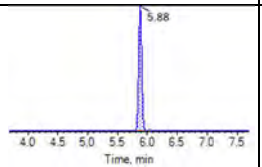
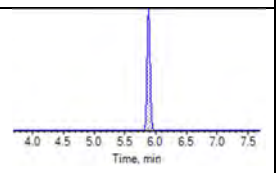
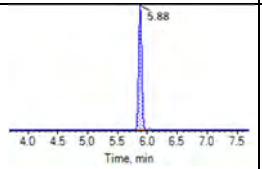
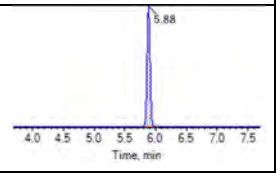
PFC103117005.wiff			
Sample Name	WPF171018-03	**Injection Vial**	4
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117005.wiff
Acquisition Date	10/31/2017 17:38:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117005.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	517100	13C4_PFBA	143800	500.0	510.3	102.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.68 (5.69)	489000	13C5_PFPeA	225300	500.0	504.5	100.9	1.00/ 1.00		
PFBS	298.9 / 80.0	5.88 (5.89)	682500	13C3_PFBS	157400	442.5	440.0	99.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.88 (5.89)	318900	13C3_PFBS	157400	442.5	457.9	103.5	0.47/ 0.45		

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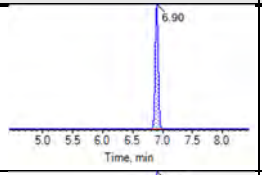
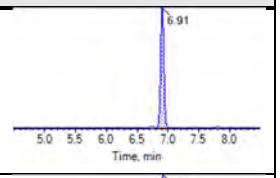
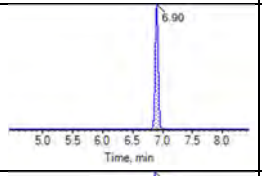
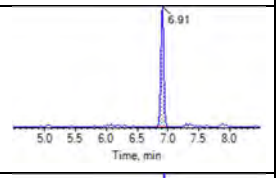
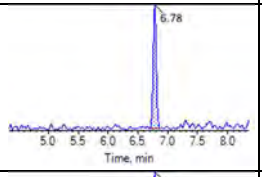
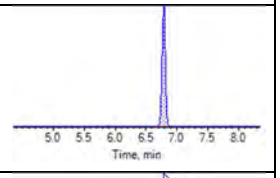
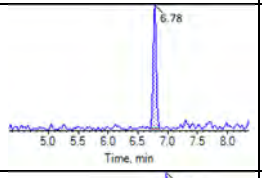
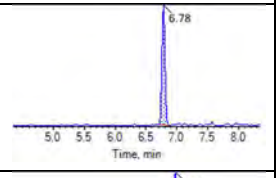
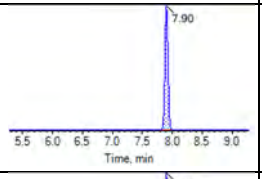
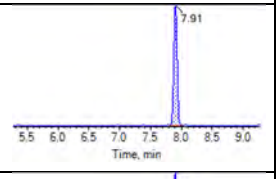
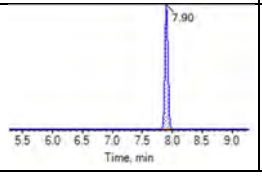
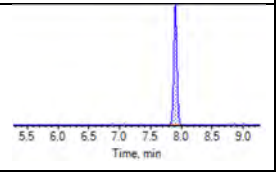
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.91 (6.92)	559700	13C5_PFHxA	280900	500.0	524.8	105.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.91 (6.92)	37040	13C5_PFHxA	280900	500.0	491.3	98.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	84330	13C2_4:2 FTS	31670	467.5	444.8	95.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.78 (6.80)	59010	13C2_4:2 FTS	31670	467.5	433.2	92.7	0.70/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	488100	13C4_PFHpA	228000	500.0	511.8	102.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.90 (7.93)	137800	13C4_PFHpA	228000	500.0	552.5	110.5	0.28/ 0.26		

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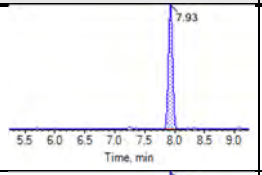
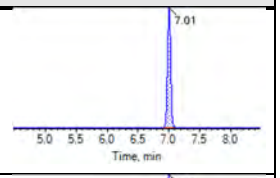
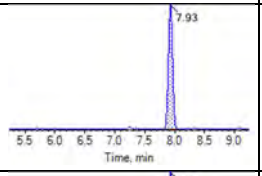
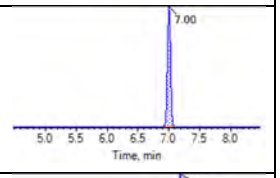
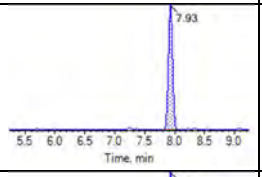
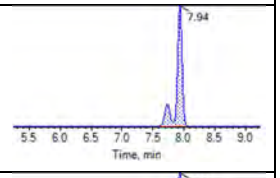
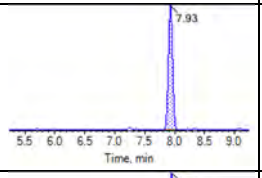
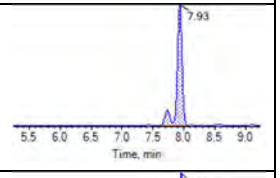
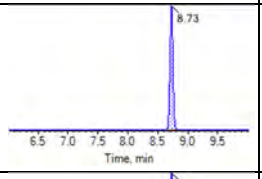
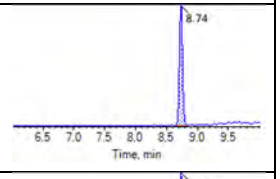
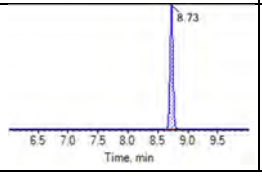
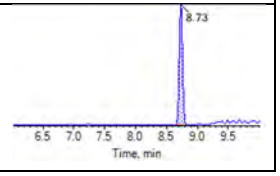
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.01 (7.02)	762400	13C3_PFHxS	65190	470.0	558.6	118.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.00 (7.02)	249200	13C3_PFHxS	65190	470.0	522.5	111.2	0.33/ 0.35		
PFHxS	399.0 / 80.0	7.94 (7.96)	665500	13C3_PFHxS	65190	456.0	529.3	116.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.93 (7.96)	192500	13C3_PFHxS	65190	456.0	606.1	132.9	0.29/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	522800	13C8_PFOA	235000	500.0	527.2	105.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.73 (8.75)	192700	13C8_PFOA	235000	500.0	520.9	104.2	0.37/ 0.37		

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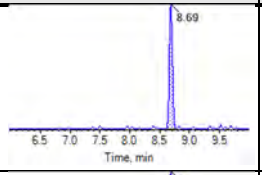
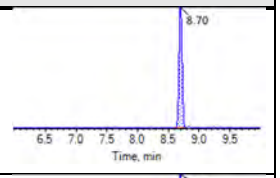
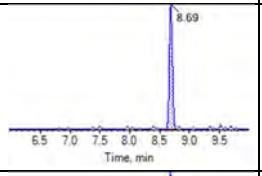
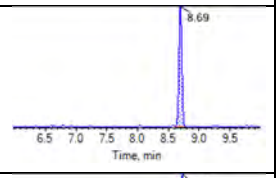
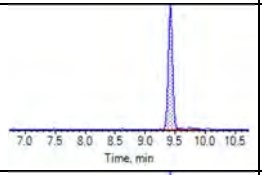
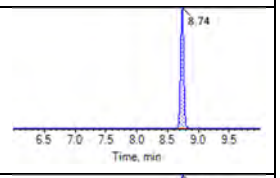
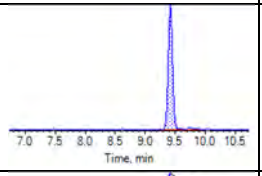
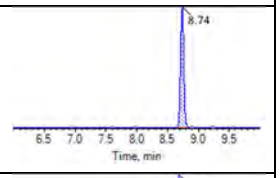
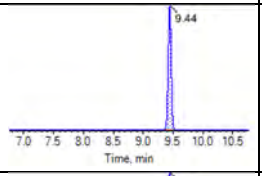
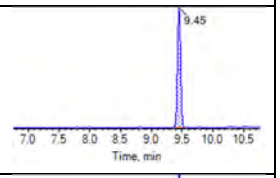
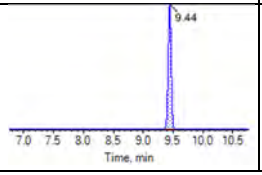
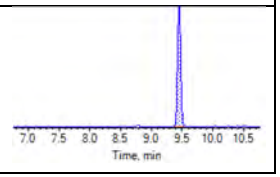
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.70 (8.72)	80140	13C2_6:2 FTS	36320	475.0	418.4	88.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.69 (8.72)	75960	13C2_6:2 FTS	36320	475.0	441.6	93.0	0.95/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	615300	13C8_PFOS	69320	475.0	455.3	95.9	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	120100	13C8_PFOS	69320	475.0	441.5	92.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	378800	13C9_PFNA	234300	500.0	481.0	96.2	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	102000	13C9_PFNA	234300	500.0	537.3	107.5	0.27/ 0.24		

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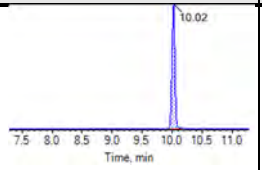
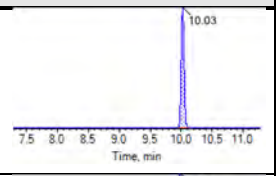
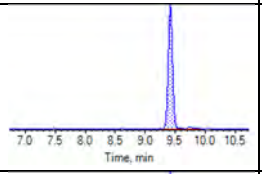
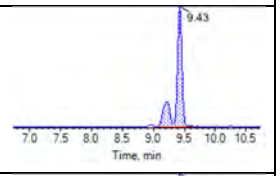
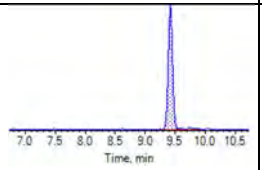
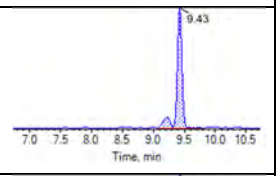
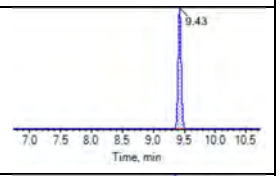
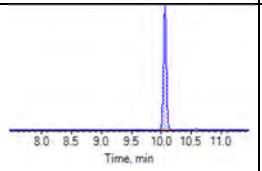
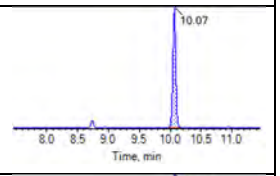
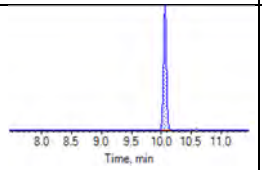
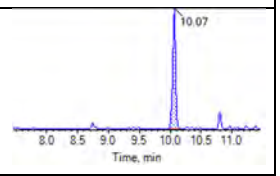
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	984500	13C8_PFOSA	504200	462.8	521.9	112.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	538600	13C8_PFOS	69320	500.0	478.2	95.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	84470	13C8_PFOS	69320	500.0	507.8	101.6	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1636000	N/A	N/A	1000.0	975.7	97.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	364700	13C6_PFDA	141800	500.0	499.0	99.8	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	47340	13C6_PFDA	141800	500.0	517.1	103.4	0.13/ 0.13		

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LCMSMS#6

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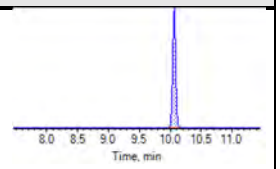
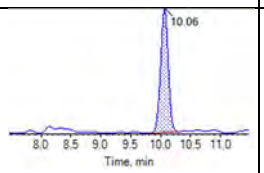
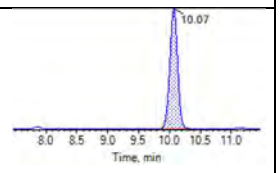
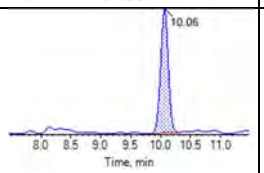
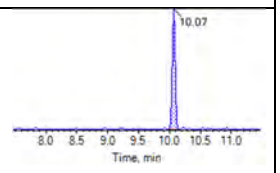
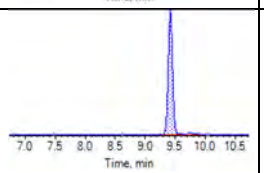
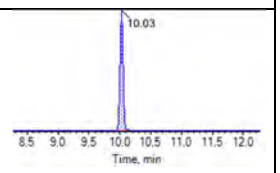
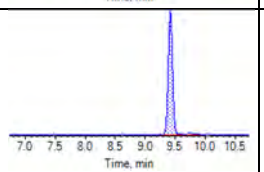
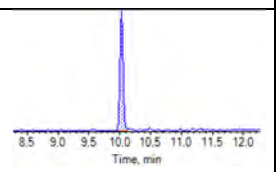
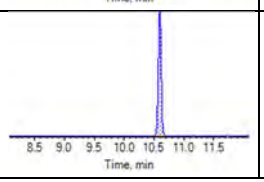
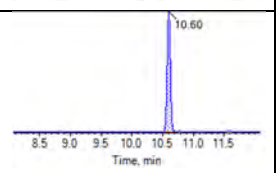
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.06 (10.02)	1171000	N/A	N/A	1000.0	1015.5	101.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	64800	13C2_8:2 FTS	27340	480.0	459.8	95.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	57650	13C2_8:2 FTS	27340	480.0	422.1	87.9	0.89/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	488200	13C8_PFOS	69320	480.0	446.2	93.0	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	93410	13C8_PFOS	69320	480.0	468.7	97.6	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	358700	13C7_PFUdA	201900	500.0	498.9	99.8	1.00/ 1.00		

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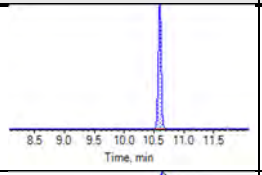
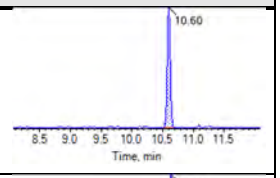
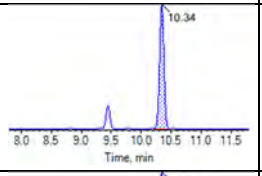
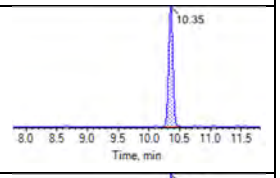
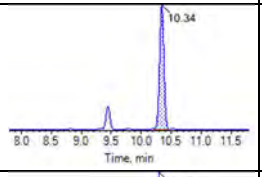
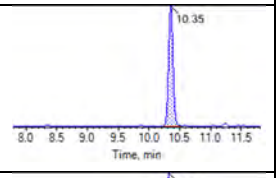
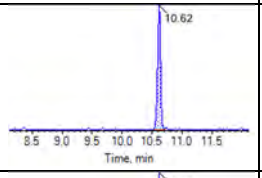
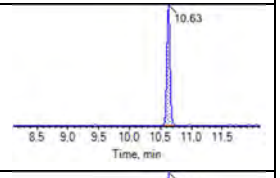
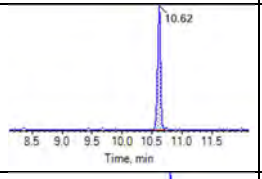
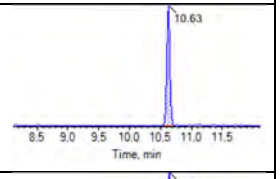
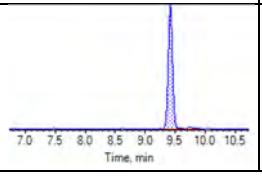
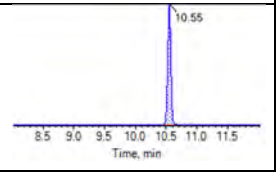
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	42550	13C7_PFUdA	201900	500.0	496.7	99.3	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.35 (10.37)	85690	d3-N-MeFOSAA	42130	500.0	512.9	102.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.35 (10.37)	41780	d3-N-MeFOSAA	42130	500.0	507.6	101.5	0.49/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	96410	d5-N-EtFOSAA	44930	500.0	528.6	105.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	48270	d5-N-EtFOSAA	44930	500.0	556.9	111.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	598200	13C8_PFOS	69320	482.5	448.2	92.9	1.00/ 1.00		

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LCMSMS#6

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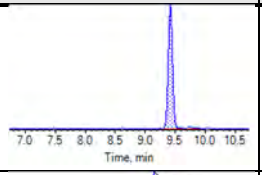
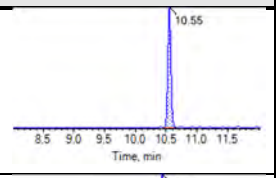
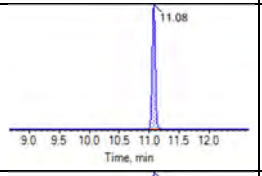
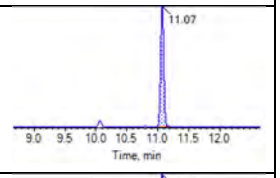
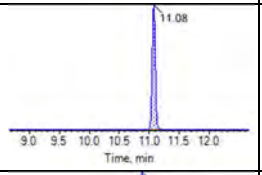
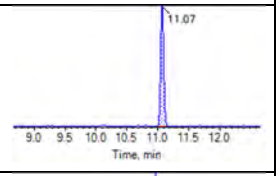
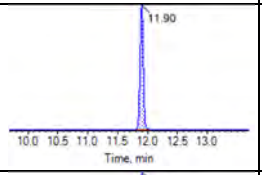
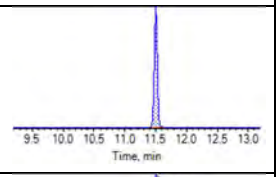
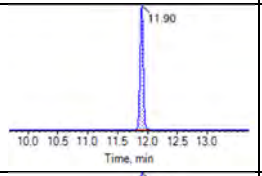
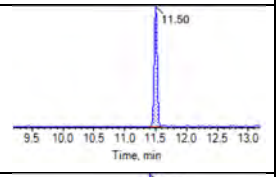
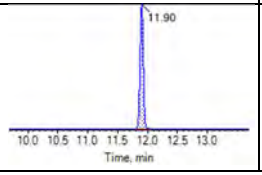
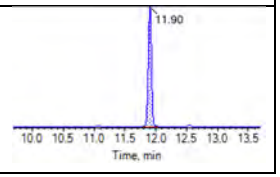
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	170800	13C8_PFOS	69320	482.5	480.4	99.6	0.29/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	342100	13C2_PFDoA	181100	500.0	501.6	100.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	58640	13C2_PFDoA	181100	500.0	526.0	105.2	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	314900	13C2_PFTeDA	125000	500.0	512.2	102.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	71040	13C2_PFTeDA	125000	500.0	522.5	104.5	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	221100	13C2_PFTeDA	125000	500.0	490.9	98.2	1.00/ 1.00		

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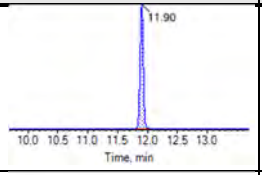
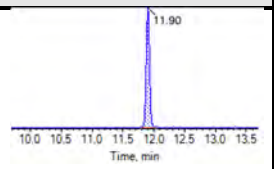
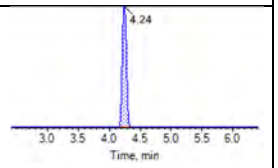
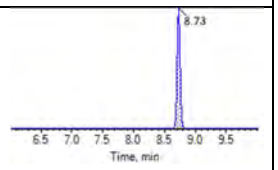
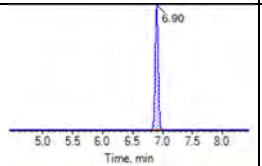
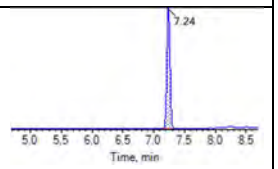
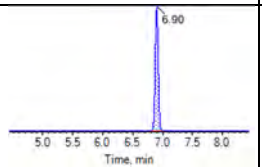
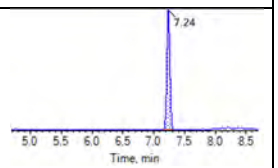
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	49350	13C2_PFTeDA	125000	500.0	497.6	99.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1737000	N/A	N/A	1000.0	1003.8	100.4	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.73 (8.75)	1169000	N/A	N/A	1000.0	949.8	95.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.24 (7.26)	401200	13C5_PFHxA	280900	500.0	574.2	114.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.24 (7.26)	280000	13C5_PFHxA	280900	500.0	532.6	106.5	0.70/ 0.75		

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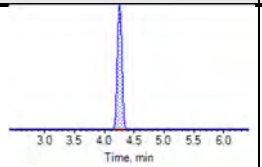
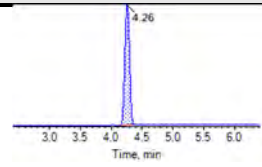
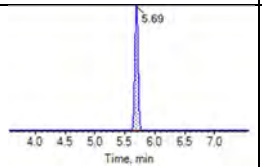
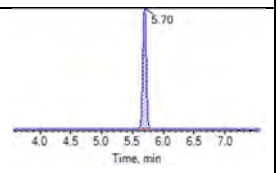
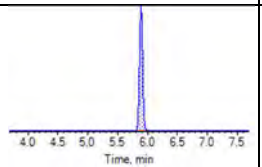
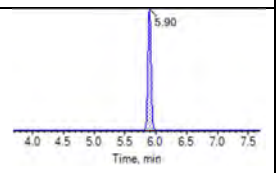
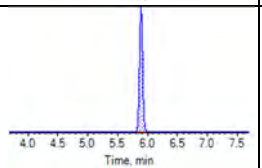
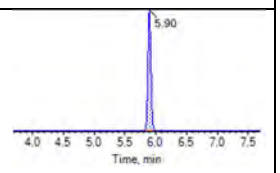
PFC103117006.wiff			
Sample Name	WPF171018-04	**Injection Vial**	5
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117006.wiff
Acquisition Date	10/31/2017 18:00:08	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117006.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	767000	13C4_PFBA	149800	750.0	726.8	96.9	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	757800	13C5_PFPeA	231500	750.0	760.8	101.4	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	989600	13C3_PFBS	156800	663.8	640.3	96.5	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	434700	13C3_PFBS	156800	663.8	626.5	94.4	0.44/ 0.45		

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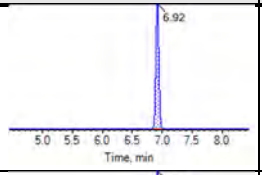
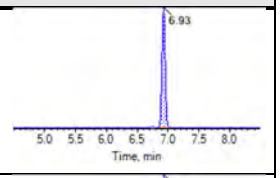
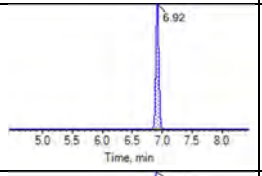
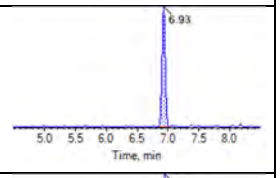
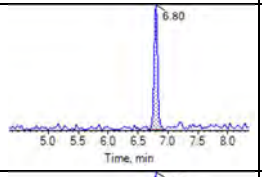
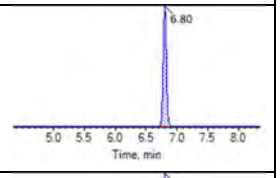
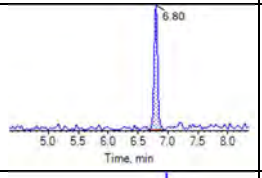
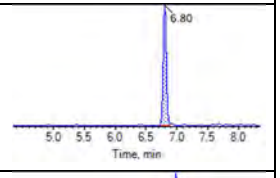
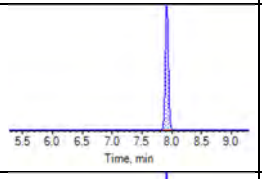
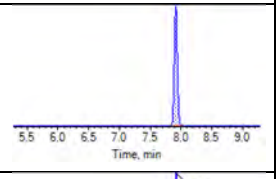
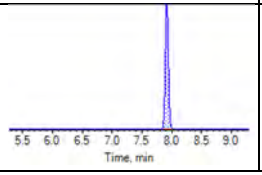
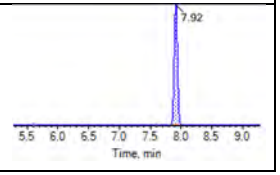
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	837400	13C5_PFHxA	309400	750.0	712.9	95.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	58640	13C5_PFHxA	309400	750.0	706.1	94.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	129900	13C2_4:2 FTS	33690	701.3	644.4	91.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	103600	13C2_4:2 FTS	33690	701.3	715.0	102.0	0.80/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	762600	13C4_PFHpA	250700	750.0	727.2	97.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	206900	13C4_PFHpA	250700	750.0	754.5	100.6	0.27/ 0.26		

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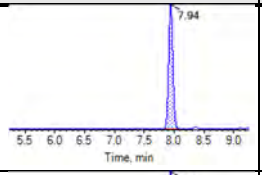
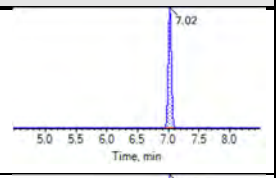
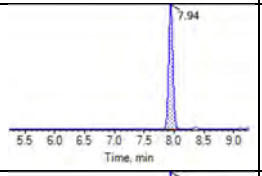
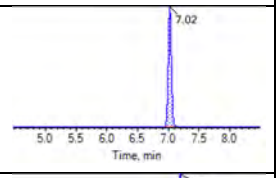
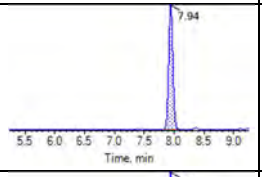
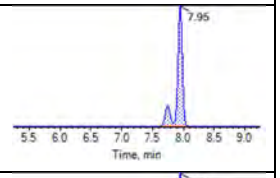
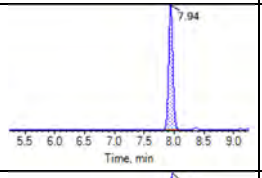
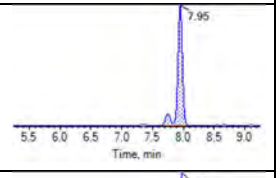
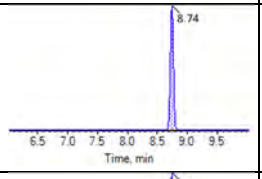
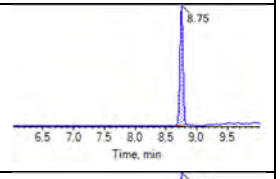
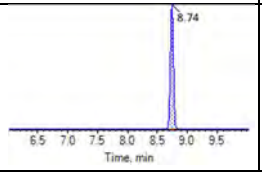
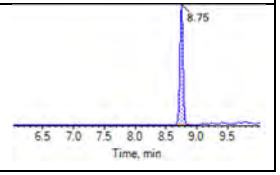
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1148000	13C3_PFHxS	74210	705.0	739.0	104.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	403600	13C3_PFHxS	74210	705.0	743.6	105.5	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1049000	13C3_PFHxS	74210	684.0	732.7	107.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	251500	13C3_PFHxS	74210	684.0	695.8	101.7	0.24/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	736000	13C8_PFOA	236300	750.0	738.3	98.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	272300	13C8_PFOA	236300	750.0	732.0	97.6	0.37/ 0.37		

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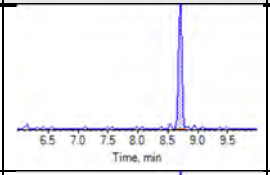
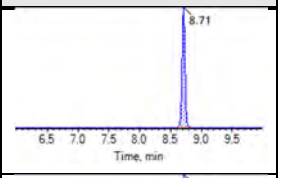
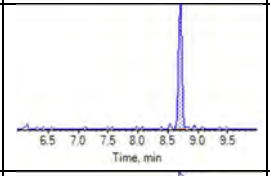
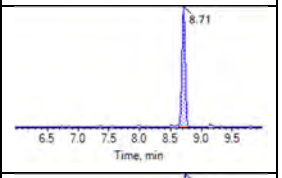
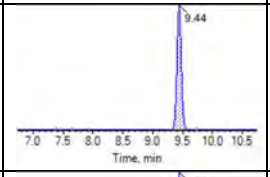
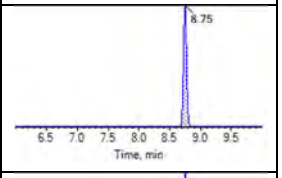
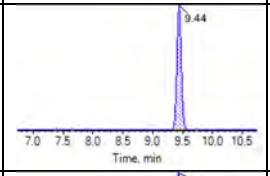
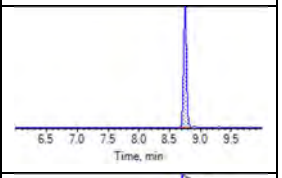
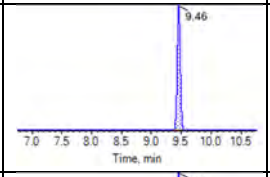
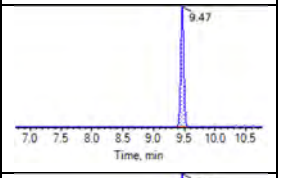
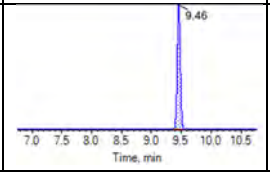
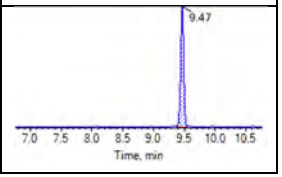
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	119000	13C2_6:2 FTS	29030	712.5	777.0	109.1	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	100000	13C2_6:2 FTS	29030	712.5	727.4	102.1	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	906400	13C8_PFOS	69030	712.5	673.5	94.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	189600	13C8_PFOS	69030	712.5	699.6	98.2	0.21/ 0.20		
PFNA	463.0 / 419.0	9.47 (9.47)	594200	13C9_PFNA	253400	750.0	697.8	93.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.47 (9.47)	147600	13C9_PFNA	253400	750.0	718.6	95.8	0.25/ 0.24		

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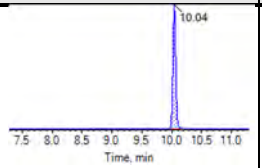
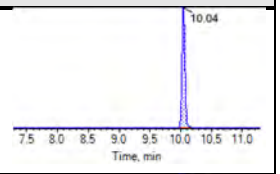
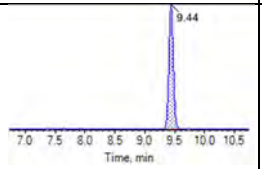
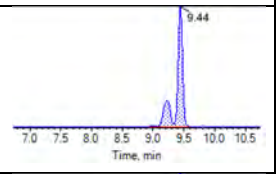
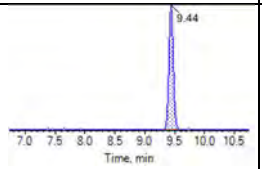
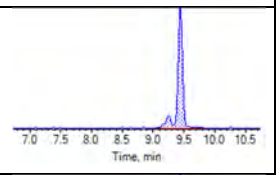
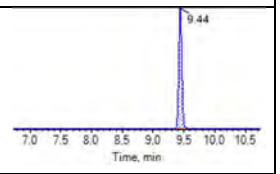
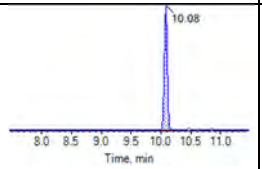
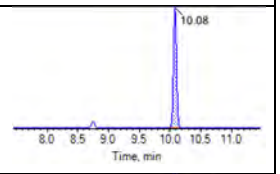
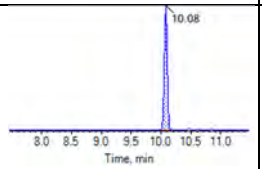
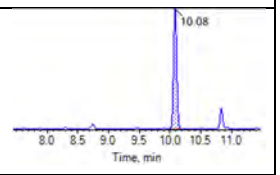
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.04 (10.04)	1416000	13C8_PFOSA	562200	694.1	673.1	97.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	798200	13C8_PFOS	69030	750.0	711.7	94.9	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	130300	13C8_PFOS	69030	750.0	786.7	104.9	0.16/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1731000	N/A	N/A	1000.0	1032.2	103.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	577100	13C6_PFDA	127300	750.0	879.7	117.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	66430	13C6_PFDA	127300	750.0	808.5	107.8	0.12/ 0.13		

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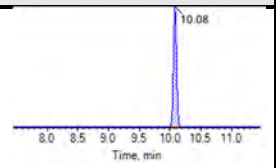
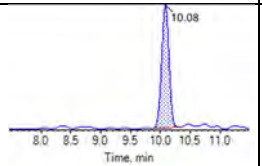
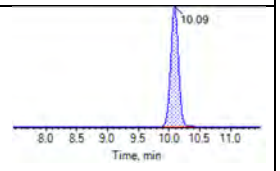
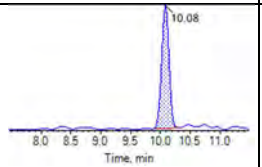
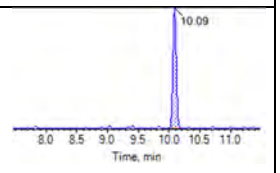
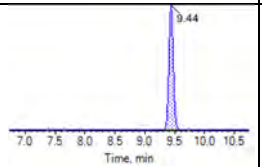
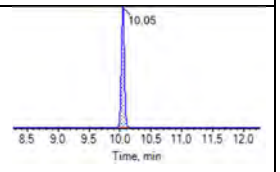
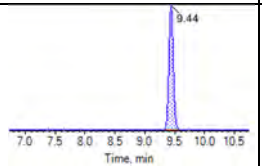
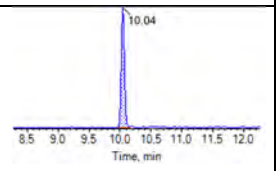
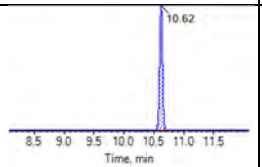
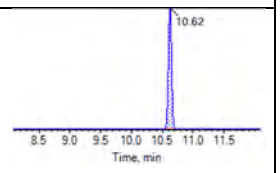
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1174000	N/A	N/A	1000.0	1017.6	101.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.09 (10.09)	82480	13C2_8:2 FTS	23650	720.0	676.8	94.0	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.09 (10.09)	76340	13C2_8:2 FTS	23650	720.0	646.3	89.8	0.93/ 0.96		
PFNS	549.0 / 80.0	10.05 (10.49)	822000	13C8_PFOS	69030	720.0	754.4	104.8	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	141600	13C8_PFOS	69030	720.0	713.3	99.1	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.62 (10.62)	520500	13C7_PFUdA	203300	750.0	719.0	95.9	1.00/ 1.00		

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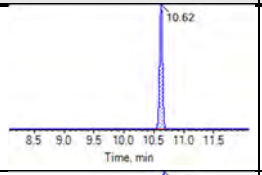
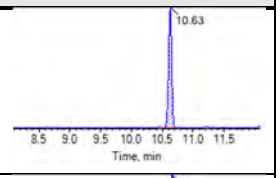
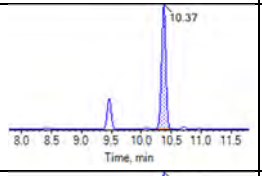
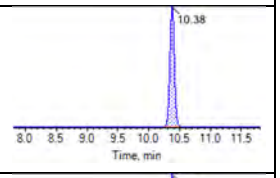
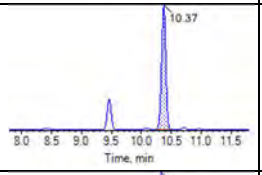
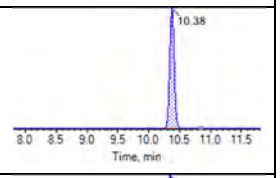
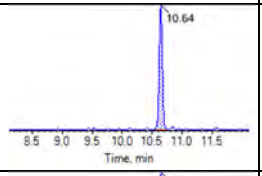
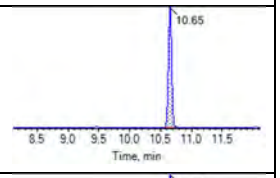
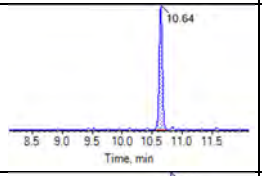
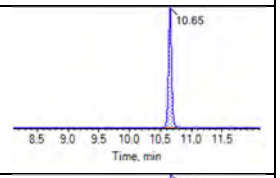
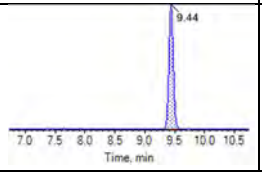
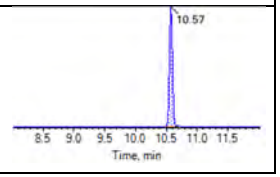
PFUdA_2	563.0 / 169.0	10.63 (10.62)	65130	13C7_PFUdA	203300	750.0	755.0	100.7	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.38 (10.37)	139900	d3-N-MeFOSAA	51150	750.0	689.6	91.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.38 (10.37)	74720	d3-N-MeFOSAA	51150	750.0	747.8	99.7	0.53/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.65 (10.64)	150600	d5-N-EtFOSAA	47640	750.0	778.8	103.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.65 (10.64)	76880	d5-N-EtFOSAA	47640	750.0	836.6	111.5	0.51/ 0.48		
PFDS	599.0 / 80.0	10.57 (10.93)	964500	13C8_PFOS	69030	723.8	725.7	100.3	1.00/ 1.00		

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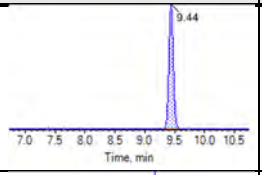
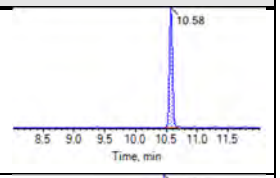
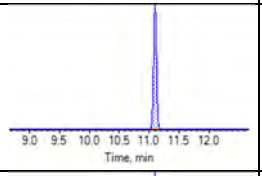
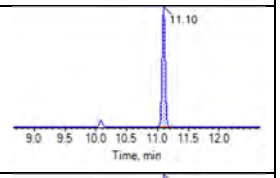
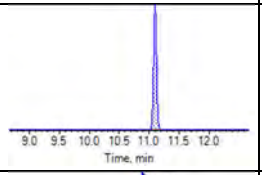
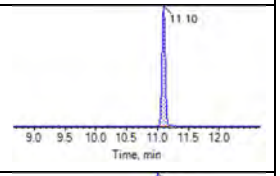
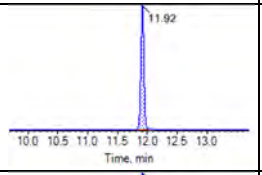
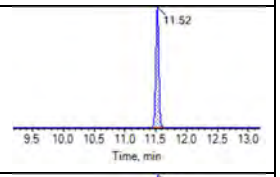
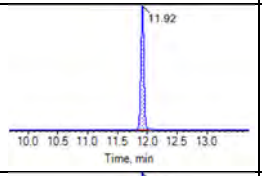
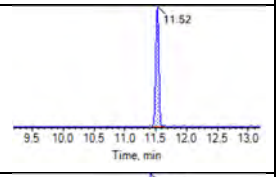
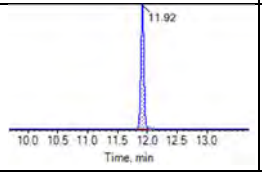
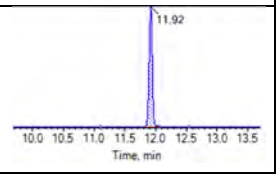
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.58 (10.93)	233800	13C8_PFOS	69030	723.8	660.5	91.3	0.24/ 0.27		
PFDoA	613.0 / 569.0	11.10 (11.09)	520100	13C2_PFDoA	171500	750.0	805.4	107.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.10 (11.09)	79330	13C2_PFDoA	171500	750.0	751.5	100.2	0.15/ 0.16		
PFTrDA	663.0 / 619.0	11.52 (11.82)	466000	13C2_PFTeDA	124300	750.0	762.2	101.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.52 (11.82)	102400	13C2_PFTeDA	124300	750.0	757.4	101.0	0.22/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	357300	13C2_PFTeDA	124300	750.0	797.8	106.4	1.00/ 1.00		

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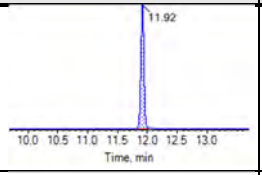
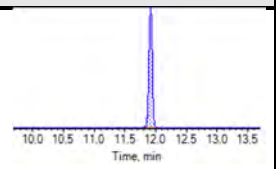
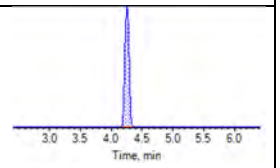
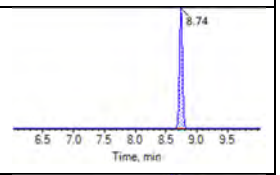
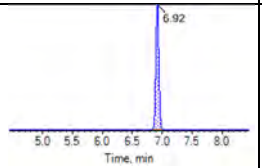
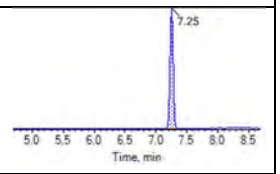
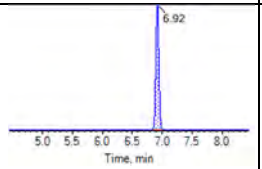
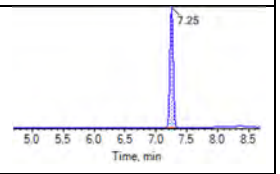
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	75610	13C2_PFTeDA	124300	750.0	766.6	102.2	0.21/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1749000	N/A	N/A	1000.0	1010.7	101.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1228000	N/A	N/A	1000.0	997.8	99.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	559800	13C5_PFHxA	309400	750.0	727.4	97.0	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	408300	13C5_PFHxA	309400	750.0	705.1	94.0	0.73/ 0.75		

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LCMSMS#6

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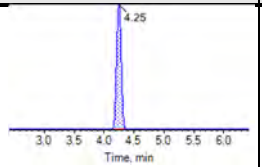
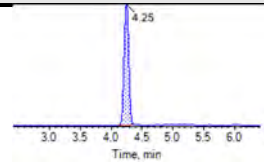
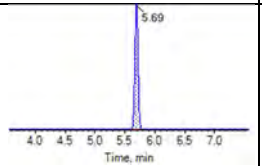
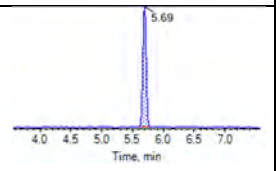
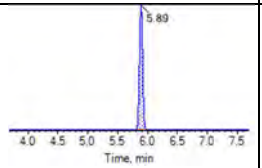
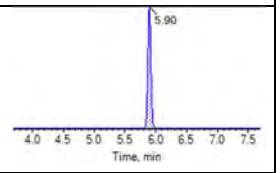
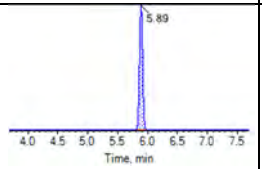
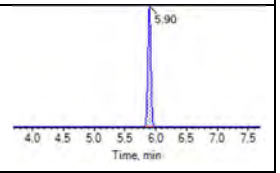
PFC103117007.wiff			
Sample Name	WPF171018-05	**Injection Vial**	6
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117007.wiff
Acquisition Date	10/31/2017 18:21:33	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117007.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1028000	13C4_PFBA	142000	1000.0	1026.7	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	999500	13C5_PFPeA	235000	1000.0	988.5	98.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1387000	13C3_PFBS	145100	885.0	969.9	109.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	649800	13C3_PFBS	145100	885.0	1012.3	114.4	0.47/ 0.45		

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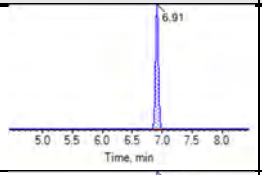
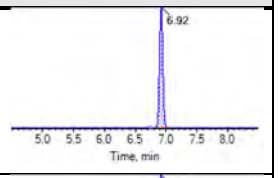
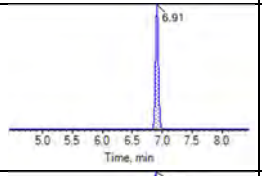
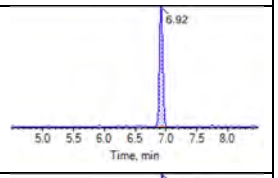
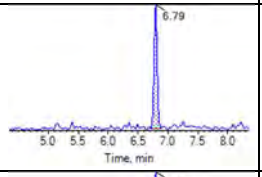
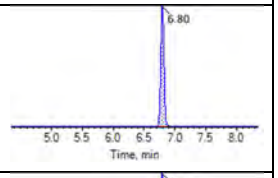
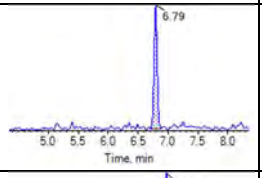
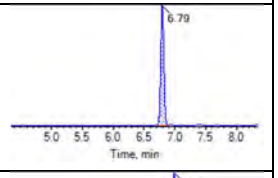
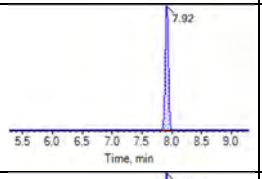
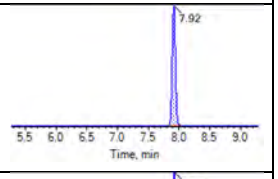
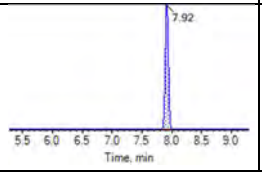
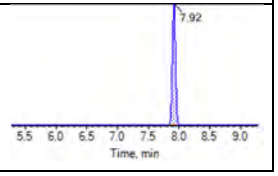
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1069000	13C5_PFHxA	287400	1000.0	980.0	98.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	78140	13C5_PFHxA	287400	1000.0	1013.1	101.3	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	174600	13C2_4:2 FTS	26660	935.0	1093.9	117.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	138600	13C2_4:2 FTS	26660	935.0	1208.6	129.3	0.79/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1052000	13C4_PFHpA	260000	1000.0	967.2	96.7	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	263700	13C4_PFHpA	260000	1000.0	927.4	92.7	0.25/ 0.26		

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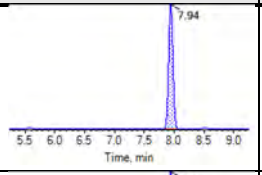
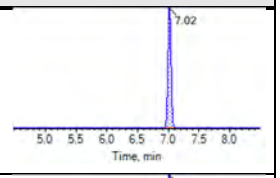
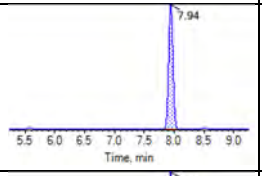
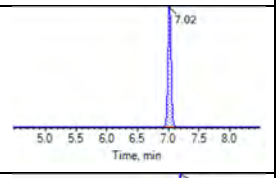
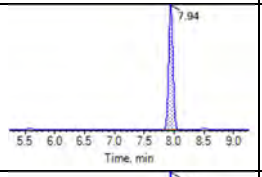
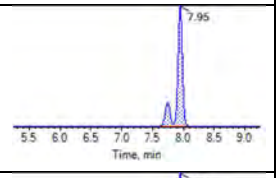
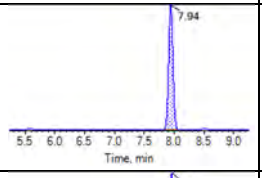
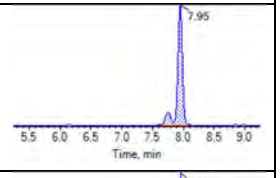
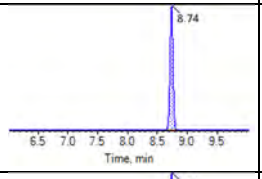
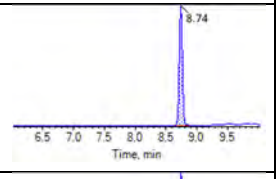
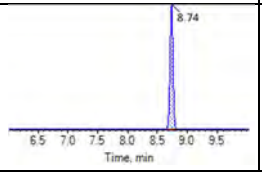
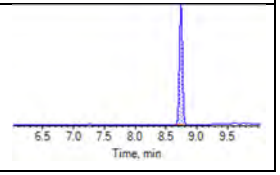
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1464000	13C3_PFHxS	82910	940.0	843.5	89.7	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	530700	13C3_PFHxS	82910	940.0	875.1	93.1	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1331000	13C3_PFHxS	82910	912.0	832.5	91.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	333300	13C3_PFHxS	82910	912.0	825.3	90.5	0.25/ 0.25		
PFOA	413.0 / 369.0	8.74 (8.75)	1037000	13C8_PFOA	237800	1000.0	1033.9	103.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.74 (8.75)	352100	13C8_PFOA	237800	1000.0	940.6	94.1	0.34/ 0.37		

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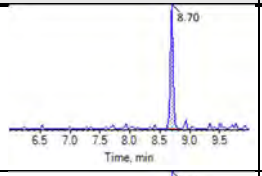
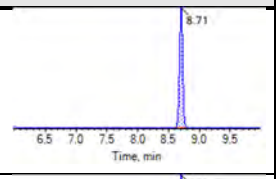
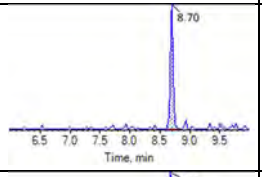
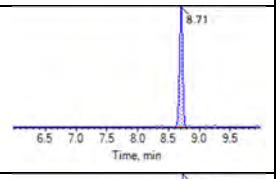
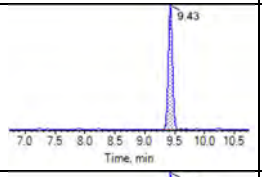
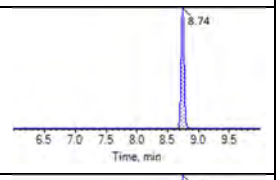
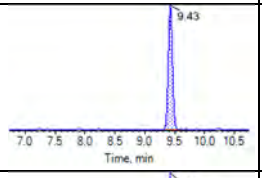
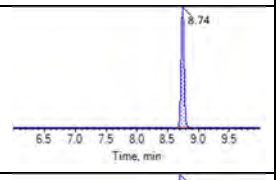
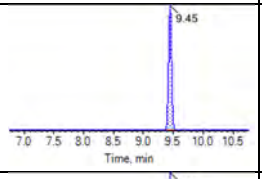
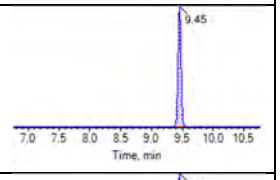
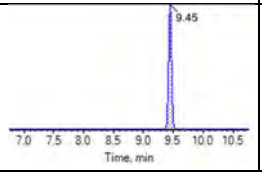
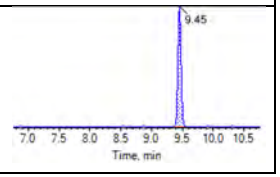
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	165700	13C2_6:2 FTS	28340	950.0	1108.9	116.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	150400	13C2_6:2 FTS	28340	950.0	1120.6	118.0	0.91/ 0.91		
PFHpS	449.0 / 80.0	8.74 (8.76)	1332000	13C8_PFOS	60240	950.0	1133.7	119.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	275900	13C8_PFOS	60240	950.0	1166.9	122.8	0.21/ 0.20		
PFNA	463.0 / 419.0	9.45 (9.47)	879400	13C9_PFNA	240000	1000.0	1090.5	109.0	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.45 (9.47)	187700	13C9_PFNA	240000	1000.0	965.3	96.5	0.21/ 0.24		

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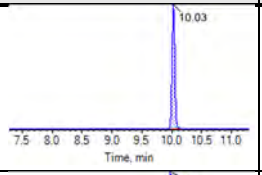
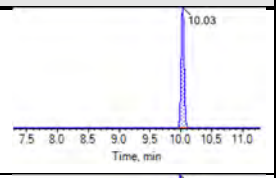
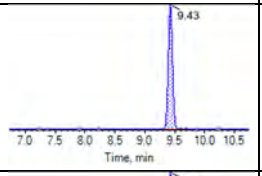
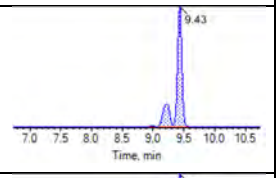
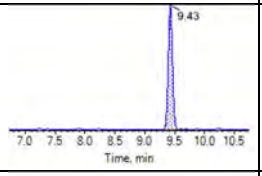
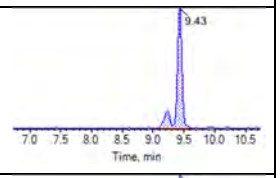
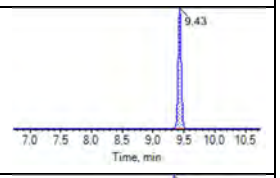
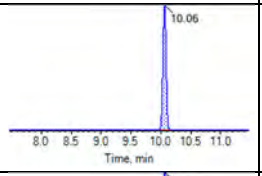
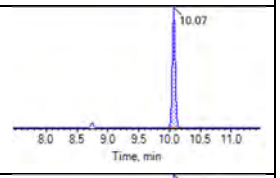
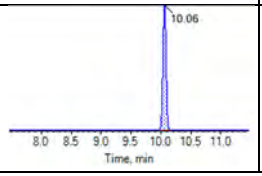
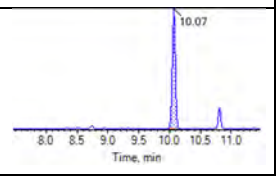
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	1847000	13C8_PFOSA	517000	925.5	955.0	103.2	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	1165000	13C8_PFOS	60240	1000.0	1190.7	119.1	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	148600	13C8_PFOS	60240	1000.0	1028.3	102.8	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1668000	N/A	N/A	1000.0	994.4	99.4	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	714500	13C6_PFDA	156800	1000.0	884.1	88.4	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	89470	13C6_PFDA	156800	1000.0	883.9	88.4	0.13/ 0.13		

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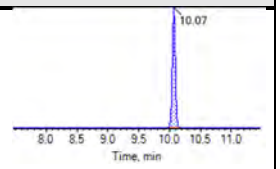
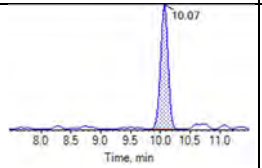
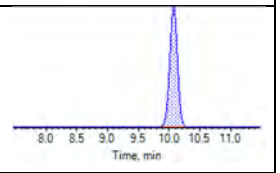
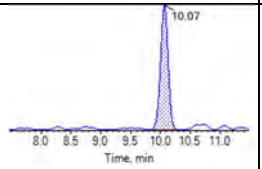
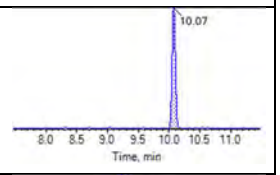
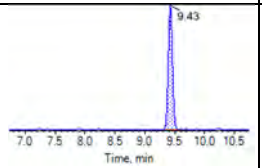
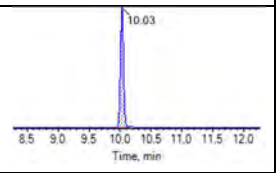
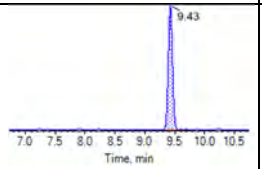
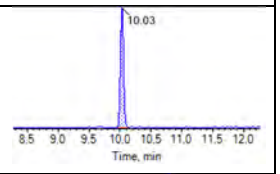
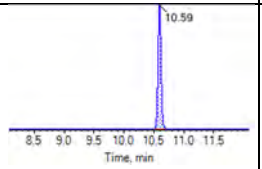
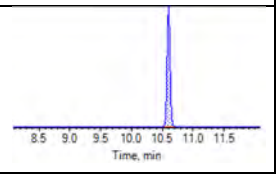
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1105000	N/A	N/A	1000.0	957.8	95.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.07 (10.09)	103100	13C2_8:2 FTS	24270	960.0	824.0	85.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.07 (10.09)	103600	13C2_8:2 FTS	24270	960.0	855.0	89.1	1.01/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1064000	13C8_PFOS	60240	960.0	1118.6	116.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	204900	13C8_PFOS	60240	960.0	1182.8	123.2	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	738100	13C7_PFUdA	198300	1000.0	1045.4	104.5	1.00/ 1.00		

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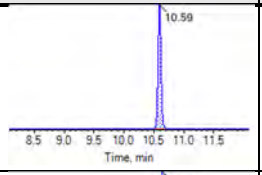
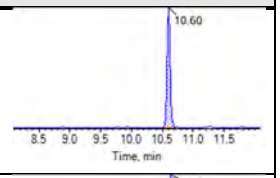
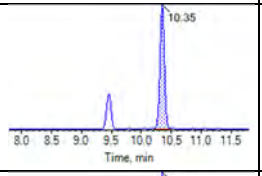
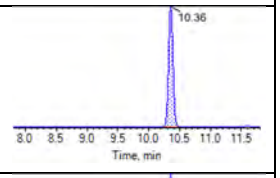
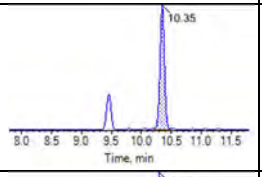
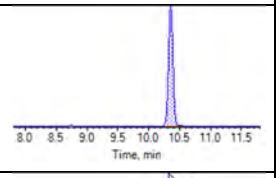
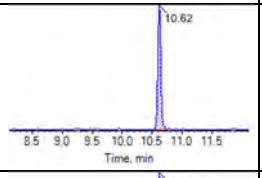
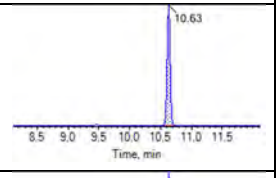
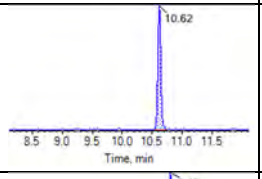
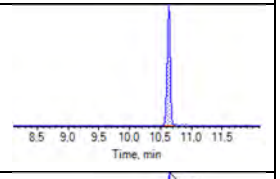
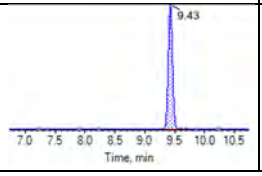
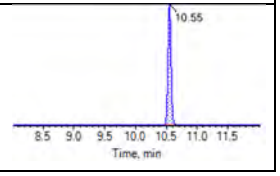
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	91010	13C7_PFUdA	198300	1000.0	1081.7	108.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	187000	d3-N-MeFOSAA	49860	1000.0	945.7	94.6	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	89990	d3-N-MeFOSAA	49860	1000.0	923.8	92.4	0.48/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	196000	d5-N-EtFOSAA	51440	1000.0	938.5	93.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	92660	d5-N-EtFOSAA	51440	1000.0	933.6	93.4	0.47/ 0.48		
PFDS	599.0 / 80.0	10.55 (10.93)	1311000	13C8_PFOS	60240	965.0	1129.9	117.1	1.00/ 1.00		

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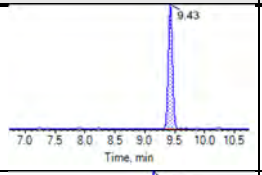
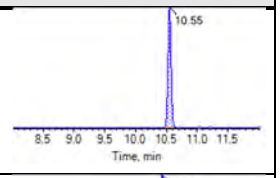
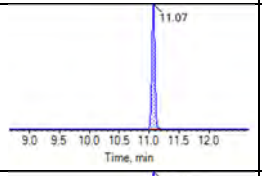
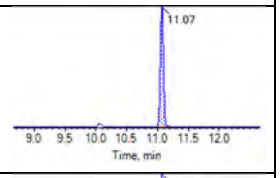
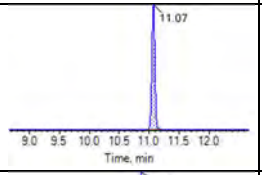
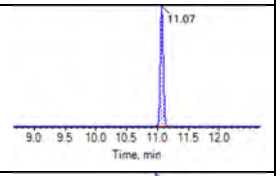
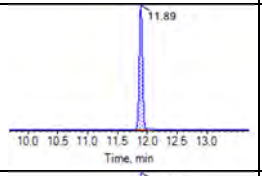
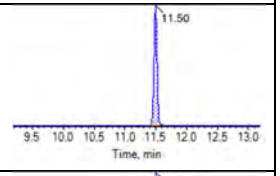
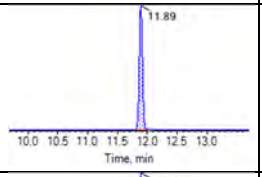
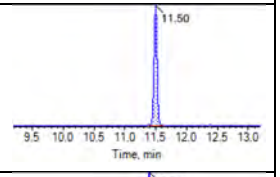
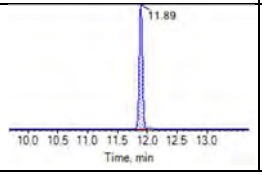
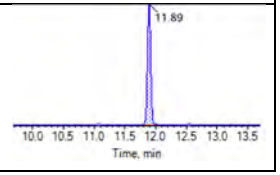
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.55 (10.93)	339600	13C8_PFOS	60240	965.0	1099.1	113.9	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	710800	13C2_PFDoA	192600	1000.0	979.8	98.0	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	117800	13C2_PFDoA	192600	1000.0	993.5	99.3	0.17/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	628200	13C2_PFTeDA	123800	1000.0	1032.0	103.2	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	147600	13C2_PFTeDA	123800	1000.0	1096.3	109.6	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	478600	13C2_PFTeDA	123800	1000.0	1073.2	107.3	1.00/ 1.00		

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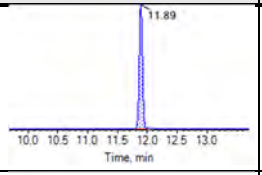
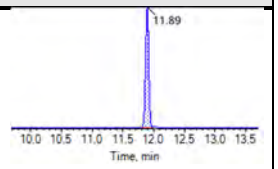
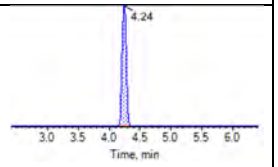
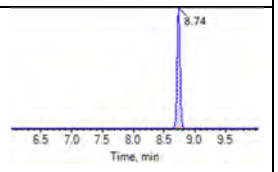
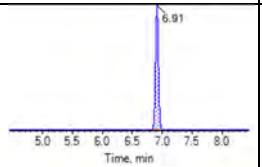
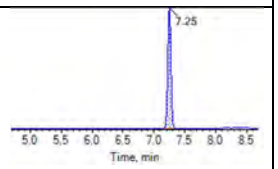
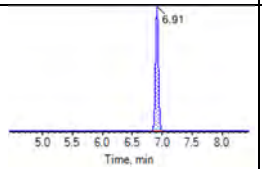
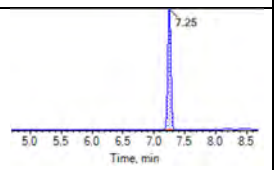
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	97510	13C2_PFTeDA	123800	1000.0	993.0	99.3	0.20/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1680000	N/A	N/A	1000.0	971.1	97.1	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1289000	N/A	N/A	1000.0	1047.9	104.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	735100	13C5_PFHxA	287400	1000.0	1028.5	102.8	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	604200	13C5_PFHxA	287400	1000.0	1123.4	112.3	0.82/ 0.75		

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LCMSMS#6

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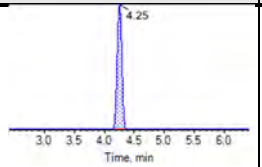
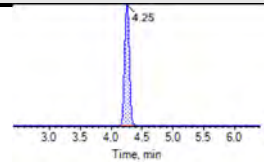
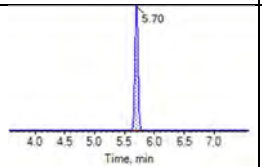
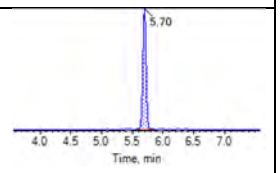
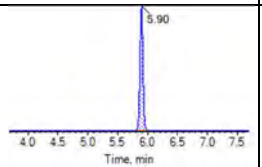
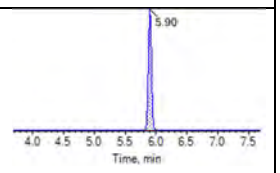
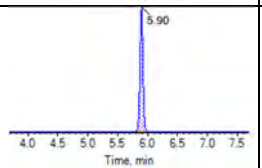
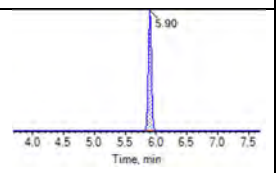
PFC103117008.wiff			
Sample Name	WPF171018-06	**Injection Vial**	7
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117008.wiff
Acquisition Date	10/31/2017 18:42:56	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117008.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	1489000	13C4_PFBA	150400	1500.0	1405.2	93.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1422000	13C5_PFPeA	237800	1500.0	1390.0	92.7	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1939000	13C3_PFBS	153900	1327.5	1278.4	96.3	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	884500	13C3_PFBS	153900	1327.5	1298.7	97.8	0.46/ 0.45		

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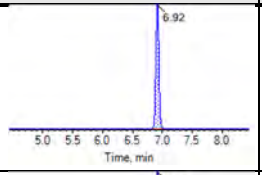
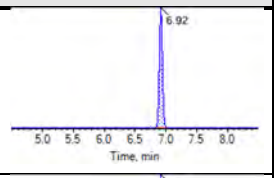
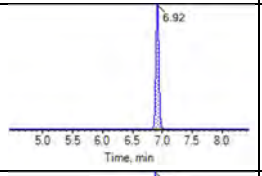
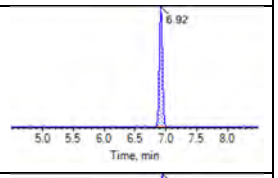
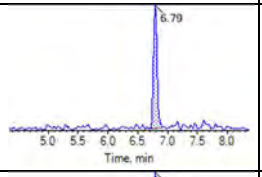
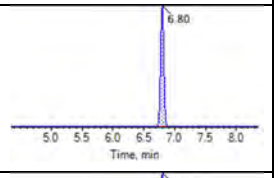
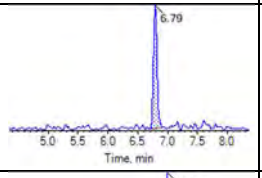
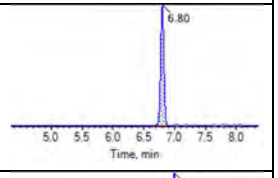
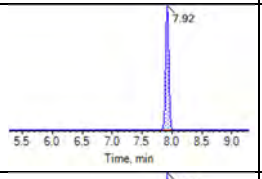
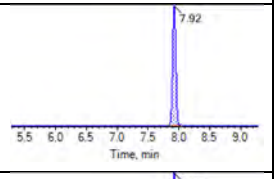
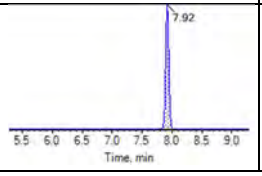
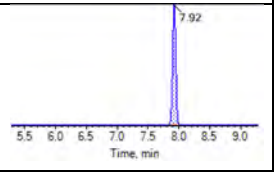
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1631000	13C5_PFHxA	304900	1500.0	1408.8	93.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	116200	13C5_PFHxA	304900	1500.0	1420.4	94.7	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	246100	13C2_4:2 FTS	33620	1402.5	1222.8	87.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	182300	13C2_4:2 FTS	33620	1402.5	1260.8	89.9	0.74/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	1479000	13C4_PFHpA	237500	1500.0	1488.5	99.2	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	376400	13C4_PFHpA	237500	1500.0	1449.0	96.6	0.25/ 0.26		

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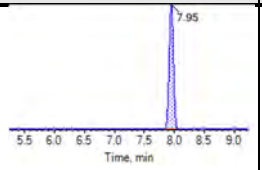
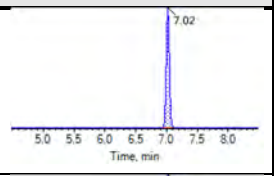
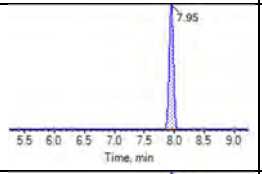
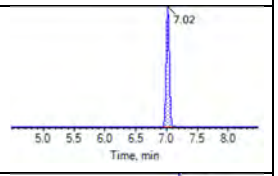
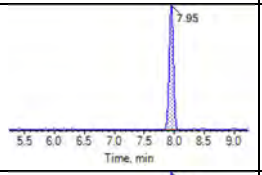
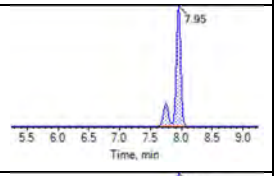
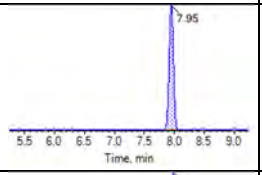
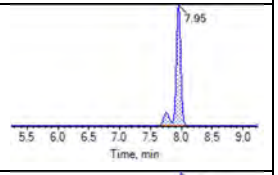
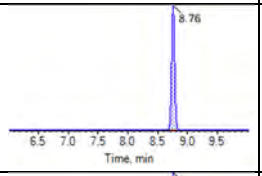
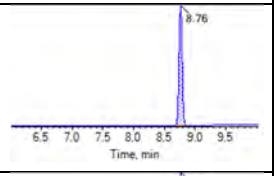
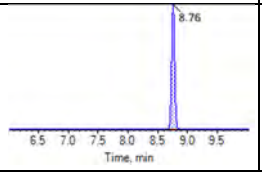
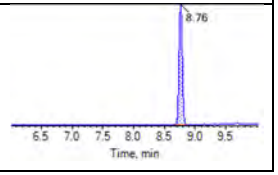
PFPeS	349.0 / 80.0	7.02 (7.02)	2099000	13C3_PFHxS	64940	1410.0	1543.5	109.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	739400	13C3_PFHxS	64940	1410.0	1556.4	110.4	0.35/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1950000	13C3_PFHxS	64940	1368.0	1556.7	113.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	488300	13C3_PFHxS	64940	1368.0	1543.6	112.8	0.25/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	1426000	13C8_PFOA	252800	1500.0	1337.0	89.1	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.76 (8.75)	520200	13C8_PFOA	252800	1500.0	1307.2	87.1	0.36/ 0.37		

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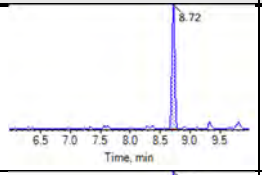
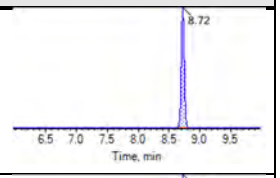
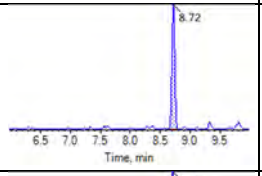
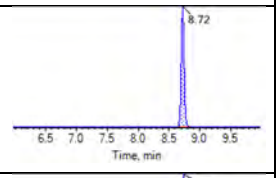
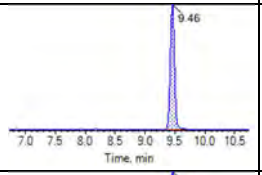
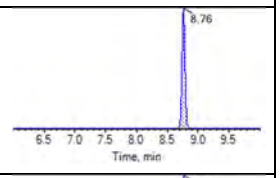
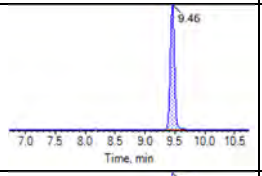
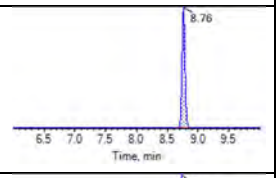
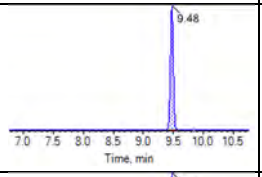
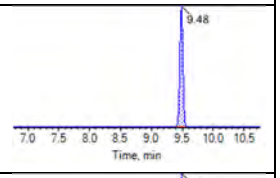
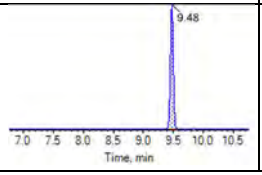
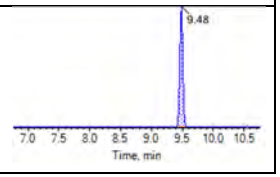
6:2 FTS	427.0 / 407.0	8.72 (8.72)	255200	13C2_6:2 FTS	32970	1425.0	1467.4	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	215100	13C2_6:2 FTS	32970	1425.0	1377.5	96.7	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	1807000	13C8_PFOS	71370	1425.0	1298.7	91.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.76 (8.76)	360500	13C8_PFOS	71370	1425.0	1287.1	90.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	1241000	13C9_PFNA	232700	1500.0	1586.5	105.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.48 (9.47)	300400	13C9_PFNA	232700	1500.0	1592.9	106.2	0.24/ 0.24		

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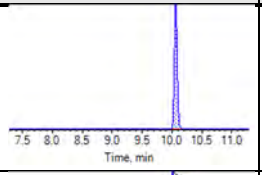
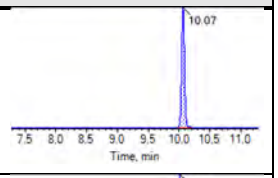
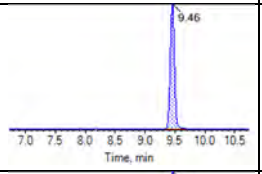
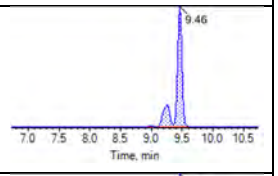
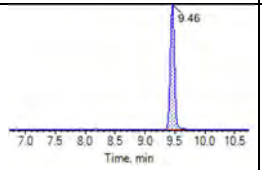
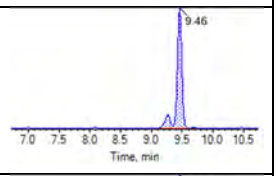
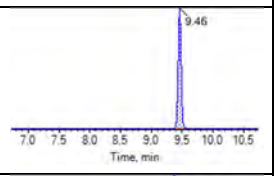
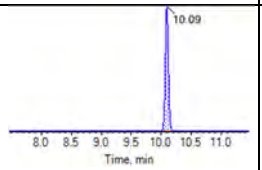
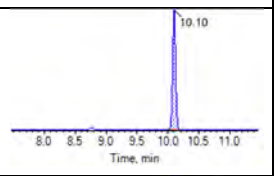
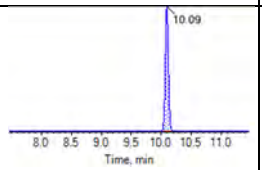
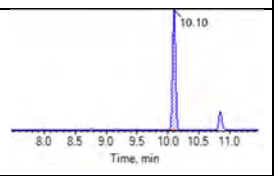
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.07 (10.04)	2835000	13C8_PFOSA	588100	1388.3	1288.5	92.8	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	1614000	13C8_PFOS	71370	1500.0	1391.8	92.8	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	232800	13C8_PFOS	71370	1500.0	1359.6	90.6	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1663000	N/A	N/A	1000.0	991.6	99.2	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	1182000	13C6_PFDA	152400	1500.0	1505.0	100.3	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	136700	13C6_PFDA	152400	1500.0	1388.9	92.6	0.12/ 0.13		

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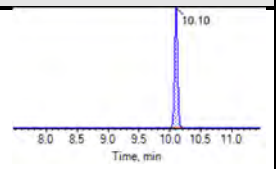
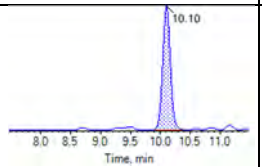
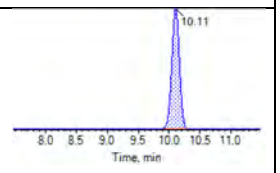
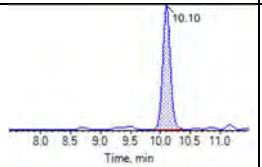
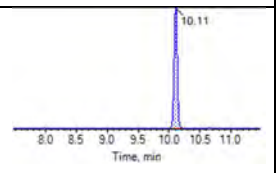
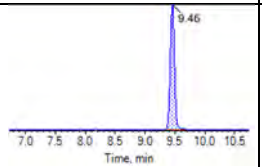
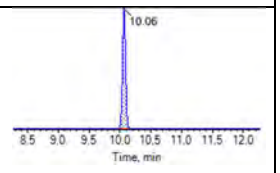
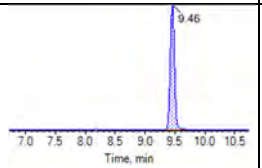
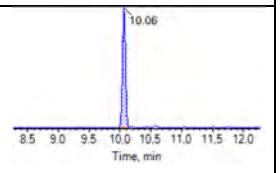
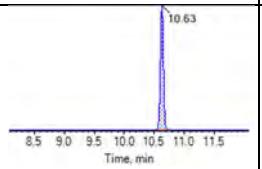
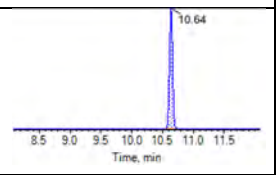
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1111000	N/A	N/A	1000.0	963.2	96.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	187700	13C2_8:2 FTS	26430	1440.0	1378.3	95.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	164700	13C2_8:2 FTS	26430	1440.0	1247.9	86.7	0.88/ 0.96		
PFNS	549.0 / 80.0	10.06 (10.49)	1494000	13C8_PFOS	71370	1440.0	1326.4	92.1	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	268300	13C8_PFOS	71370	1440.0	1307.5	90.8	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	992100	13C7_PFUdA	189300	1500.0	1471.6	98.1	1.00/ 1.00		

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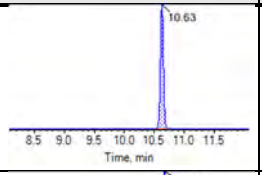
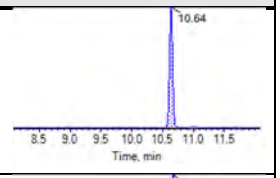
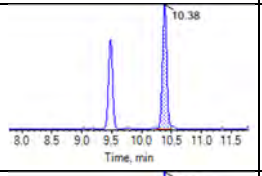
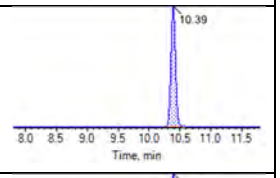
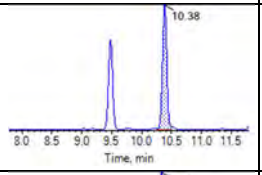
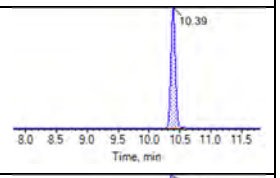
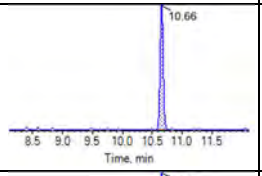
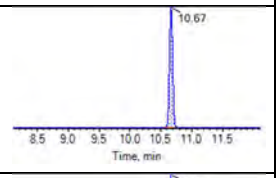
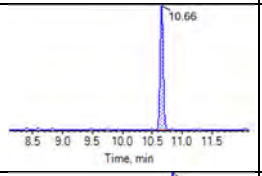
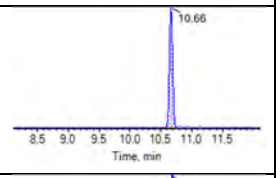
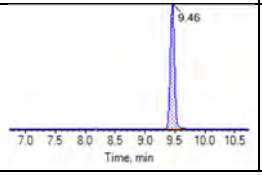
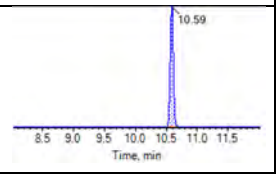
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.64 (10.62)	122800	13C7_PFUdA	189300	1500.0	1528.8	101.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	275600	d3-N-MeFOSAA	43350	1500.0	1602.9	106.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	126100	d3-N-MeFOSAA	43350	1500.0	1488.4	99.2	0.46/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	317000	d5-N-EtFOSAA	56120	1500.0	1391.5	92.8	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.66 (10.64)	149600	d5-N-EtFOSAA	56120	1500.0	1381.7	92.1	0.47/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	1748000	13C8_PFOS	71370	1447.5	1272.1	87.9	1.00/ 1.00		

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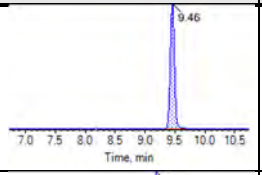
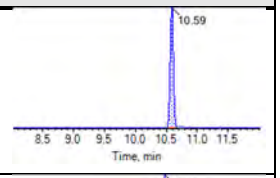
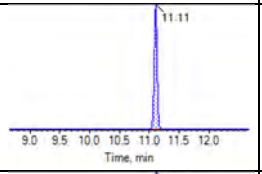
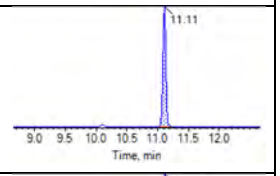
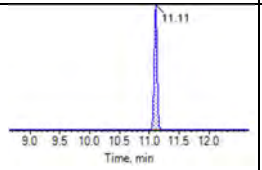
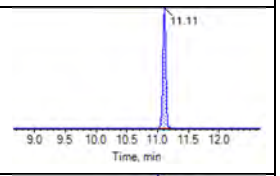
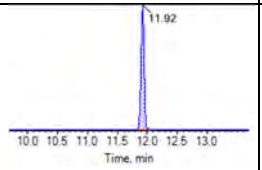
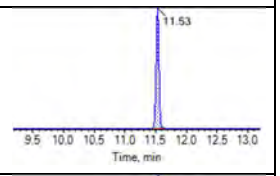
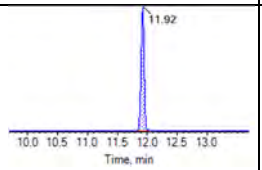
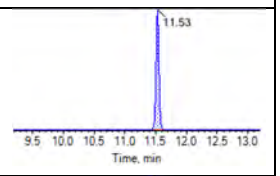
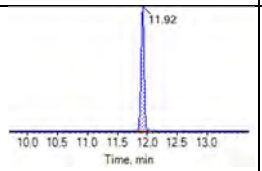
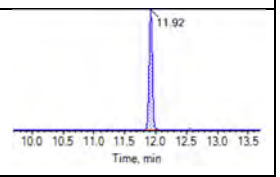
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.59 (10.93)	446100	13C8_PFOS	71370	1447.5	1218.8	84.2	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	1040000	13C2_PFDoA	185200	1500.0	1490.6	99.4	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	163200	13C2_PFDoA	185200	1500.0	1431.6	95.4	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	941100	13C2_PFTeDA	133400	1500.0	1434.5	95.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	199800	13C2_PFTeDA	133400	1500.0	1377.4	91.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	672900	13C2_PFTeDA	133400	1500.0	1400.3	93.4	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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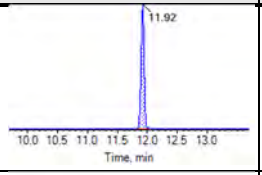
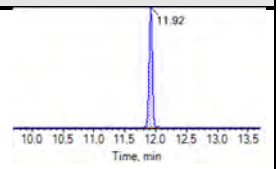
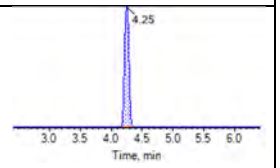
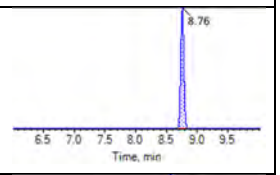
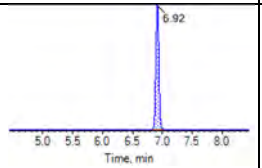
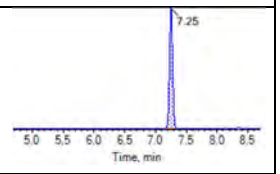
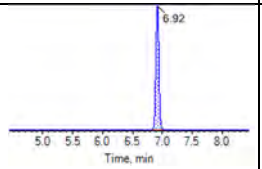
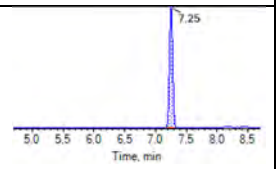
PFC103117008.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	150000	13C2_PFTeDA	133400	1500.0	1417.9	94.5	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1642000	N/A	N/A	1000.0	948.9	94.9	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1265000	N/A	N/A	1000.0	1028.0	102.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1099000	13C5_PFHxA	304900	1500.0	1449.9	96.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	823200	13C5_PFHxA	304900	1500.0	1442.9	96.2	0.75/ 0.75		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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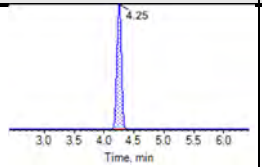
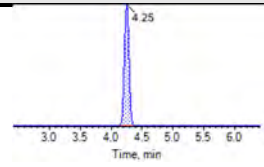
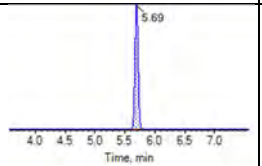
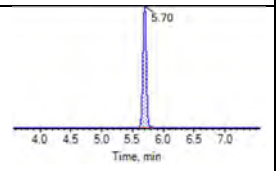
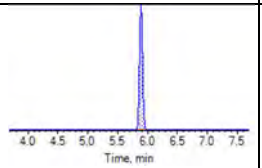
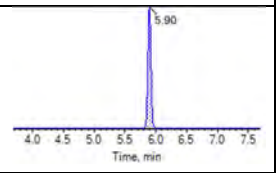
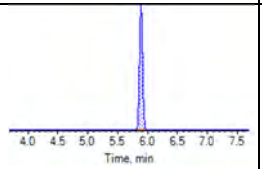
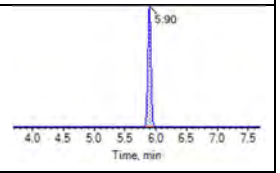
PFC103117009.wiff			
Sample Name	WPF171018-07	**Injection Vial**	8
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Standard	**Data File**	PFC103117009.wiff
Acquisition Date	10/31/2017 19:04:19	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_I

Results Summary

PFC103117009.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	2053000	13C4_PFBA	145700	2000.0	1999.6	100.0	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	1921000	13C5_PFPeA	223300	2000.0	2000.1	100.0	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	2726000	13C3_PFBS	152900	1770.0	1808.9	102.2	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	1193000	13C3_PFBS	152900	1770.0	1762.6	99.6	0.44/ 0.45		

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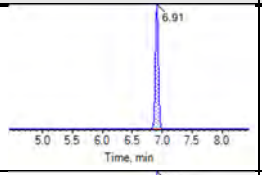
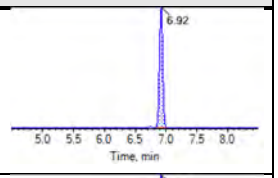
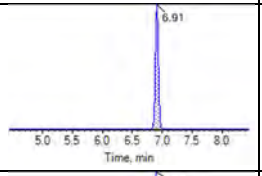
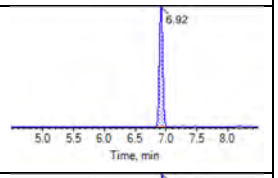
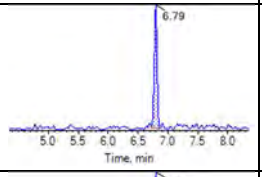
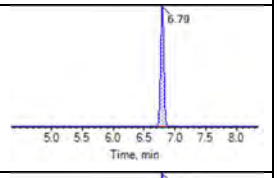
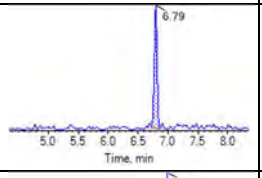
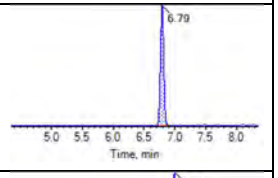
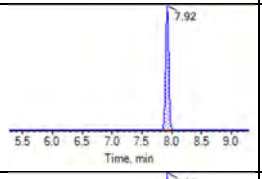
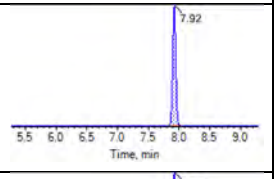
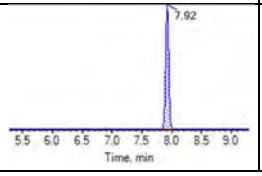
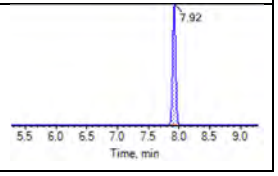
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	2215000	13C5_PFHxA	294500	2000.0	1981.5	99.1	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	158400	13C5_PFHxA	294500	2000.0	2004.2	100.2	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.79 (6.80)	359900	13C2_4:2 FTS	27160	1870.0	2214.1	118.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.79 (6.80)	247600	13C2_4:2 FTS	27160	1870.0	2120.3	113.4	0.69/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	2024000	13C4_PFHpA	239900	2000.0	2017.1	100.9	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	499000	13C4_PFHpA	239900	2000.0	1902.1	95.1	0.25/ 0.26		

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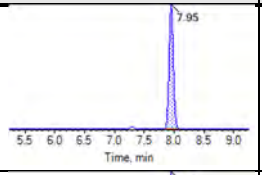
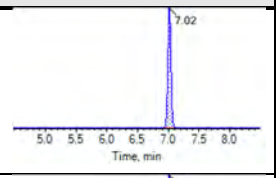
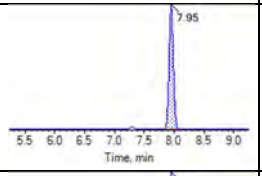
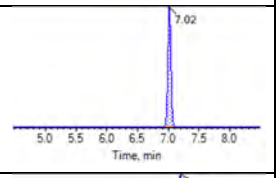
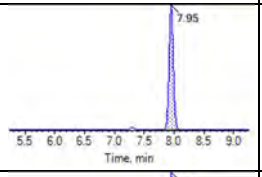
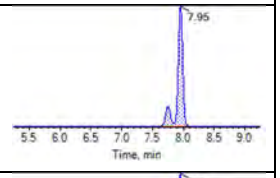
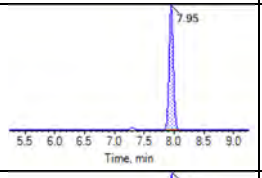
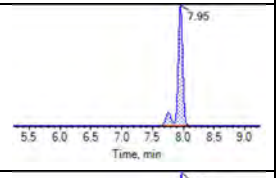
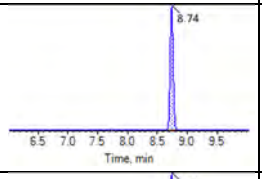
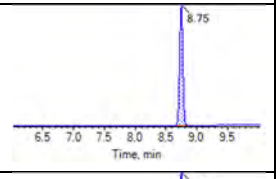
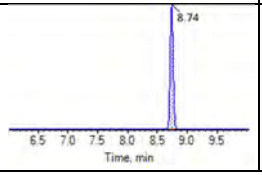
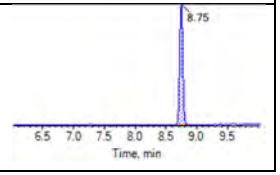
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	3042000	13C3_PFHxS	83220	1880.0	1746.1	92.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	1102000	13C3_PFHxS	83220	1880.0	1809.6	96.3	0.36/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	2701000	13C3_PFHxS	83220	1824.0	1682.8	92.3	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	673200	13C3_PFHxS	83220	1824.0	1660.8	91.1	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	1955000	13C8_PFOA	225600	2000.0	2053.8	102.7	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	699100	13C8_PFOA	225600	2000.0	1968.2	98.4	0.36/ 0.37		

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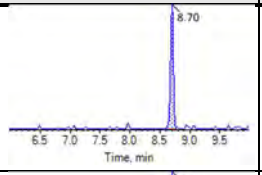
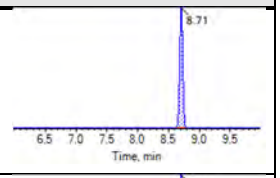
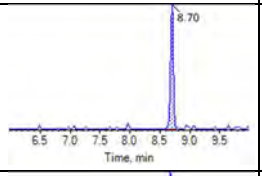
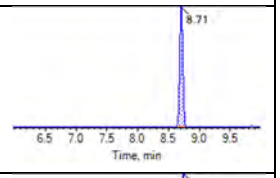
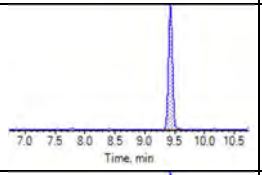
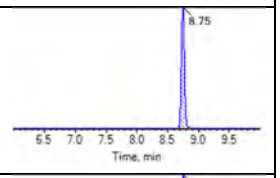
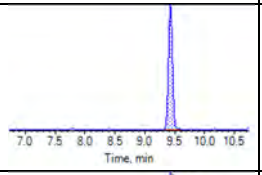
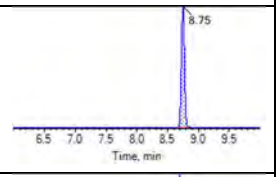
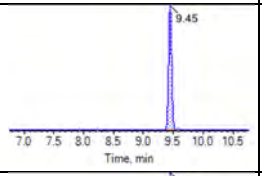
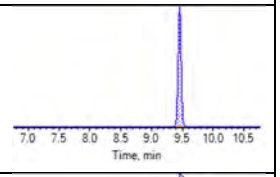
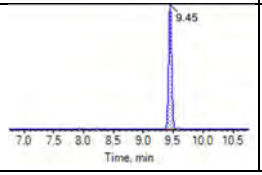
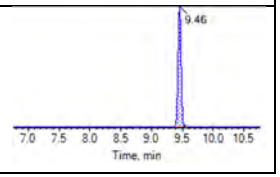
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.71 (8.72)	301500	13C2_6:2 FTS	29880	1900.0	1913.2	100.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.71 (8.72)	283300	13C2_6:2 FTS	29880	1900.0	2001.9	105.4	0.94/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	2539000	13C8_PFOS	66190	1900.0	1967.8	103.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	496500	13C8_PFOS	66190	1900.0	1911.1	100.6	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	1649000	13C9_PFNA	223400	2000.0	2195.7	109.8	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	367500	13C9_PFNA	223400	2000.0	2029.9	101.5	0.22/ 0.24		

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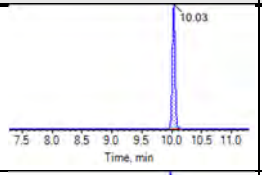
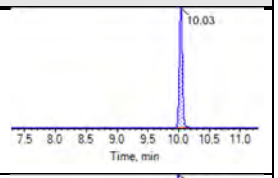
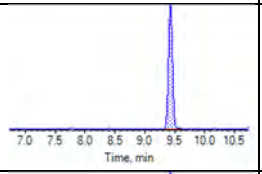
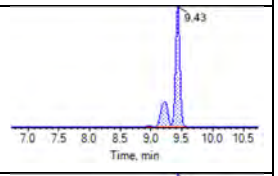
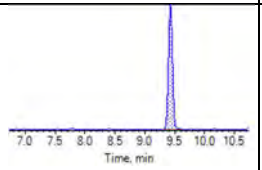
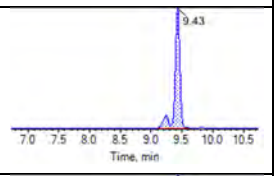
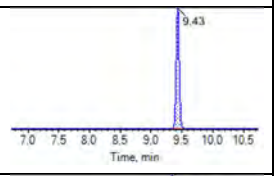
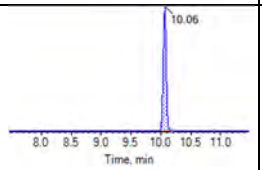
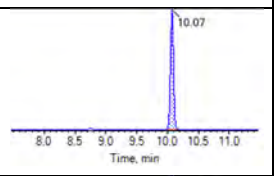
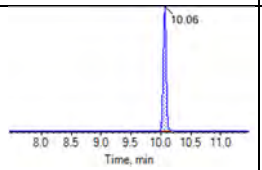
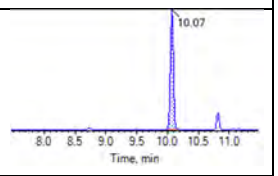
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	3524000	13C8_PFOSA	519300	1851.0	1813.9	98.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.43 (9.45)	2095000	13C8_PFOS	66190	2000.0	1948.3	97.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.43 (9.45)	291100	13C8_PFOS	66190	2000.0	1833.0	91.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1670000	N/A	N/A	1000.0	995.6	99.6	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.07 (10.08)	1453000	13C6_PFDA	138600	2000.0	2034.1	101.7	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.07 (10.08)	181400	13C6_PFDA	138600	2000.0	2027.1	101.4	0.12/ 0.13		

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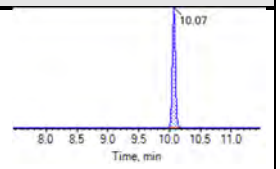
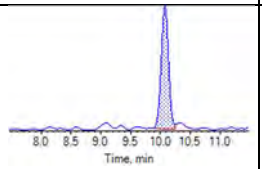
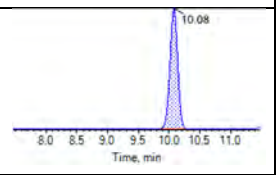
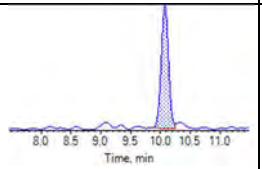
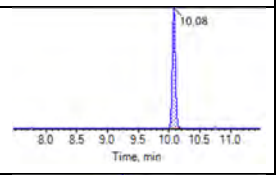
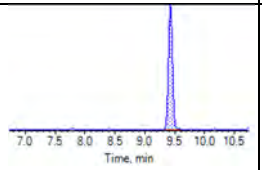
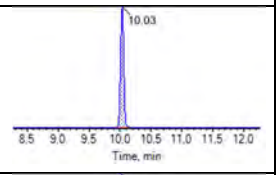
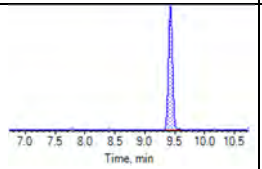
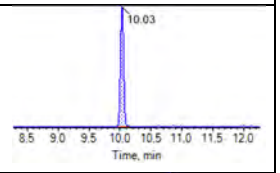
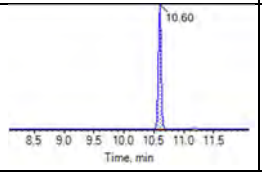
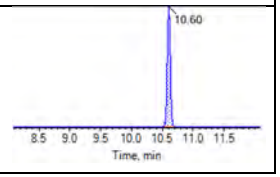
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1082000	N/A	N/A	1000.0	938.0	93.8	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	222200	13C2_8:2 FTS	22570	1920.0	1910.6	99.5	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	212000	13C2_8:2 FTS	22570	1920.0	1881.0	98.0	0.95/ 0.96		
PFNS	549.0 / 80.0	10.03 (10.49)	1996000	13C8_PFOS	66190	1920.0	1910.7	99.5	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.03 (10.49)	372800	13C8_PFOS	66190	1920.0	1959.1	102.0	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.60 (10.62)	1448000	13C7_PFUdA	215200	2000.0	1889.7	94.5	1.00/ 1.00		

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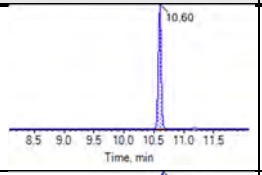
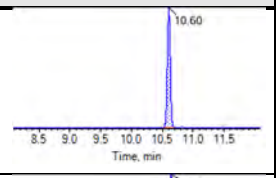
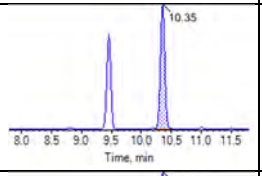
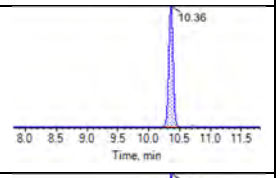
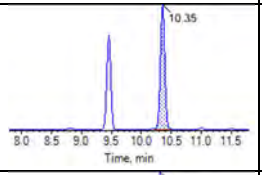
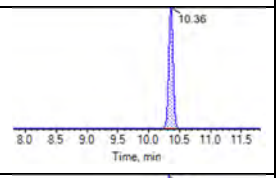
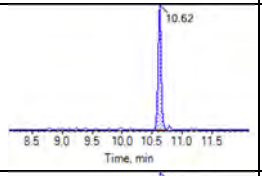
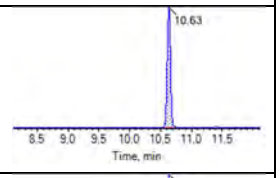
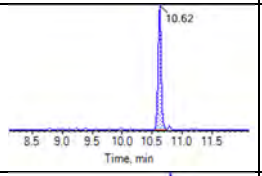
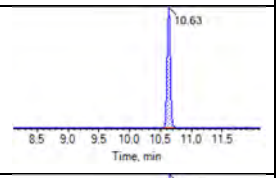
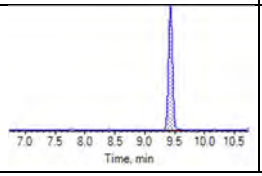
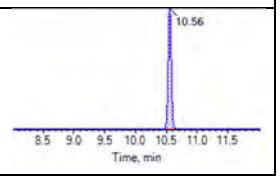
PFUdA_2	563.0 / 169.0	10.60 (10.62)	177500	13C7_PFUdA	215200	2000.0	1943.2	97.2	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.36 (10.37)	397100	d3-N-MeFOSAA	42350	2000.0	2364.4	118.2	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	202200	d3-N-MeFOSAA	42350	2000.0	2443.8	122.2	0.51/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.63 (10.64)	383000	d5-N-EtFOSAA	47710	2000.0	1977.3	98.9	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.63 (10.64)	190300	d5-N-EtFOSAA	47710	2000.0	2067.5	103.4	0.50/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	2440000	13C8_PFOS	66190	1930.0	1914.5	99.2	1.00/ 1.00		

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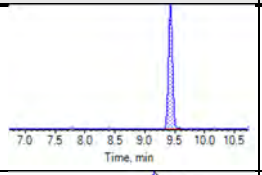
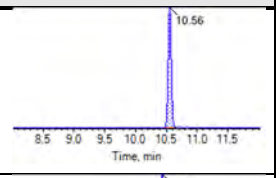
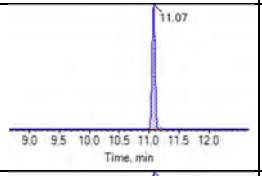
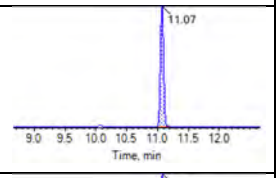
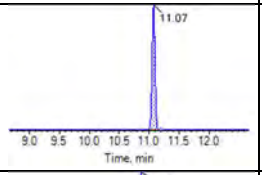
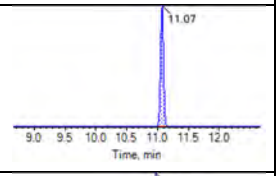
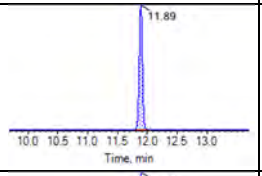
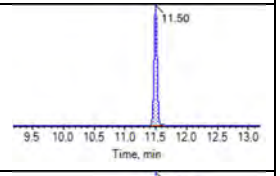
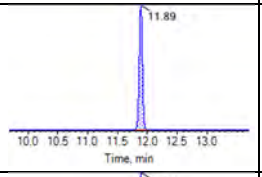
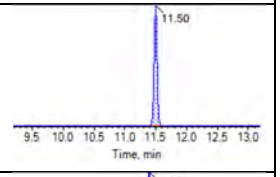
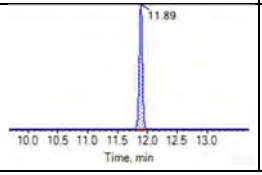
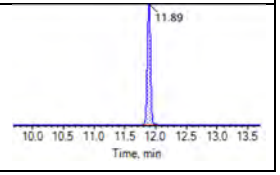
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	681800	13C8_PFOS	66190	1930.0	2008.5	104.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.07 (11.09)	1327000	13C2_PFDoA	182900	2000.0	1926.8	96.3	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.07 (11.09)	218800	13C2_PFDoA	182900	2000.0	1943.1	97.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	1162000	13C2_PFTeDA	124800	2000.0	1894.3	94.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	262600	13C2_PFTeDA	124800	2000.0	1935.1	96.8	0.23/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	885000	13C2_PFTeDA	124800	2000.0	1968.9	98.4	1.00/ 1.00		

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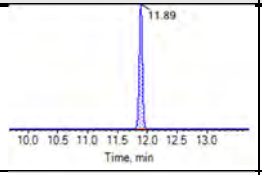
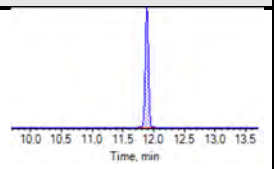
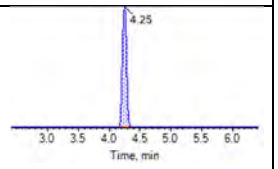
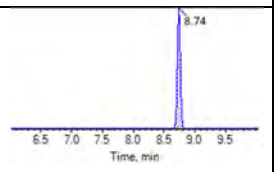
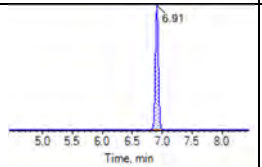
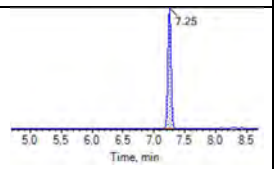
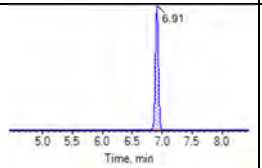
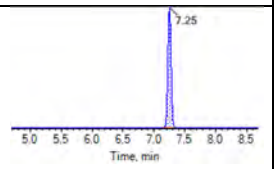
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	206700	13C2_PFTeDA	124800	2000.0	2087.7	104.4	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1664000	N/A	N/A	1000.0	962.1	96.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1180000	N/A	N/A	1000.0	959.0	95.9	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	1391000	13C5_PFHxA	294500	2000.0	1899.0	94.9	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	1079000	13C5_PFHxA	294500	2000.0	1958.5	97.9	0.78/ 0.75		

Continuing Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:25

Data File: PFC103117010.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-08

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	100	95.734	95.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	102.683	102.7	
Perfluorotetradecanoic acid (PFTeDA)	100	97.154	97.2	
Perfluorotridecanoic acid (PFTrDA)	100	100.845	100.8	
Perfluorododecanoic acid (PFDoA)	100	99.066	99.1	
Perfluoroundecanoic acid (PFUdA)	100	106.06	106.1	
Perfluorodecanoic acid (PFDA)	100	114.979	115	
Perfluorononanoic acid (PFNA)	100	118.365	118.4	
Perfluoroheptanoic acid (PFHpA)	100	96.552	96.6	
Perfluorooctanoic acid (PFOA)	100	105.165	105.2	
Perfluorohexanoic acid (PFHxA)	100	109.036	109	
Perfluorooctanesulfonate (PFOS)	100	127.441	127.4	
Perfluorobutanesulfonate (PFBS)	88.5	80.892	91.4	
Perfluorohexanesulfonate (PFHxS)	91.2	82.93	90.9	

Recovery criteria is 70% - 130%

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LCMSMS#6

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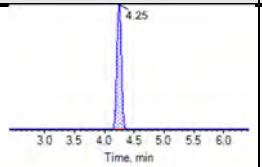
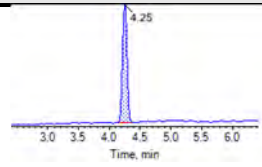
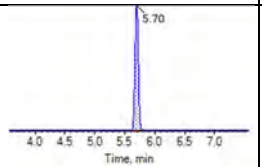
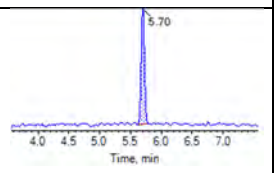
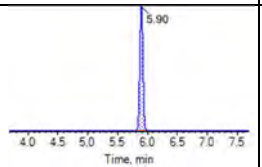
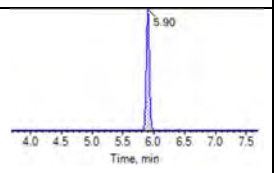
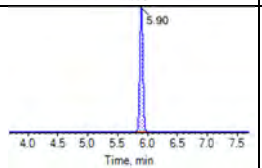
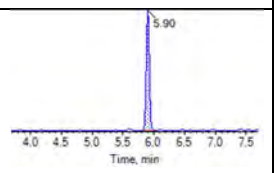
PFC103117010.wiff			
Sample Name	WPF171018-08ISC	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117010.wiff
Acquisition Date	10/31/2017 19:25:42	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117010.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	111100	13C4_PFBA	162400	100.0	97.1	97.1	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	103000	13C5_PFPeA	250800	100.0	95.5	95.5	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	137000	13C3_PFBS	171900	88.5	80.9	91.4	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	63140	13C3_PFBS	171900	88.5	83.0	93.8	0.46/ 0.45		

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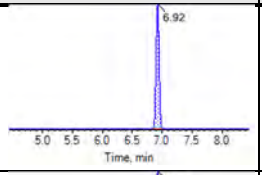
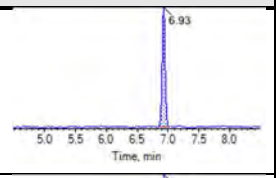
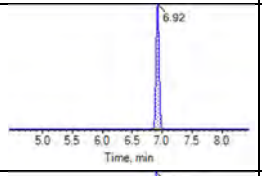
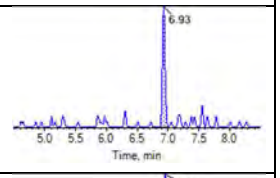
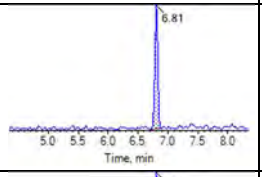
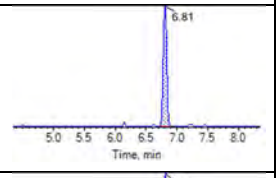
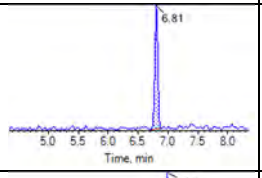
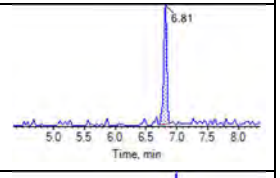
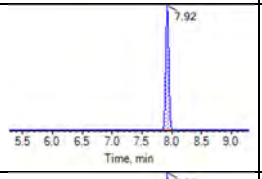
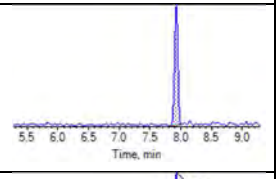
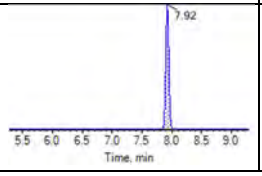
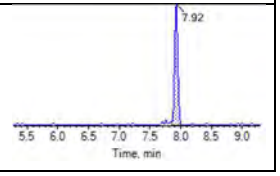
PFC103117010.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	122100	13C5_PFHxA	294900	100.0	109.0	109.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	5888	13C5_PFHxA	294900	100.0	74.4	74.4	0.05/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	18690	13C2_4:2 FTS	34790	93.5	89.8	96.0	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.81 (6.80)	15480	13C2_4:2 FTS	34790	93.5	103.4	110.6	0.83/ 0.72		
PFHpA	363.0 / 319.0	7.92 (7.93)	103100	13C4_PFHpA	255200	100.0	96.6	96.6	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.92 (7.93)	30680	13C4_PFHpA	255200	100.0	109.9	109.9	0.30/ 0.26		

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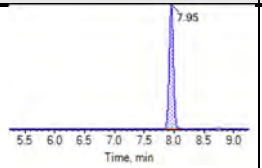
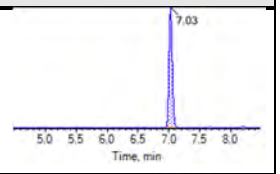
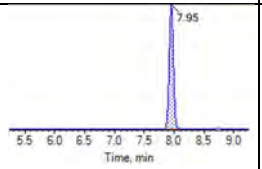
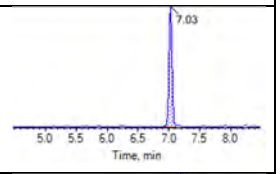
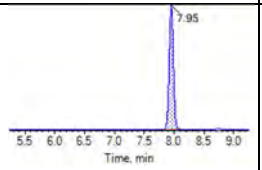
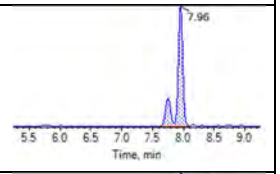
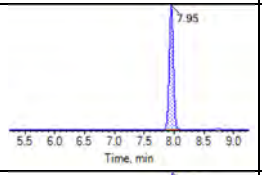
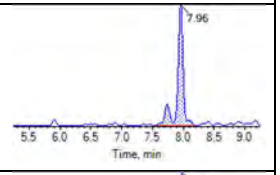
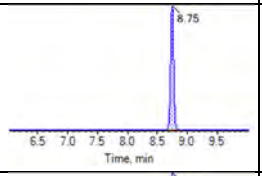
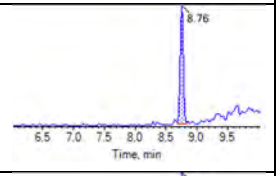
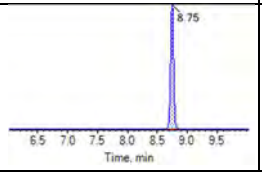
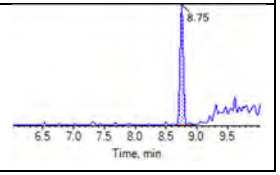
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	149300	13C3_PFHxS	86360	94.0	82.6	87.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	56890	13C3_PFHxS	86360	94.0	90.1	95.8	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.96 (7.96)	138100	13C3_PFHxS	86360	91.2	82.9	90.9	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.96 (7.96)	31570	13C3_PFHxS	86360	91.2	75.1	82.3	0.23/ 0.25		
PFOA	413.0 / 369.0	8.76 (8.75)	111300	13C8_PFOA	250900	100.0	105.2	105.2	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	41220	13C8_PFOA	250900	100.0	104.3	104.3	0.37/ 0.37		

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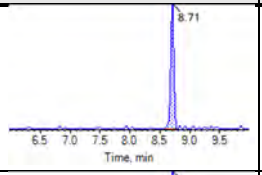
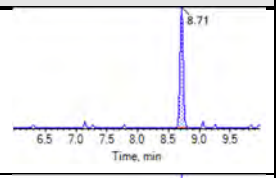
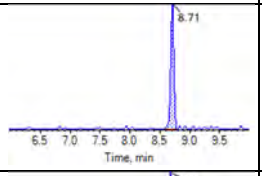
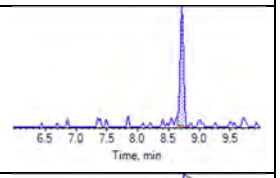
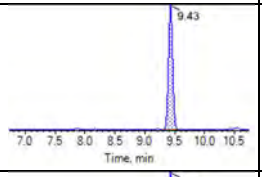
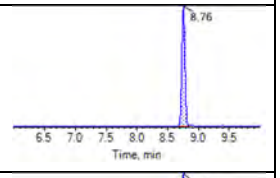
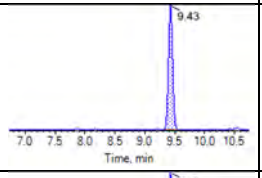
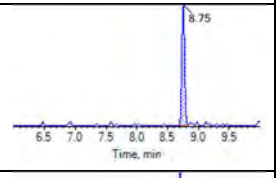
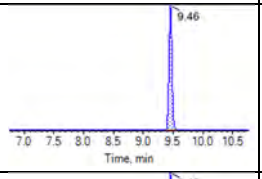
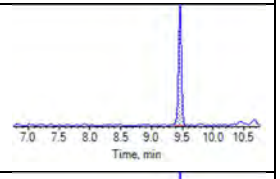
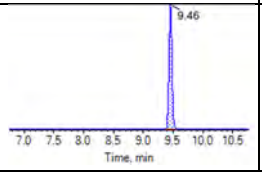
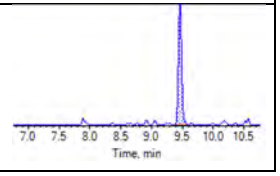
6:2 FTS	427.0 / 407.0	8.71 (8.72)	18750	13C2_6:2 FTS	36170	95.0	98.3	103.5	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.72 (8.72)	14260	13C2_6:2 FTS	36170	95.0	83.3	87.6	0.76/ 0.91		
PFHpS	449.0 / 80.0	8.76 (8.76)	123500	13C8_PFOS	62810	95.0	100.9	106.2	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.75 (8.76)	25280	13C8_PFOS	62810	95.0	102.5	107.9	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	102900	13C9_PFNA	258600	100.0	118.4	118.4	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	26100	13C9_PFNA	258600	100.0	124.6	124.6	0.25/ 0.24		

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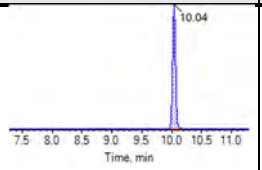
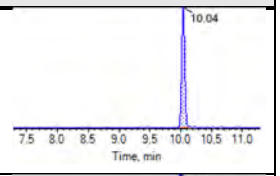
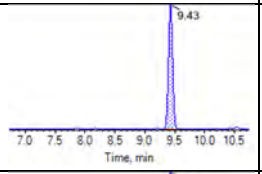
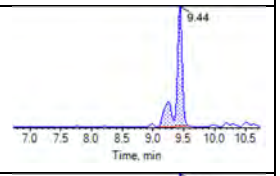
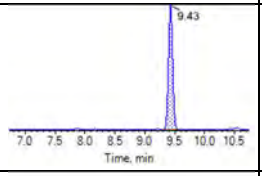
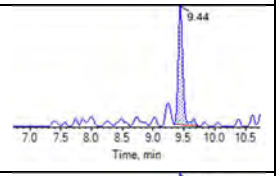
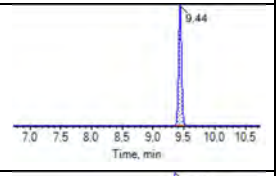
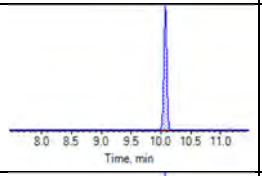
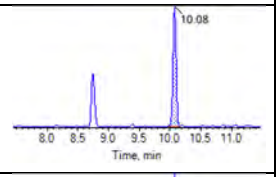
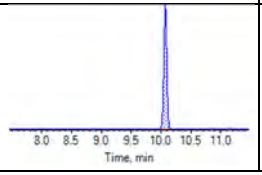
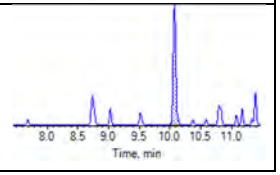
PFOSA	498.0 / 78.0	10.04 (10.04)	191800	13C8_PFOSA	619900	92.6	82.7	89.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	130000	13C8_PFOS	62810	100.0	127.4	127.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	10420	13C8_PFOS	62810	100.0	69.1	69.1	0.08/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1753000	N/A	N/A	1000.0	1045.5	104.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	85700	13C6_PFDA	144600	100.0	115.0	115.0	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	8841	13C6_PFDA	144600	100.0	94.7	94.7	0.10/ 0.13		

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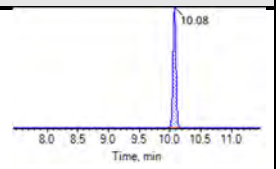
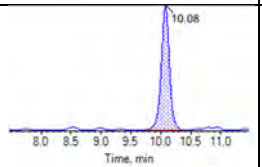
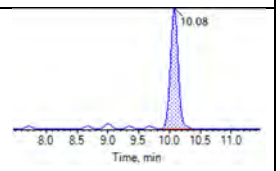
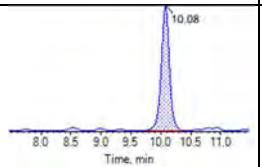
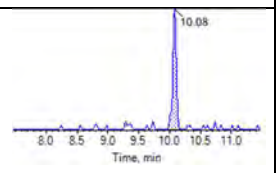
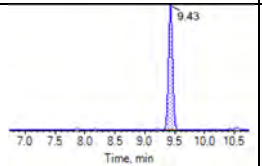
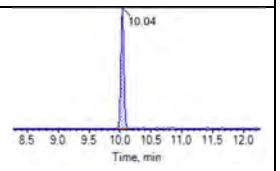
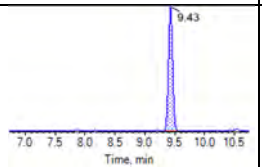
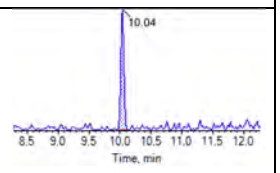
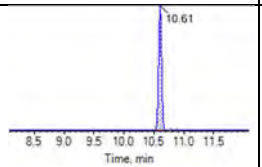
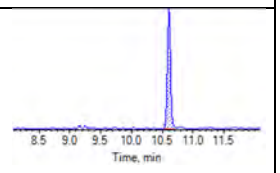
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1276000	N/A	N/A	1000.0	1105.9	110.6	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	13030	13C2_8:2 FTS	31060	96.0	81.4	84.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	15860	13C2_8:2 FTS	31060	96.0	102.3	106.5	1.22/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	118900	13C8_PFOS	62810	96.0	119.9	124.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	21440	13C8_PFOS	62810	96.0	118.7	123.7	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	81440	13C7_PFUdA	215600	100.0	106.1	106.1	1.00/ 1.00		

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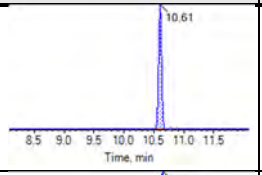
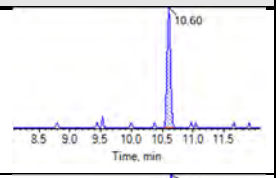
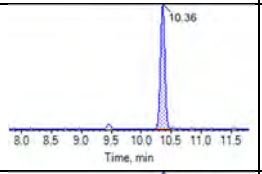
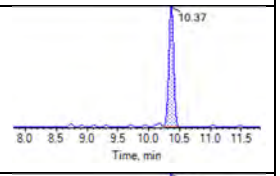
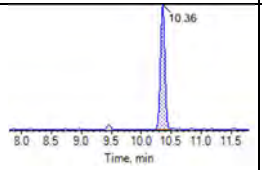
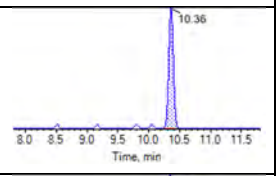
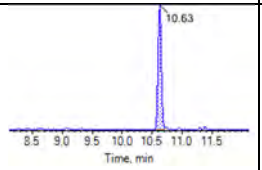
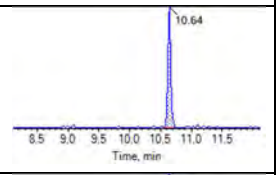
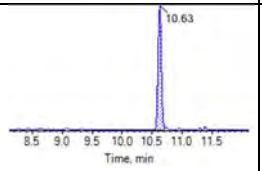
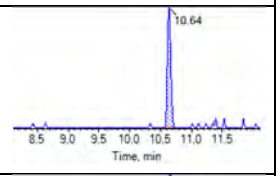
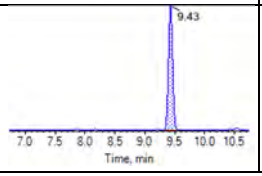
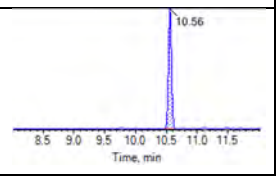
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.60 (10.62)	9431	13C7_PFUdA	215600	100.0	103.1	103.1	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	24450	d3-N-MeFOSAA	60050	100.0	102.7	102.7	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.36 (10.37)	10980	d3-N-MeFOSAA	60050	100.0	93.6	93.6	0.45/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	23940	d5-N-EtFOSAA	61590	100.0	95.7	95.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	10380	d5-N-EtFOSAA	61590	100.0	87.3	87.3	0.43/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	144200	13C8_PFOS	62810	96.5	119.3	123.6	1.00/ 1.00		

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LCMSMS#6

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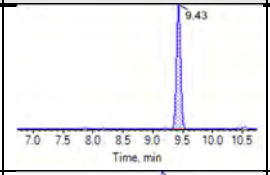
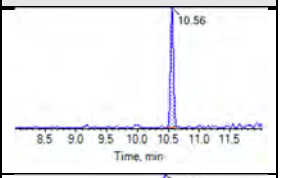
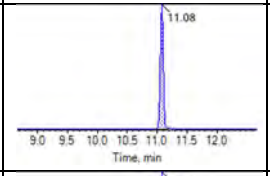
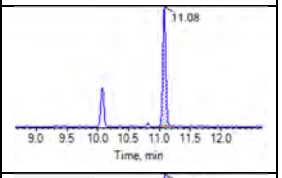
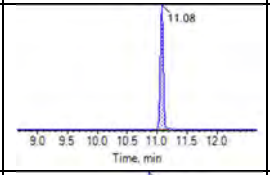
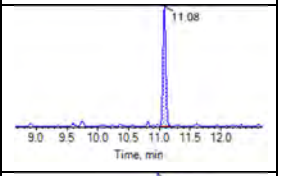
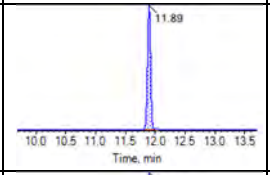
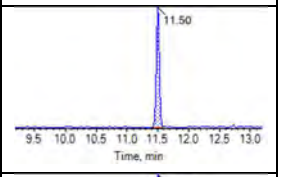
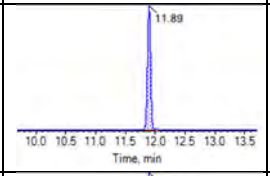
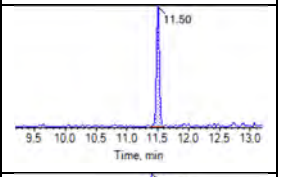
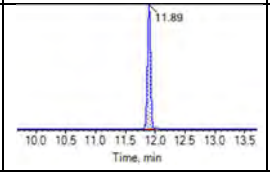
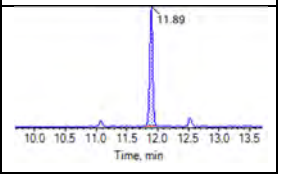
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.56 (10.93)	38170	13C8_PFOS	62810	96.5	118.5	122.8	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	74670	13C2_PFDoA	200100	100.0	99.1	99.1	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	15300	13C2_PFDoA	200100	100.0	124.1	124.1	0.20/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	69300	13C2_PFTeDA	139800	100.0	100.8	100.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	17000	13C2_PFTeDA	139800	100.0	111.9	111.9	0.25/ 0.22		
PFTeDA	713.0 / 669.0	11.89 (11.91)	48900	13C2_PFTeDA	139800	100.0	97.2	97.2	1.00/ 1.00		

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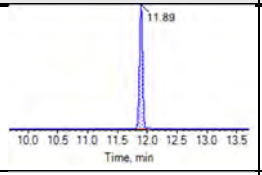
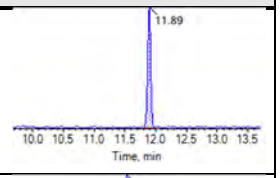
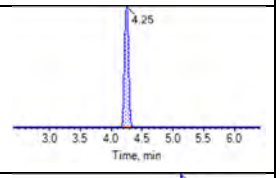
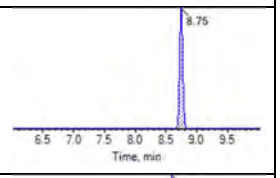
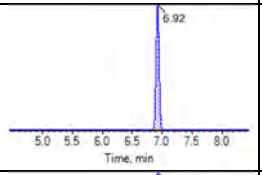
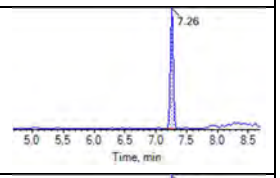
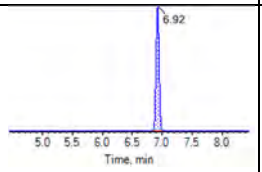
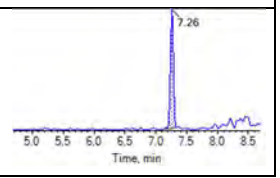
PFTeDA_2	713.0 / 169.0	11.89 (11.91)	12580	13C2_PFTeDA	139800	100.0	113.5	113.5	0.26/ 0.22		
13C3_PFBA	216.0 / 172.0	4.25 (4.60)	1812000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1200000	N/A	N/A	1000.0	975.5	97.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	88300	13C5_PFHxA	294900	100.0	120.4	120.4	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	50190	13C5_PFHxA	294900	100.0	91.0	91.0	0.57/ 0.75		

Continuing Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 19:47

Data File: PFC103117011.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-11

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	200	210.524	105.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	200	260.015	130	
Perfluorotetradecanoic acid (PFTeDA)	200	187.232	93.6	
Perfluorotridecanoic acid (PFTrDA)	200	207.518	103.8	
Perfluoroundecanoic acid (PFUdA)	200	210.847	105.4	
Perfluorododecanoic acid (PFDoA)	200	203.003	101.5	
Perfluorodecanoic acid (PFDA)	200	222.376	111.2	
Perfluorononanoic acid (PFNA)	200	219.1	109.6	
Perfluoroheptanoic acid (PFHpA)	200	208.064	104	
Perfluorooctanoic acid (PFOA)	200	205.04	102.5	
Perfluorohexanoic acid (PFHxA)	200	202.832	101.4	
Perfluorooctanesulfonate (PFOS)	200	212.35	106.2	
Perfluorobutanesulfonate (PFBS)	177	178.688	101	
Perfluorohexanesulfonate (PFHxS)	182.4	171.093	93.8	

Recovery criteria is 70% - 130%

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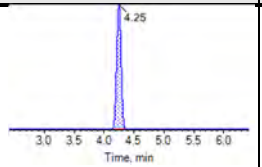
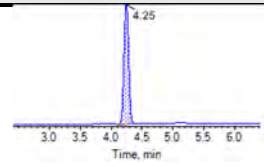
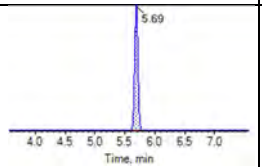
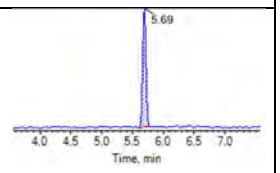
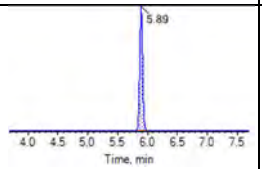
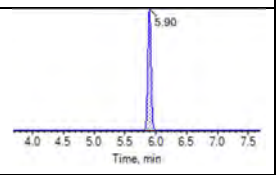
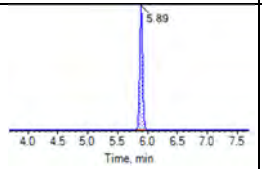
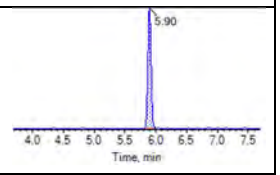
PFC103117011.wiff			
Sample Name	WPF171018-11ISC	**Injection Vial**	3
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117011.wiff
Acquisition Date	10/31/2017 19:47:06	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117011.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.25 (4.25)	220600	13C4_PFBA	159400	200.0	196.4	98.2	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.69 (5.69)	215800	13C5_PFPeA	241700	200.0	207.5	103.8	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	286400	13C3_PFBS	162700	177.0	178.7	101.0	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	126300	13C3_PFBS	162700	177.0	175.4	99.1	0.44/ 0.45		

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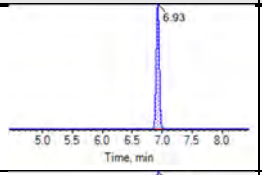
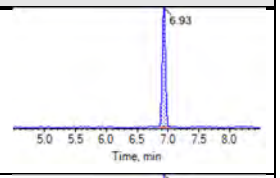
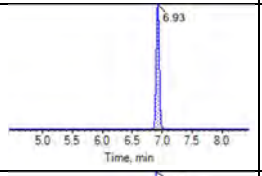
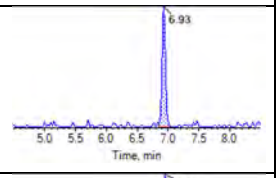
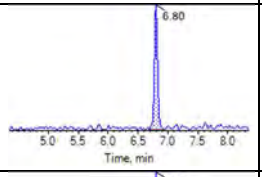
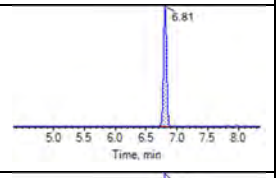
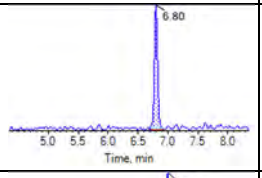
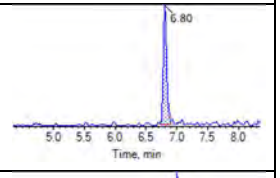
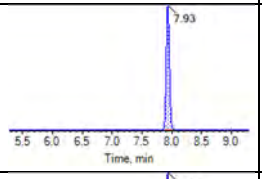
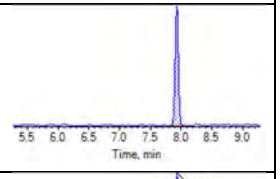
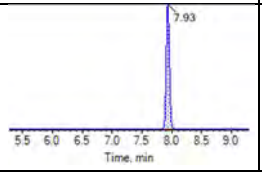
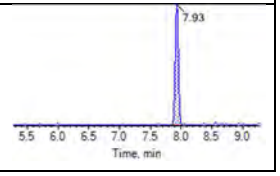
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.93 (6.92)	229400	13C5_PFHxA	297900	200.0	202.8	101.4	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.93 (6.92)	16640	13C5_PFHxA	297900	200.0	208.1	104.1	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.81 (6.80)	44190	13C2_4:2 FTS	35600	187.0	207.4	110.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	29580	13C2_4:2 FTS	35600	187.0	193.2	103.3	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.93 (7.93)	215000	13C4_PFHpA	247100	200.0	208.1	104.0	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.93 (7.93)	62190	13C4_PFHpA	247100	200.0	230.2	115.1	0.29/ 0.26		

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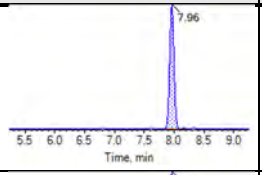
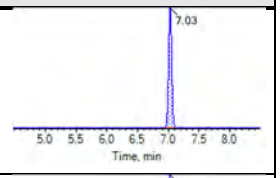
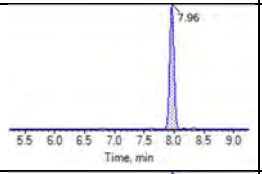
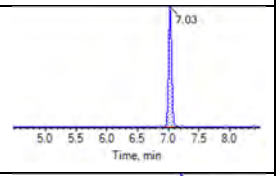
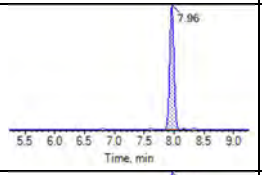
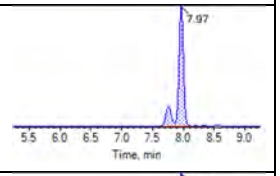
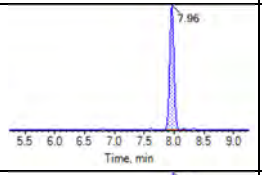
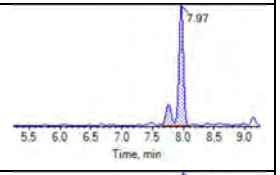
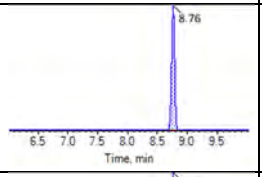
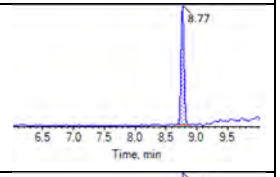
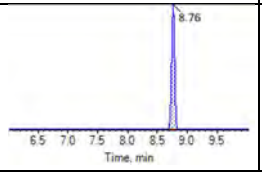
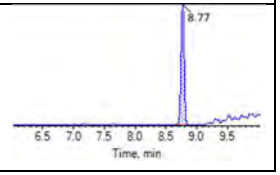
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.03 (7.02)	320600	13C3_PFHxS	93110	188.0	164.5	87.5	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.03 (7.02)	118800	13C3_PFHxS	93110	188.0	174.4	92.8	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.97 (7.96)	307200	13C3_PFHxS	93110	182.4	171.1	93.8	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.97 (7.96)	65870	13C3_PFHxS	93110	182.4	145.2	79.6	0.21/ 0.25		
PFOA	413.0 / 369.0	8.77 (8.75)	224600	13C8_PFOA	259600	200.0	205.0	102.5	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.77 (8.75)	81170	13C8_PFOA	259600	200.0	198.6	99.3	0.36/ 0.37		

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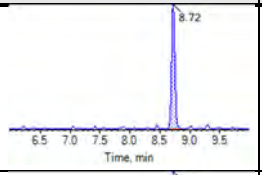
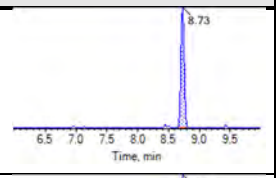
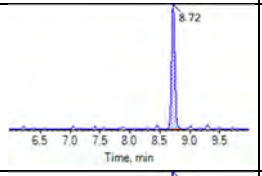
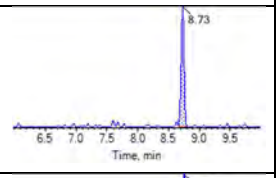
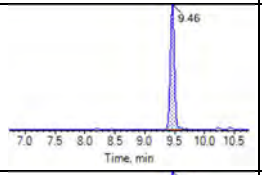
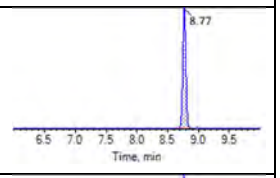
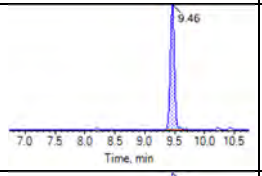
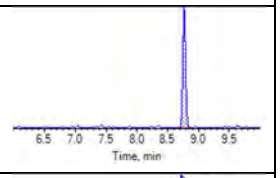
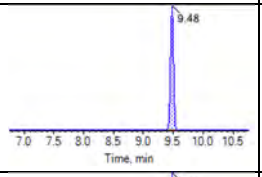
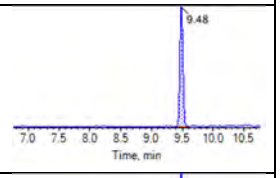
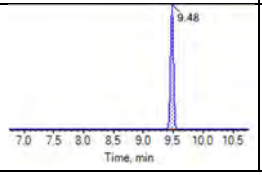
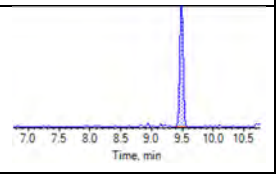
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.73 (8.72)	32710	13C2_6:2 FTS	40460	190.0	153.3	80.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.73 (8.72)	27600	13C2_6:2 FTS	40460	190.0	144.0	75.8	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.77 (8.76)	262500	13C8_PFOS	68800	190.0	195.7	103.0	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.77 (8.76)	59740	13C8_PFOS	68800	190.0	221.2	116.4	0.23/ 0.20		
PFNA	463.0 / 419.0	9.48 (9.47)	185300	13C9_PFNA	251600	200.0	219.1	109.6	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.49 (9.47)	47060	13C9_PFNA	251600	200.0	230.8	115.4	0.25/ 0.24		

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LCMSMS#6

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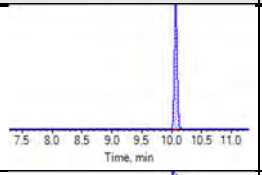
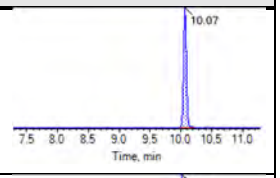
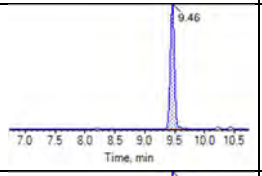
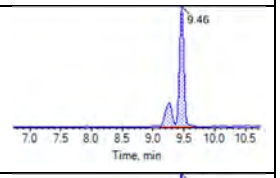
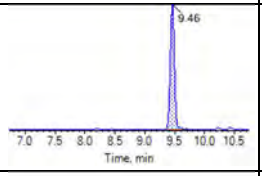
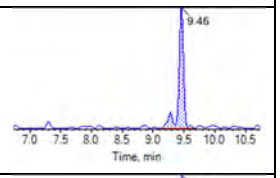
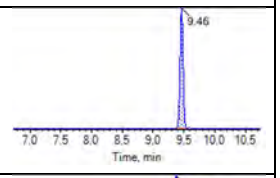
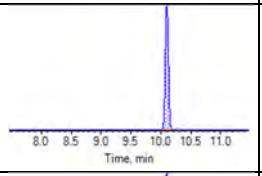
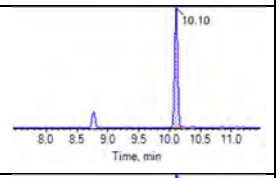
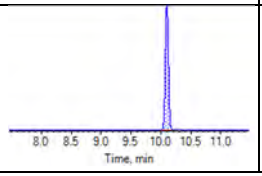
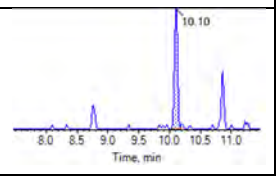
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.07 (10.04)	446300	13C8_PFOSA	613800	185.1	194.3	105.0	1.00/ 1.00		
PFOS	499.0 / 80.0	9.46 (9.45)	237400	13C8_PFOS	68800	200.0	212.4	106.2	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.46 (9.45)	29930	13C8_PFOS	68800	200.0	181.3	90.7	0.13/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1756000	N/A	N/A	1000.0	1047.3	104.7	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.10 (10.08)	176200	13C6_PFDA	153800	200.0	222.4	111.2	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.10 (10.08)	14770	13C6_PFDA	153800	200.0	148.8	74.4	0.08/ 0.13		

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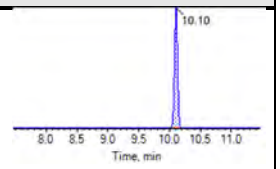
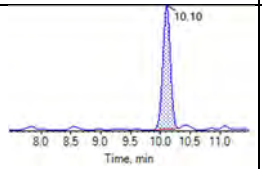
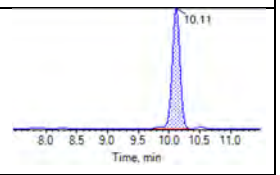
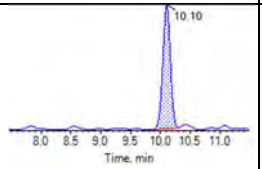
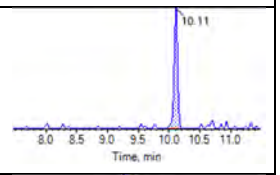
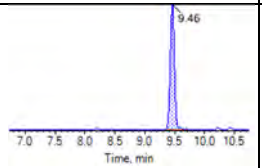
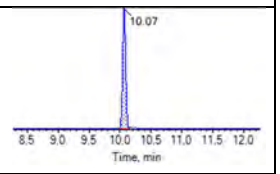
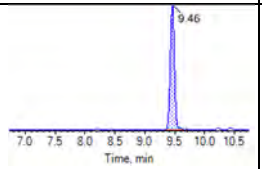
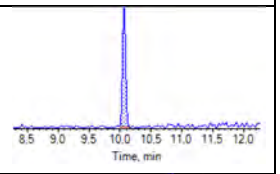
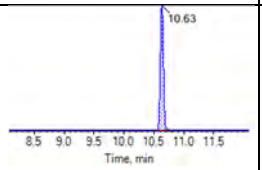
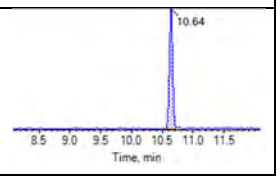
13C2_PFDA	515.0 / 470.0	10.10 (10.02)	1192000	N/A	N/A	1000.0	1032.9	103.3	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.11 (10.09)	31010	13C2_8:2 FTS	30920	192.0	194.6	101.4	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.11 (10.09)	26270	13C2_8:2 FTS	30920	192.0	170.1	88.6	0.85/ 0.96		
PFNS	549.0 / 80.0	10.07 (10.49)	225100	13C8_PFOS	68800	192.0	207.2	107.9	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.06 (10.49)	39250	13C8_PFOS	68800	192.0	198.4	103.3	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.64 (10.62)	149300	13C7_PFUdA	198900	200.0	210.8	105.4	1.00/ 1.00		

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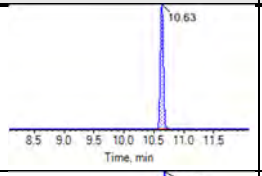
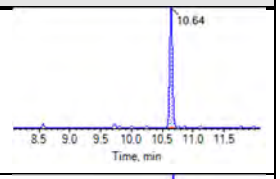
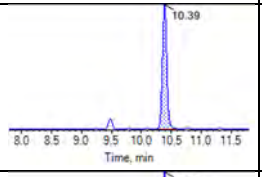
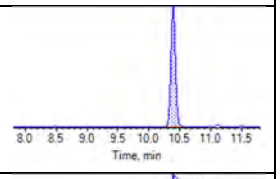
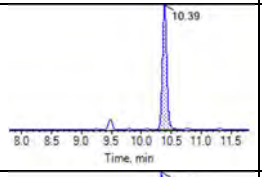
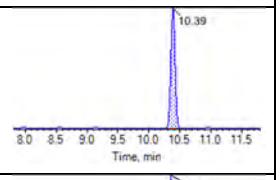
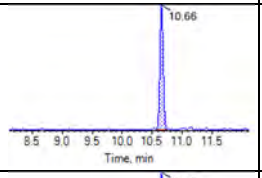
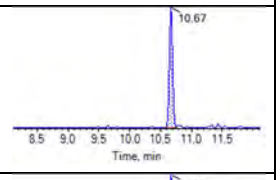
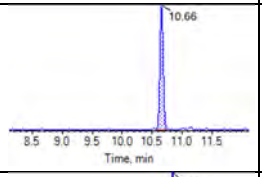
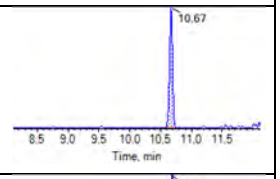
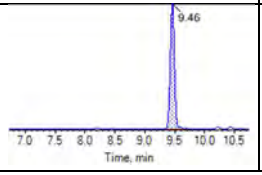
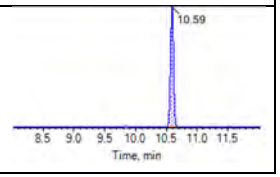
PFUdA_2	563.0 / 169.0	10.64 (10.62)	18210	13C7_PFUdA	198900	200.0	215.8	107.9	0.12/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.39 (10.37)	62670	d3-N-MeFOSAA	60780	200.0	260.0	130.0	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.39 (10.37)	25170	d3-N-MeFOSAA	60780	200.0	212.0	106.0	0.40/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.67 (10.64)	41740	d5-N-EtFOSAA	48840	200.0	210.5	105.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.67 (10.64)	23500	d5-N-EtFOSAA	48840	200.0	249.4	124.7	0.56/ 0.48		
PFDS	599.0 / 80.0	10.59 (10.93)	279400	13C8_PFOS	68800	193.0	210.9	109.3	1.00/ 1.00		

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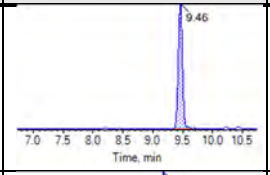
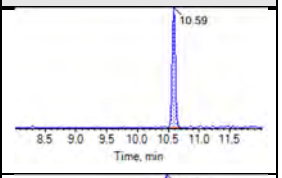
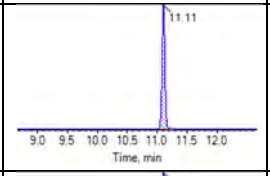
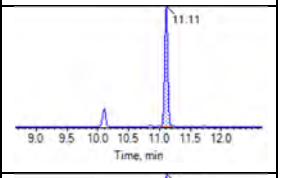
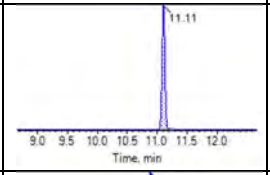
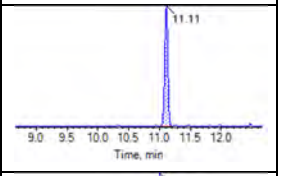
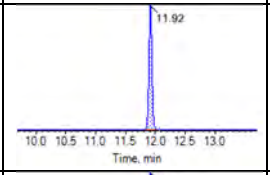
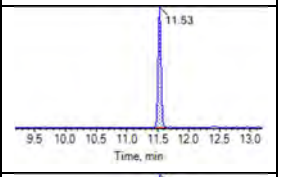
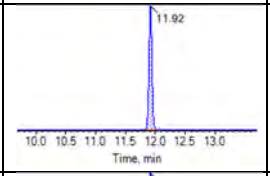
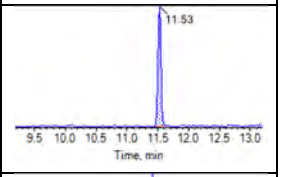
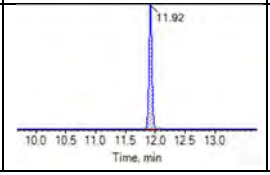
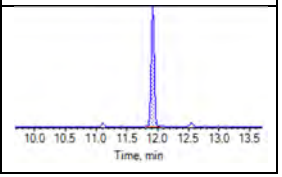
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.59 (10.93)	78890	13C8_PFOS	68800	193.0	223.5	115.8	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.11 (11.09)	155100	13C2_PFDoA	202800	200.0	203.0	101.5	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.11 (11.09)	29930	13C2_PFDoA	202800	200.0	239.7	119.9	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.53 (11.82)	135800	13C2_PFTeDA	133100	200.0	207.5	103.8	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.53 (11.82)	27550	13C2_PFTeDA	133100	200.0	190.4	95.2	0.20/ 0.22		
PFTeDA	713.0 / 669.0	11.92 (11.91)	89730	13C2_PFTeDA	133100	200.0	187.2	93.6	1.00/ 1.00		

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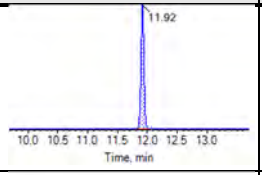
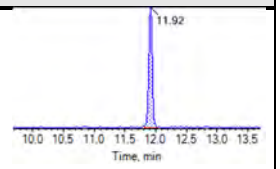
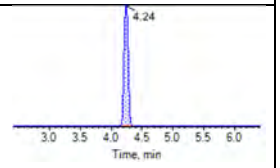
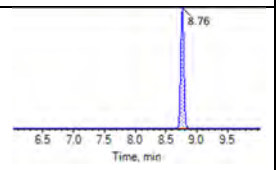
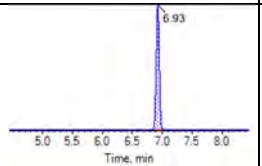
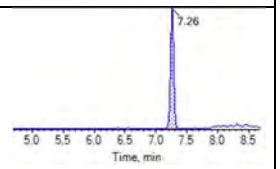
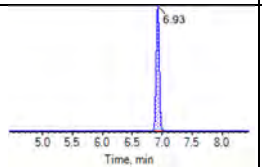
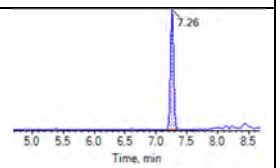
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.92 (11.91)	21760	13C2_PFTeDA	133100	200.0	206.2	103.1	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1752000	N/A	N/A	1000.0	1012.5	101.3	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1309000	N/A	N/A	1000.0	1063.8	106.4	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.26 (7.26)	168600	13C5_PFHxA	297900	200.0	227.5	113.7	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.26 (7.26)	128000	13C5_PFHxA	297900	200.0	229.7	114.8	0.76/ 0.75		

Initial Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 20:08

Data File: PFC103117012.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	992.673	99.3	
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	805.223	80.5	
Perfluorotetradecanoic acid (PFTeDA)	1000	973.64	97.4	
Perfluorotridecanoic acid (PFTrDA)	1000	946.09	94.6	
Perfluorododecanoic acid (PFDoA)	1000	1136.449	113.6	
Perfluoroundecanoic acid (PFUdA)	1000	1138.359	113.8	
Perfluorononanoic acid (PFNA)	1000	1156.564	115.7	
Perfluorodecanoic acid (PFDA)	1000	1176.324	117.6	
Perfluorooctanoic acid (PFOA)	1000	992.655	99.3	
Perfluoroheptanoic acid (PFHpA)	1000	984.497	98.4	
Perfluorooctanesulfonate (PFOS)	1000	1013.94	101.4	
Perfluorohexanoic acid (PFHxA)	1000	968.909	96.9	
Perfluorohexanesulfonate (PFHxS)	912	911.712	100	
Perfluorobutanesulfonate (PFBS)	885	872.842	98.6	

Recovery criteria is 70% - 130%

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LCMSMS#6

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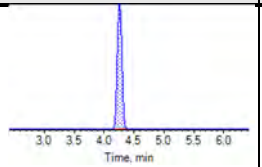
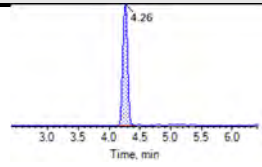
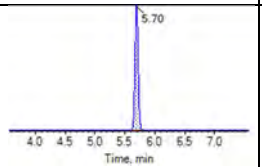
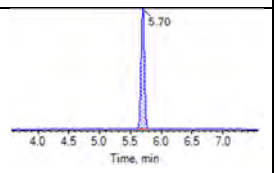
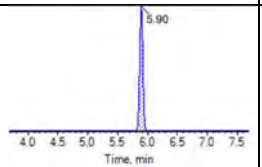
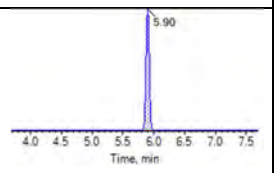
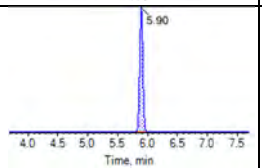
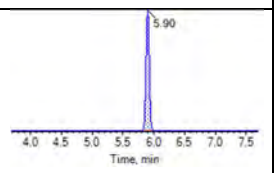
Sample Name	WPF171018-09ICV	**Injection Vial**	9
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117012.wiff
Acquisition Date	10/31/2017 20:08:29	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117012.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.26 (4.25)	1064000	13C4_PFBA	144400	1000.0	1045.3	104.5	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.70 (5.69)	960900	13C5_PFPeA	229700	1000.0	972.5	97.2	1.00/ 1.00		
PFBS	298.9 / 80.0	5.90 (5.89)	1275000	13C3_PFBS	148200	885.0	872.8	98.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.90 (5.89)	574900	13C3_PFBS	148200	885.0	876.7	99.1	0.45/ 0.45		

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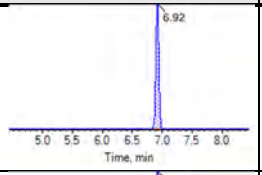
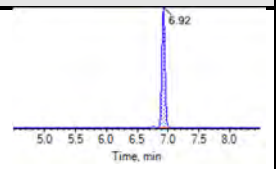
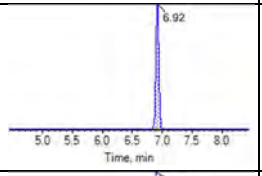
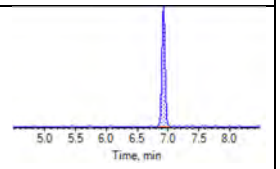
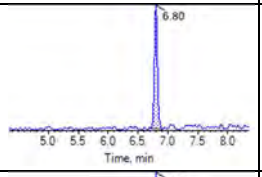
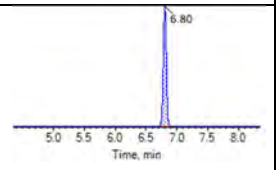
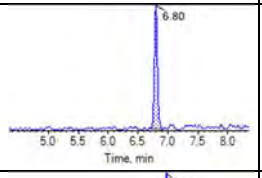
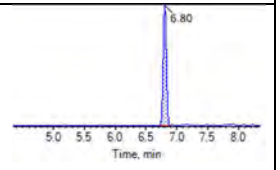
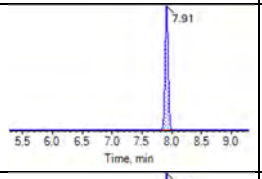
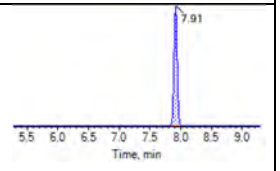
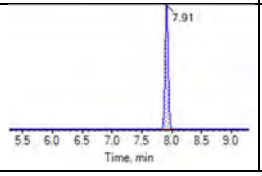
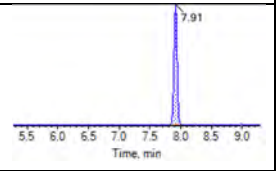
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.92 (6.92)	1104000	13C5_PFHxA	300000	1000.0	968.9	96.9	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.92 (6.92)	81250	13C5_PFHxA	300000	1000.0	1009.0	100.9	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.80 (6.80)	186700	13C2_4:2 FTS	32970	935.0	946.0	101.2	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.80 (6.80)	125300	13C2_4:2 FTS	32970	935.0	883.9	94.5	0.67/ 0.72		
PFHpA	363.0 / 319.0	7.91 (7.93)	966100	13C4_PFHpA	234600	1000.0	984.5	98.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.91 (7.93)	234400	13C4_PFHpA	234600	1000.0	913.7	91.4	0.24/ 0.26		

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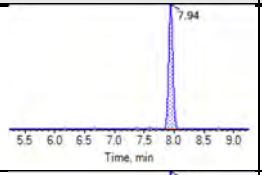
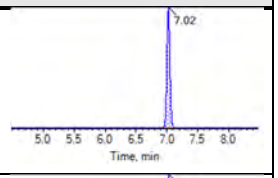
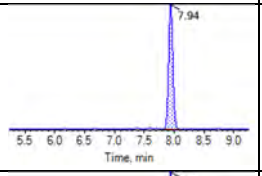
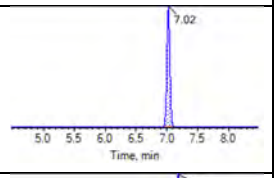
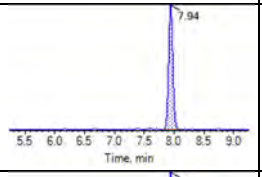
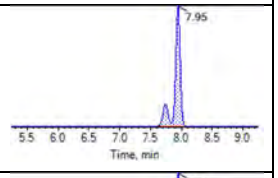
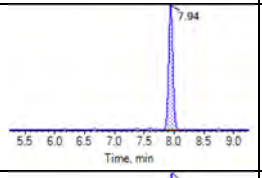
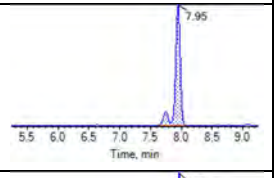
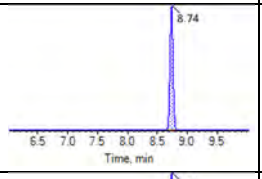
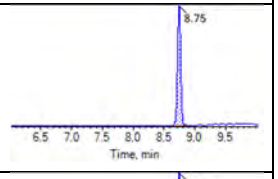
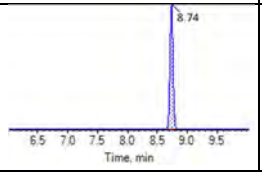
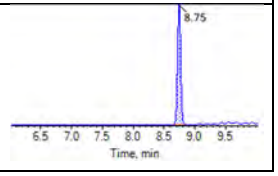
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.02 (7.02)	1553000	13C3_PFHxS	71220	940.0	1041.6	110.8	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.02 (7.02)	525000	13C3_PFHxS	71220	940.0	1007.7	107.2	0.34/ 0.35		
PFHxS	399.0 / 80.0	7.95 (7.96)	1252000	13C3_PFHxS	71220	912.0	911.7	100.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.95 (7.96)	315900	13C3_PFHxS	71220	912.0	910.7	99.9	0.25/ 0.25		
PFOA	413.0 / 369.0	8.75 (8.75)	936000	13C8_PFOA	223500	1000.0	992.7	99.3	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.75 (8.75)	324300	13C8_PFOA	223500	1000.0	921.7	92.2	0.35/ 0.37		

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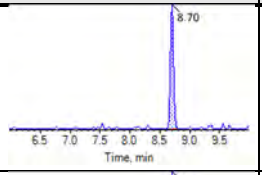
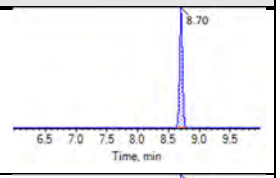
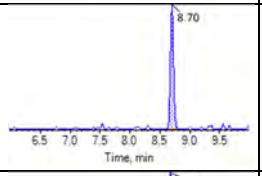
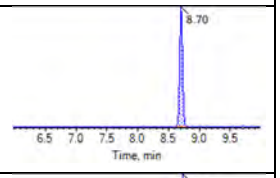
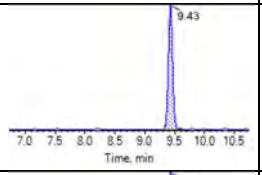
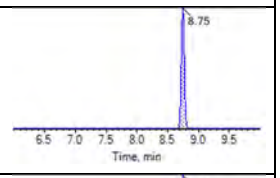
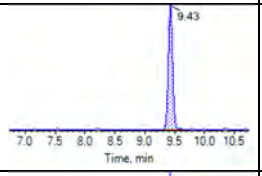
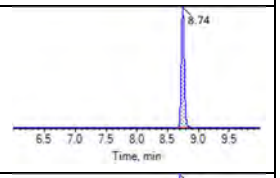
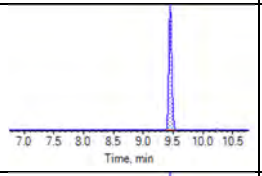
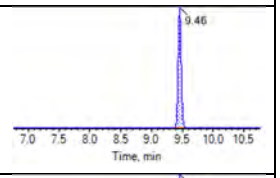
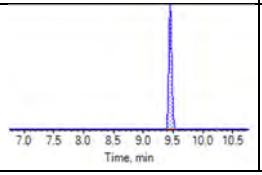
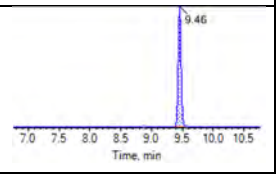
6:2 FTS	427.0 / 407.0	8.70 (8.72)	161400	13C2_6:2 FTS	31260	950.0	978.8	103.0	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.70 (8.72)	140600	13C2_6:2 FTS	31260	950.0	949.5	99.9	0.87/ 0.91		
PFHpS	449.0 / 80.0	8.75 (8.76)	1125000	13C8_PFOS	63080	950.0	914.9	96.3	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.74 (8.76)	219600	13C8_PFOS	63080	950.0	886.7	93.3	0.20/ 0.20		
PFNA	463.0 / 419.0	9.46 (9.47)	838200	13C9_PFNA	215600	1000.0	1156.6	115.7	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.46 (9.47)	194900	13C9_PFNA	215600	1000.0	1115.3	111.5	0.23/ 0.24		

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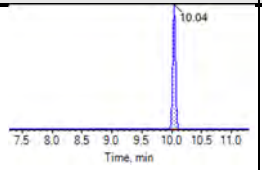
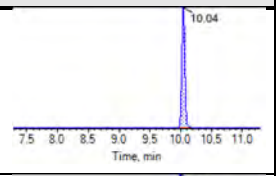
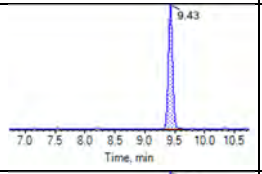
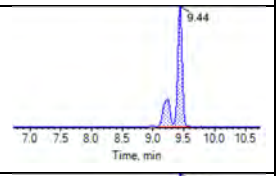
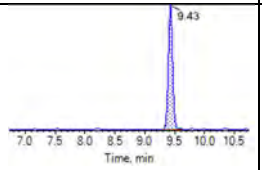
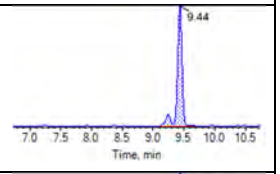
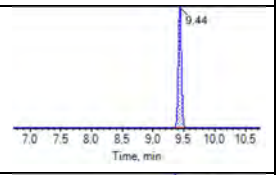
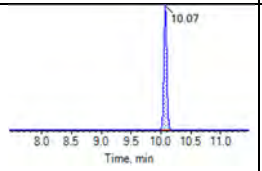
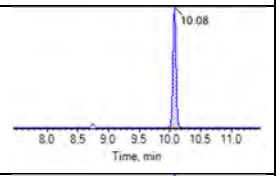
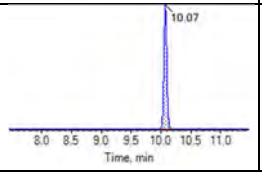
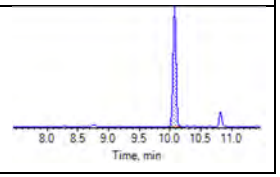
PFOSA	498.0 / 78.0	10.04 (10.04)	1956000	13C8_PFOSA	526500	925.5	992.9	107.3	1.00/ 1.00		
PFOS	499.0 / 80.0	9.44 (9.45)	1039000	13C8_PFOS	63080	1000.0	1013.9	101.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.44 (9.45)	146400	13C8_PFOS	63080	1000.0	967.1	96.7	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.44 (9.45)	1509000	N/A	N/A	1000.0	900.1	90.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.08 (10.08)	852000	13C6_PFDA	140500	1000.0	1176.3	117.6	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.08 (10.08)	97830	13C6_PFDA	140500	1000.0	1078.4	107.8	0.11/ 0.13		

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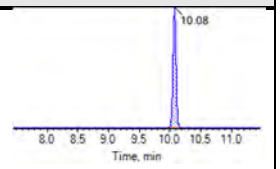
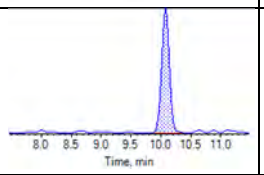
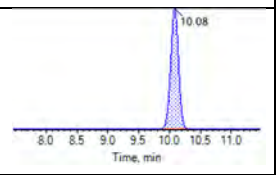
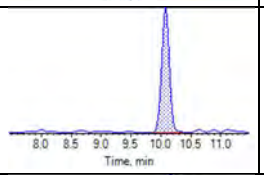
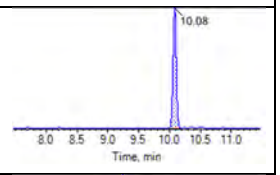
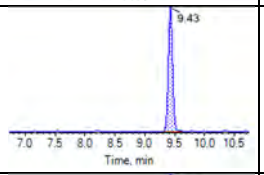
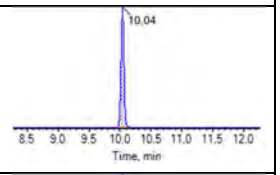
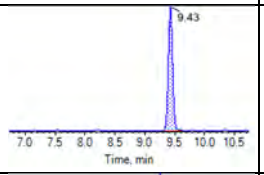
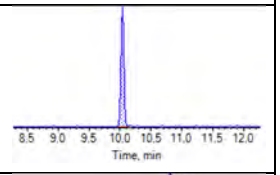
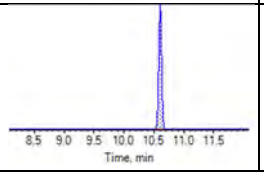
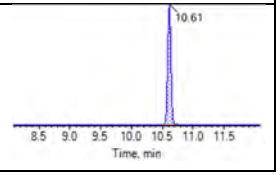
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.08 (10.02)	1072000	N/A	N/A	1000.0	929.7	93.0	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.08 (10.09)	98140	13C2_8:2 FTS	25240	960.0	754.4	78.6	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.08 (10.09)	113600	13C2_8:2 FTS	25240	960.0	901.1	93.9	1.16/ 0.96		
PFNS	549.0 / 80.0	10.04 (10.49)	1082000	13C8_PFOS	63080	960.0	1086.4	113.2	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.04 (10.49)	190900	13C8_PFOS	63080	960.0	1052.3	109.6	0.18/ 0.18		
PFUdA	563.0 / 519.0	10.61 (10.62)	691800	13C7_PFUdA	170600	1000.0	1138.4	113.8	1.00/ 1.00		

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LCMSMS#6

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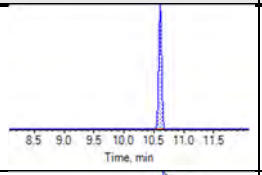
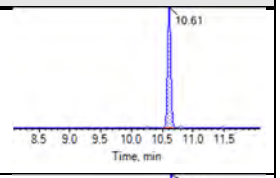
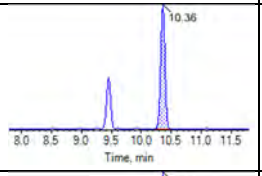
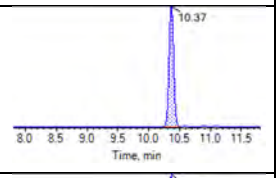
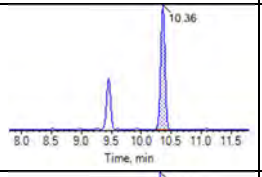
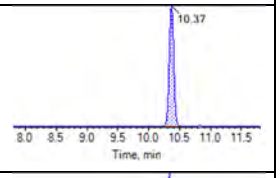
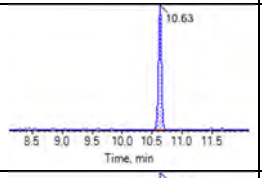
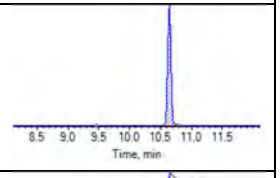
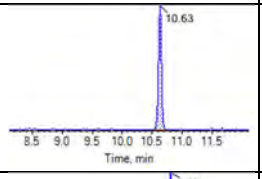
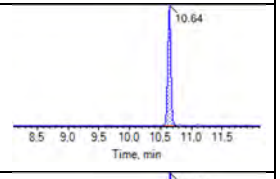
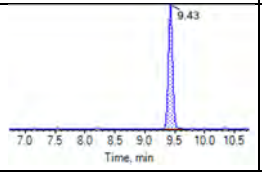
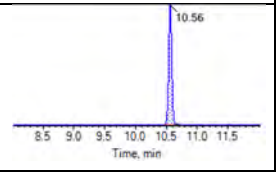
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.61 (10.62)	87290	13C7_PFUdA	170600	1000.0	1205.5	120.5	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.37 (10.37)	168700	d3-N-MeFOSAA	42860	1000.0	992.7	99.3	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.37 (10.37)	90260	d3-N-MeFOSAA	42860	1000.0	1078.2	107.8	0.54/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.64 (10.64)	173700	d5-N-EtFOSAA	53130	1000.0	805.2	80.5	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.64 (10.64)	97590	d5-N-EtFOSAA	53130	1000.0	952.1	95.2	0.56/ 0.48		
PFDS	599.0 / 80.0	10.56 (10.93)	1160000	13C8_PFOS	63080	965.0	955.2	99.0	1.00/ 1.00		

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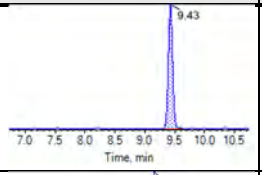
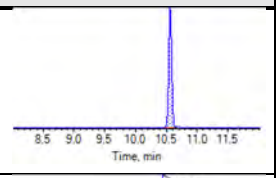
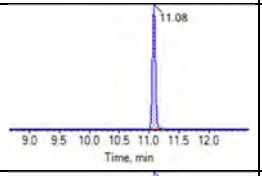
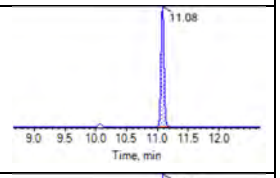
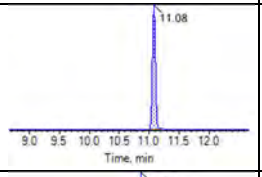
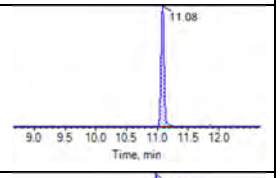
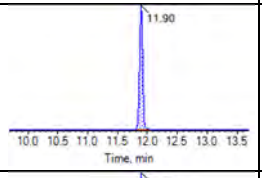
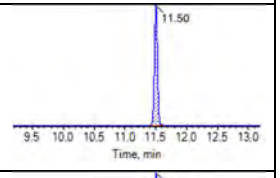
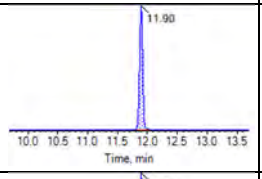
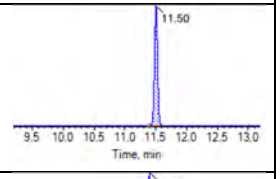
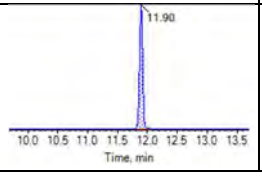
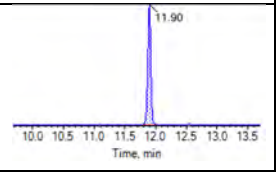
PFDS_2	599.0 / 99.0	10.56 (10.93)	321800	13C8_PFOS	63080	965.0	994.7	103.1	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.08 (11.09)	682300	13C2_PFDoA	159400	1000.0	1136.4	113.6	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.08 (11.09)	112000	13C2_PFDoA	159400	1000.0	1141.7	114.2	0.16/ 0.16		
PFTrDA	663.0 / 619.0	11.50 (11.82)	600900	13C2_PFTeDA	129200	1000.0	946.1	94.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.50 (11.82)	144300	13C2_PFTeDA	129200	1000.0	1027.3	102.7	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.90 (11.91)	453000	13C2_PFTeDA	129200	1000.0	973.6	97.4	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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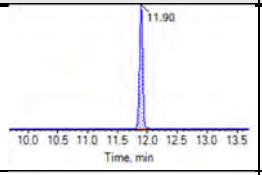
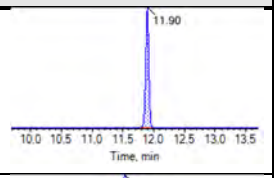
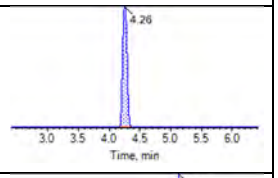
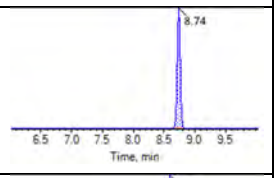
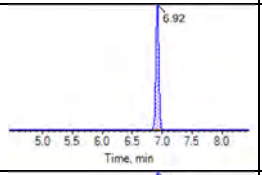
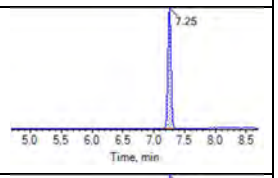
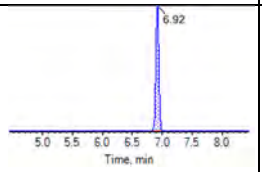
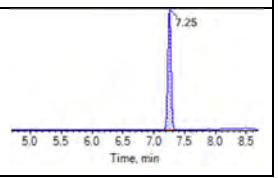
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.90 (11.91)	97390	13C2_PFTeDA	129200	1000.0	950.6	95.1	0.22/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1620000	N/A	N/A	1000.0	936.3	93.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.74 (8.75)	1107000	N/A	N/A	1000.0	899.9	90.0	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.25 (7.26)	672200	13C5_PFHxA	300000	1000.0	900.8	90.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.25 (7.26)	515400	13C5_PFHxA	300000	1000.0	918.0	91.8	0.77/ 0.75		

Continuing Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 09:46

Data File: PFC103117161.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-08

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	100	98.708	98.7	
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	94.21	94.2	
Perfluorotetradecanoic acid (PFTeDA)	100	88.749	88.7	
Perfluorotridecanoic acid (PFTrDA)	100	89.73	89.7	
Perfluorododecanoic acid (PFDoA)	100	103.189	103.2	
Perfluoroundecanoic acid (PFUdA)	100	129.736	129.7	
Perfluorodecanoic acid (PFDA)	100	109.851	109.9	
Perfluorononanoic acid (PFNA)	100	99.588	99.6	
Perfluorooctanoic acid (PFOA)	100	90.354	90.4	
Perfluorooctanesulfonate (PFOS)	100	91.146	91.1	
Perfluoroheptanoic acid (PFHpA)	100	94.438	94.4	
Perfluorohexanoic acid (PFHxA)	100	95.066	95.1	
Perfluorohexanesulfonate (PFHxS)	91.2	82.067	90	
Perfluorobutanesulfonate (PFBS)	88.5	86.448	97.7	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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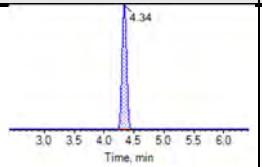
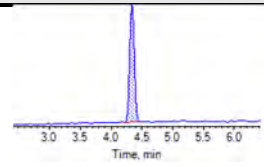
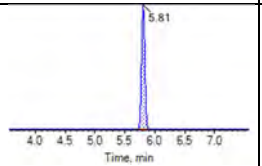
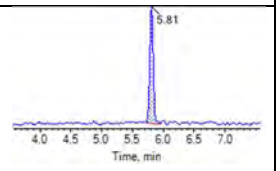
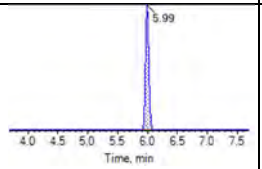
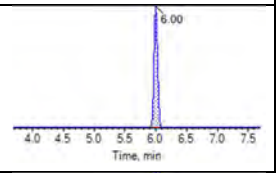
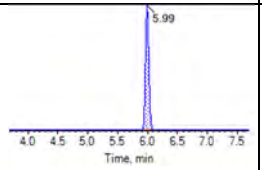
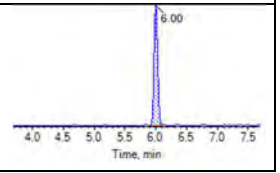
PFC103117161.wiff			
Sample Name	WPF171018-08DISC	**Injection Vial**	2
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117161.wiff
Acquisition Date	11/3/2017 09:46:46	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117161.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.34 (4.25)	117600	13C4_PFBA	174600	100.0	95.6	95.6	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.81 (5.69)	117500	13C5_PFPeA	275900	100.0	99.0	99.0	1.00/ 1.00		
PFBS	298.9 / 80.0	6.00 (5.89)	163500	13C3_PFBS	191900	88.5	86.4	97.7	1.00/ 1.00		
PFBS_2	298.9 / 99.0	6.00 (5.89)	67040	13C3_PFBS	191900	88.5	79.0	89.2	0.41/ 0.45		

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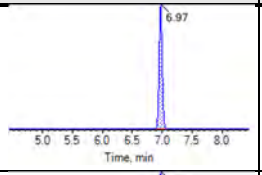
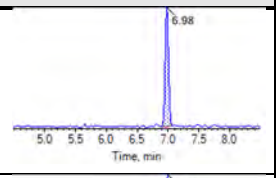
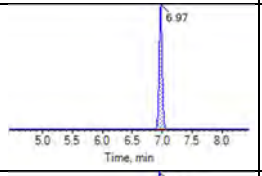
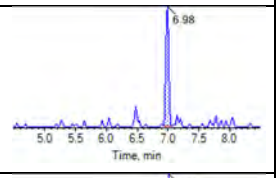
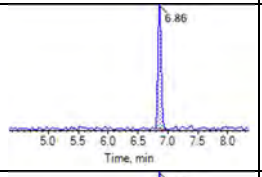
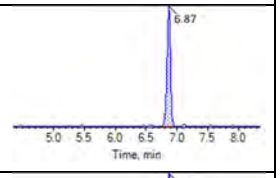
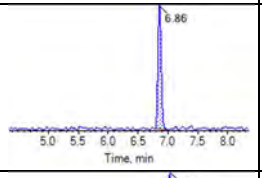
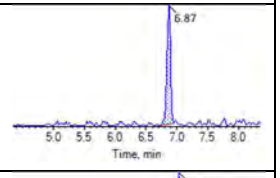
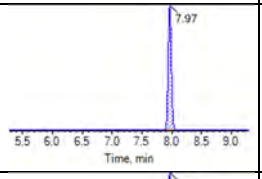
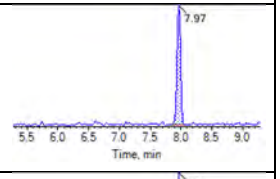
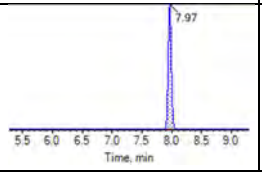
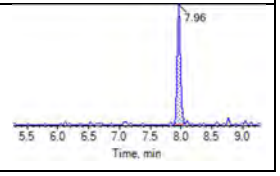
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.98 (6.92)	127200	13C5_PFHxA	352600	100.0	95.1	95.1	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.98 (6.92)	10450	13C5_PFHxA	352600	100.0	110.4	110.4	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.87 (6.80)	25230	13C2_4:2 FTS	51870	93.5	81.3	86.9	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.87 (6.80)	23320	13C2_4:2 FTS	51870	93.5	104.5	111.8	0.92/ 0.72		
PFHpA	363.0 / 319.0	7.97 (7.93)	123700	13C4_PFHpA	313200	100.0	94.4	94.4	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.96 (7.93)	34250	13C4_PFHpA	313200	100.0	100.0	100.0	0.28/ 0.26		

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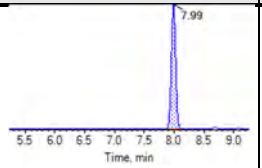
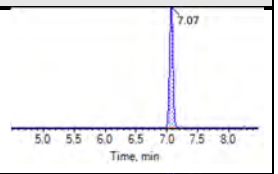
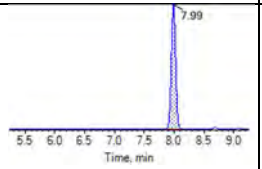
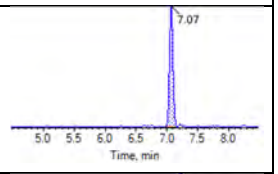
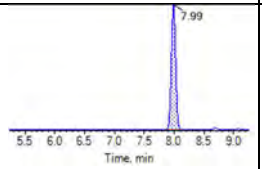
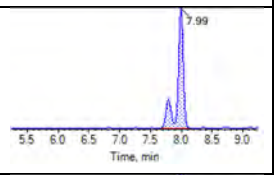
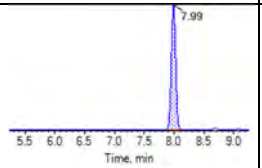
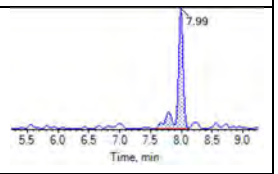
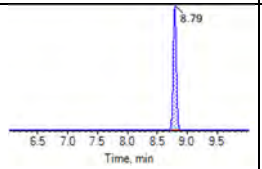
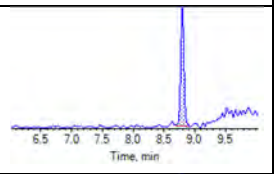
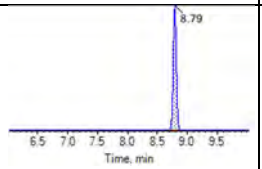
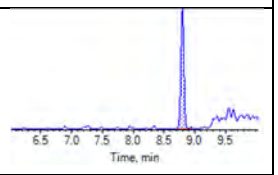
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.07 (7.02)	171400	13C3_PFHxS	94650	94.0	86.5	92.0	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.07 (7.02)	62590	13C3_PFHxS	94650	94.0	90.4	96.2	0.37/ 0.35		
PFHxS	399.0 / 80.0	7.99 (7.96)	149800	13C3_PFHxS	94650	91.2	82.1	90.0	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.99 (7.96)	41300	13C3_PFHxS	94650	91.2	89.6	98.2	0.28/ 0.25		
PFOA	413.0 / 369.0	8.80 (8.75)	96540	13C8_PFOA	253200	100.0	90.4	90.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.80 (8.75)	42030	13C8_PFOA	253200	100.0	105.4	105.4	0.44/ 0.37		

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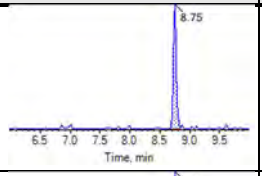
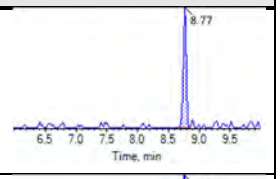
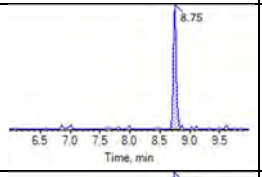
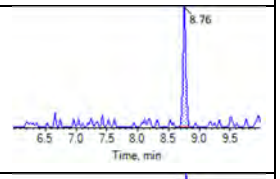
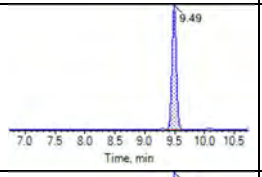
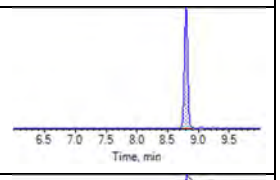
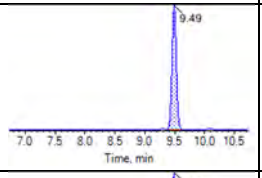
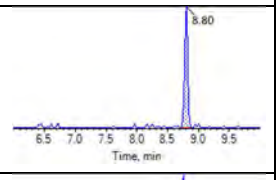
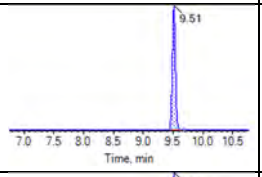
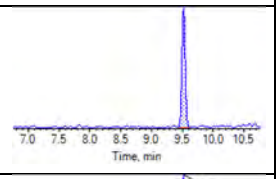
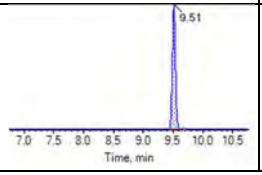
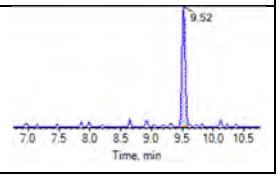
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.77 (8.72)	17170	13C2_6:2 FTS	40000	95.0	81.4	85.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.76 (8.72)	13220	13C2_6:2 FTS	40000	95.0	69.8	73.5	0.77/ 0.91		
PFHpS	449.0 / 80.0	8.80 (8.76)	140200	13C8_PFOS	79260	95.0	90.7	95.5	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.80 (8.76)	29580	13C8_PFOS	79260	95.0	95.1	100.1	0.21/ 0.20		
PFNA	463.0 / 419.0	9.52 (9.47)	91420	13C9_PFNA	273100	100.0	99.6	99.6	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.52 (9.47)	20920	13C9_PFNA	273100	100.0	94.5	94.5	0.23/ 0.24		

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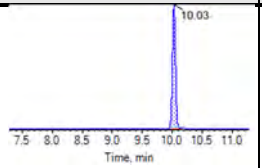
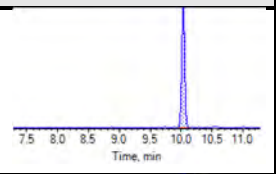
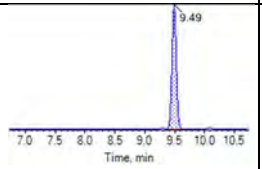
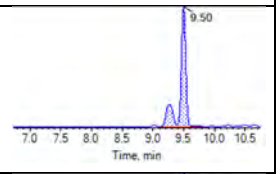
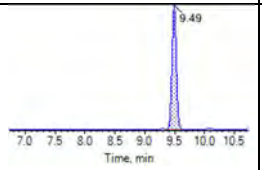
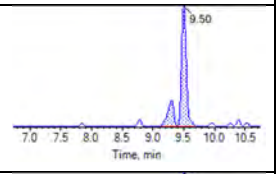
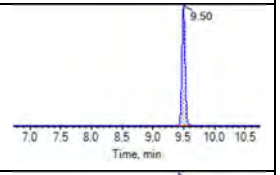
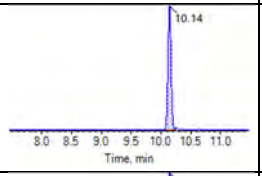
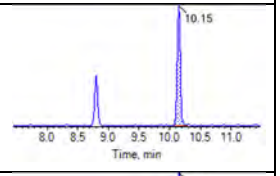
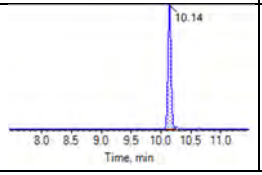
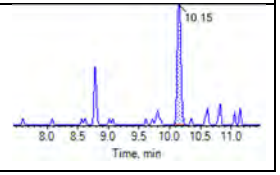
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.03 (10.04)	193300	13C8_PFOSA	638700	92.6	80.9	87.4	1.00/ 1.00		
PFOS	499.0 / 80.0	9.50 (9.45)	117400	13C8_PFOS	79260	100.0	91.1	91.1	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.50 (9.45)	15850	13C8_PFOS	79260	100.0	83.3	83.3	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.50 (9.45)	1694000	N/A	N/A	1000.0	1009.9	101.0	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.15 (10.08)	82980	13C6_PFDA	146600	100.0	109.9	109.9	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.15 (10.08)	10740	13C6_PFDA	146600	100.0	113.5	113.5	0.13/ 0.13		

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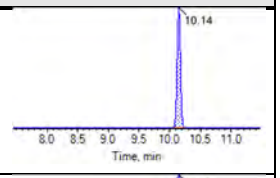
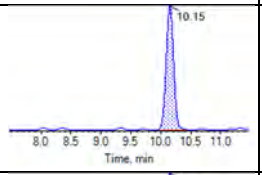
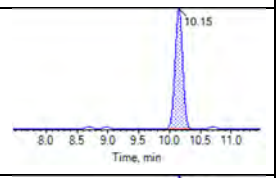
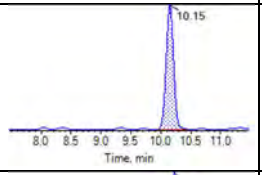
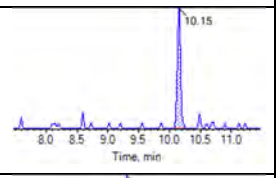
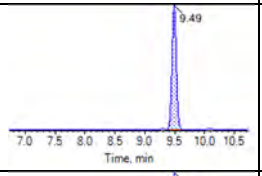
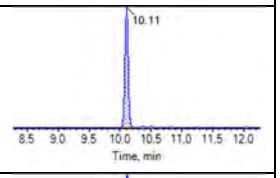
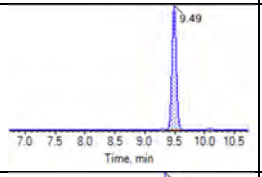
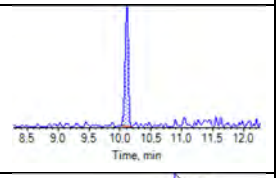
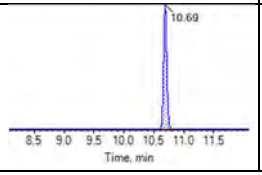
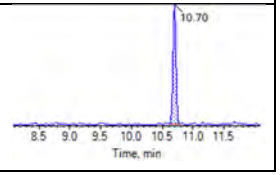
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.14 (10.02)	1132000	N/A	N/A	1000.0	981.0	98.1	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.15 (10.09)	14540	13C2_8:2 FTS	33890	96.0	83.2	86.7	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.15 (10.09)	11000	13C2_8:2 FTS	33890	96.0	65.0	67.7	0.76/ 0.96		
PFNS	549.0 / 80.0	10.11 (10.49)	116900	13C8_PFOS	79260	96.0	93.5	97.3	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.11 (10.49)	22340	13C8_PFOS	79260	96.0	98.0	102.1	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.70 (10.62)	80410	13C7_PFUdA	174000	100.0	129.7	129.7	1.00/ 1.00		

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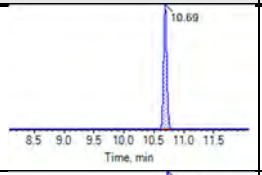
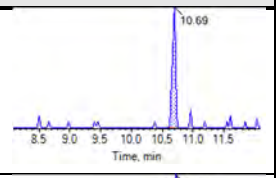
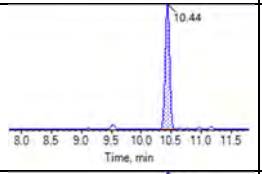
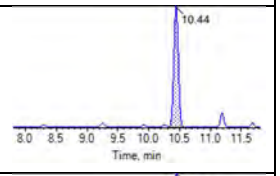
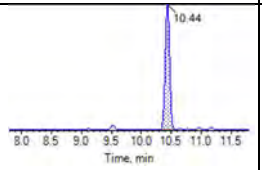
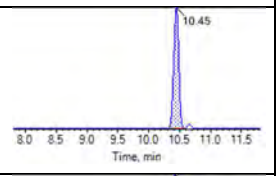
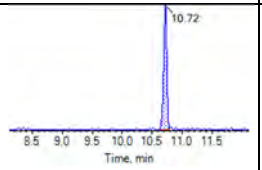
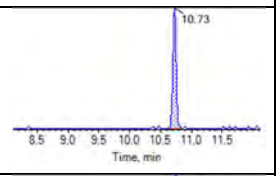
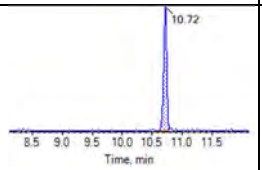
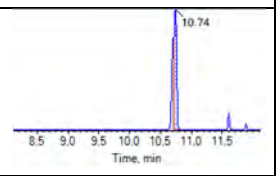
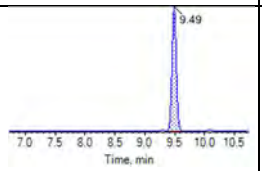
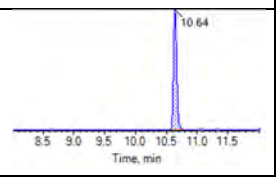
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.69 (10.62)	8110	13C7_PFUdA	174000	100.0	109.8	109.8	0.10/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.44 (10.37)	19490	d3-N-MeFOSAA	52180	100.0	94.2	94.2	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.45 (10.37)	9910	d3-N-MeFOSAA	52180	100.0	97.2	97.2	0.51/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.73 (10.64)	16990	d5-N-EtFOSAA	42400	100.0	98.7	98.7	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.74 (10.64)	6846	d5-N-EtFOSAA	42400	100.0	83.7	83.7	0.40/ 0.48		
PFDS	599.0 / 80.0	10.64 (10.93)	111900	13C8_PFOS	79260	96.5	73.4	76.0	1.00/ 1.00		

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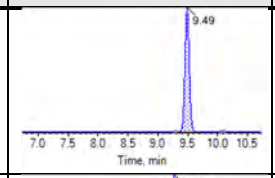
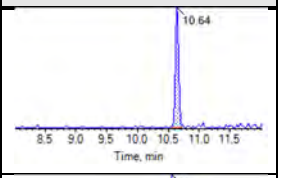
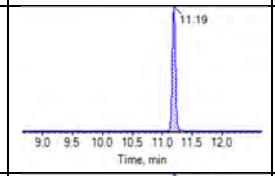
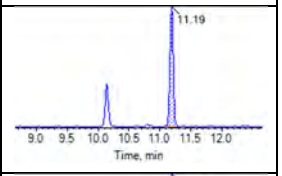
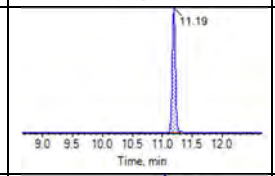
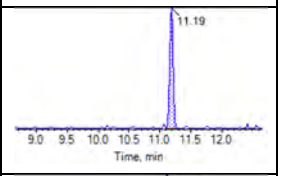
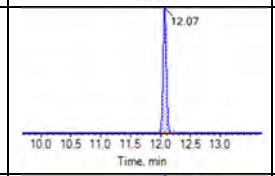
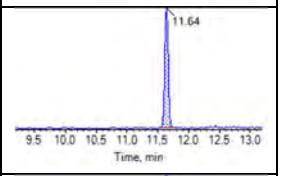
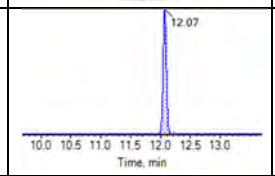
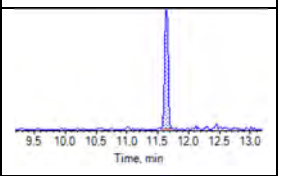
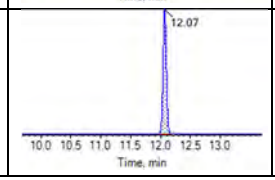
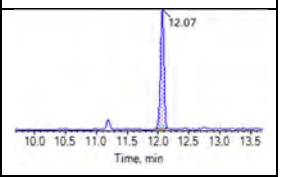
PFDS_2	599.0 / 99.0	10.64 (10.93)	31090	13C8_PFOS	79260	96.5	76.5	79.2	0.28/ 0.27		
PFDoA	613.0 / 569.0	11.19 (11.09)	76620	13C2_PFDoA	197200	100.0	103.2	103.2	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.19 (11.09)	14730	13C2_PFDoA	197200	100.0	121.4	121.4	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.64 (11.82)	63400	13C2_PFTeDA	143700	100.0	89.7	89.7	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.64 (11.82)	13250	13C2_PFTeDA	143700	100.0	84.8	84.8	0.21/ 0.22		
PFTeDA	713.0 / 669.0	12.07 (11.91)	45930	13C2_PFTeDA	143700	100.0	88.7	88.7	1.00/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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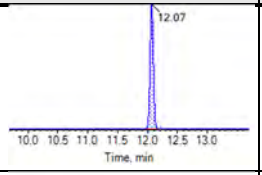
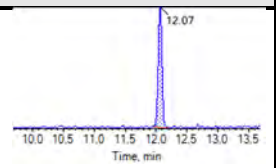
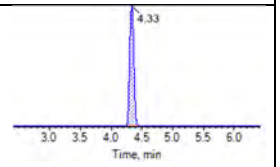
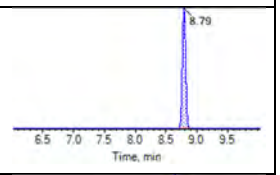
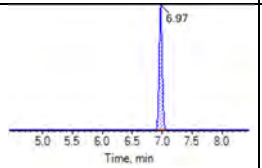
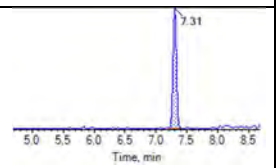
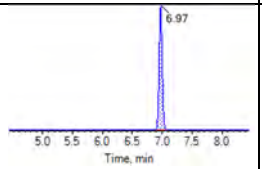
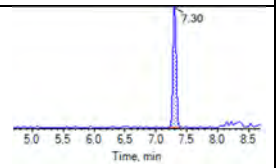
PFC103117161.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	12.07 (11.91)	11380	13C2_PFTeDA	143700	100.0	99.8	99.8	0.25/ 0.22		
13C3_PFBA	216.0 / 172.0	4.33 (4.60)	2004000	N/A	N/A	1000.0	1158.3	115.8	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.79 (8.75)	1302000	N/A	N/A	1000.0	1058.1	105.8	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.31 (7.26)	82870	13C5_PFHxA	352600	100.0	94.5	94.5	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.30 (7.26)	66770	13C5_PFHxA	352600	100.0	101.2	101.2	0.81/ 0.75		

Continuing Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 04-NOV-17 01:28

Data File: PFC103117205.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171018-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	979.875	98	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1027.526	102.8	
Perfluorotetradecanoic acid (PFTeDA)	1000	960.325	96	
Perfluorotridecanoic acid (PFTrDA)	1000	946.361	94.6	
Perfluorododecanoic acid (PFDoA)	1000	947.91	94.8	
Perfluoroundecanoic acid (PFUdA)	1000	910.162	91	
Perfluorodecanoic acid (PFDA)	1000	1278.382	127.8	
Perfluorononanoic acid (PFNA)	1000	1126.83	112.7	
Perfluorooctanoic acid (PFOA)	1000	1094.476	109.4	
Perfluoroheptanoic acid (PFHpA)	1000	923.446	92.3	
Perfluorooctanesulfonate (PFOS)	1000	976.131	97.6	
Perfluorohexanoic acid (PFHxA)	1000	1045.624	104.6	
Perfluorohexanesulfonate (PFHxS)	912	730.184	80.1	
Perfluorobutanesulfonate (PFBS)	885	978.613	110.6	

Recovery criteria is 70% - 130%

JTSB
11/06/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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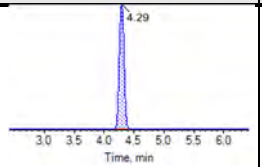
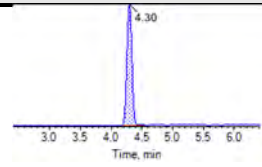
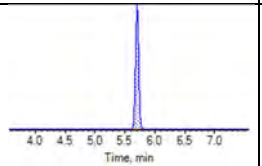
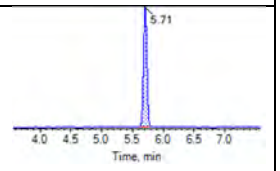
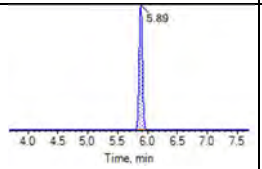
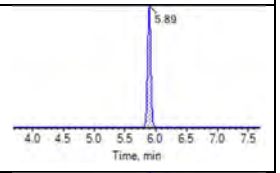
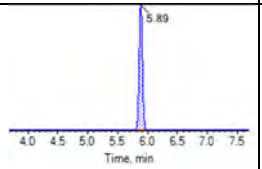
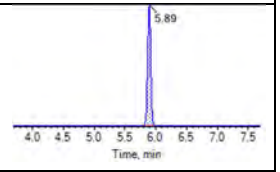
PFC103117205.wiff			
Sample Name	WPF171018-09CCV	**Injection Vial**	39
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117205.wiff
Acquisition Date	11/4/2017 01:28:07	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117205.wiff

Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFBA	212.9 / 169.0	4.30 (4.25)	1070000	13C4_PFBA	148900	1000.0	1019.1	101.9	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.71 (5.69)	993700	13C5_PFPeA	228900	1000.0	1009.0	100.9	1.00/ 1.00		
PFBS	298.9 / 80.0	5.89 (5.89)	1465000	13C3_PFBS	151900	885.0	978.6	110.6	1.00/ 1.00		
PFBS_2	298.9 / 99.0	5.89 (5.89)	660400	13C3_PFBS	151900	885.0	982.3	111.0	0.45/ 0.45		

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LCMSMS#6

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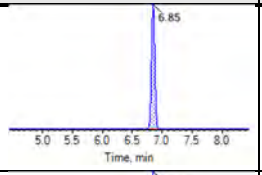
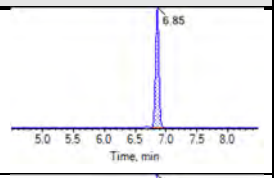
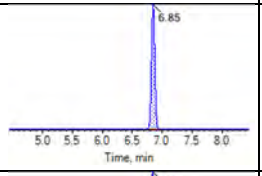
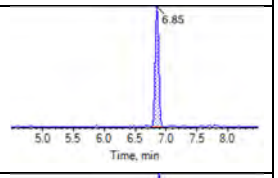
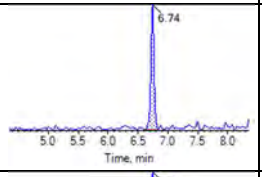
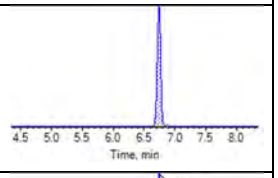
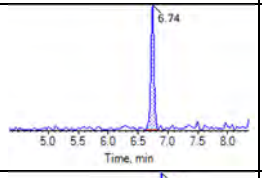
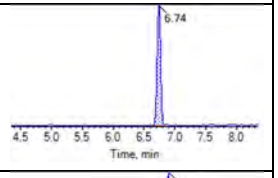
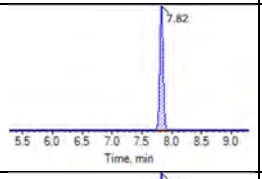
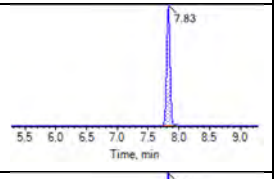
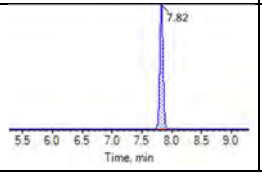
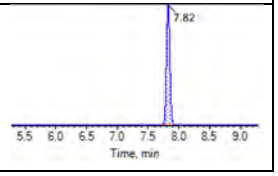
PFC103117205.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	6.85 (6.92)	1126000	13C5_PFHxA	283700	1000.0	1045.6	104.6	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	6.85 (6.92)	82870	13C5_PFHxA	283700	1000.0	1088.5	108.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.74 (6.80)	192900	13C2_4:2 FTS	36780	935.0	876.0	93.7	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.74 (6.80)	141000	13C2_4:2 FTS	36780	935.0	891.3	95.3	0.73/ 0.72		
PFHpA	363.0 / 319.0	7.83 (7.93)	990900	13C4_PFHpA	256600	1000.0	923.4	92.3	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	7.82 (7.93)	260700	13C4_PFHpA	256600	1000.0	929.2	92.9	0.26/ 0.26		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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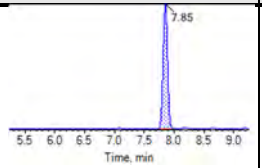
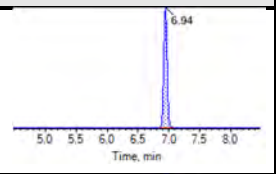
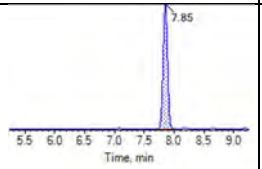
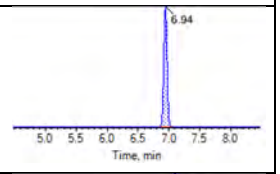
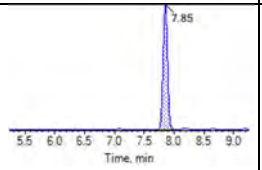
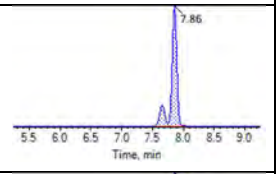
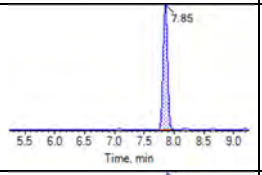
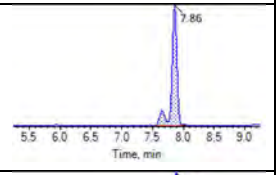
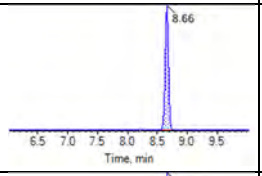
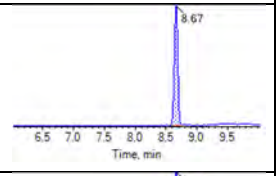
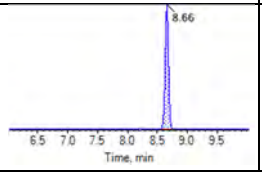
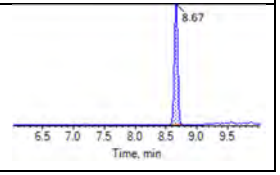
PFC103117205.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	6.94 (7.02)	1555000	13C3_PFHxS	87690	940.0	846.9	90.1	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	6.94 (7.02)	586500	13C3_PFHxS	87690	940.0	914.4	97.3	0.38/ 0.35		
PFHxS	399.0 / 80.0	7.86 (7.96)	1235000	13C3_PFHxS	87690	912.0	730.2	80.1	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	7.86 (7.96)	331100	13C3_PFHxS	87690	912.0	775.2	85.0	0.27/ 0.25		
PFOA	413.0 / 369.0	8.67 (8.75)	965100	13C8_PFOA	209000	1000.0	1094.5	109.4	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.67 (8.75)	352400	13C8_PFOA	209000	1000.0	1070.9	107.1	0.37/ 0.37		

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LCMSMS#6

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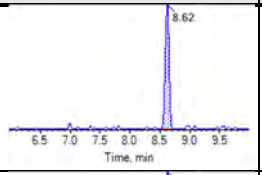
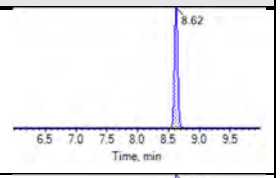
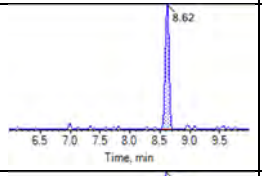
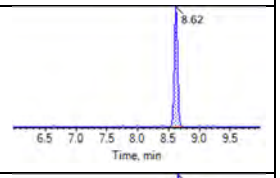
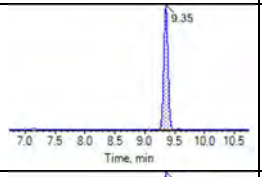
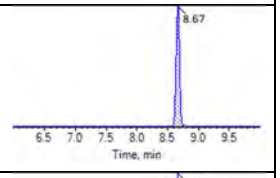
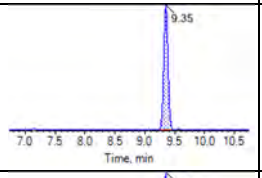
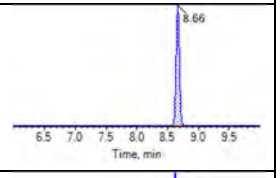
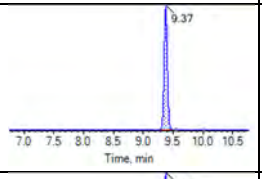
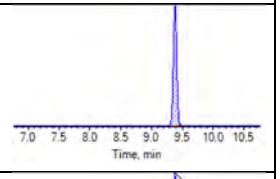
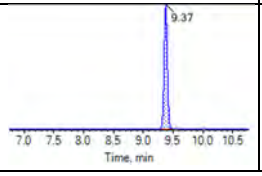
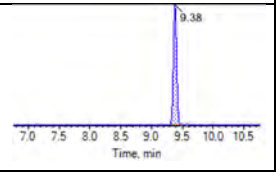
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.62 (8.72)	176300	13C2_6:2 FTS	39400	950.0	848.7	89.3	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.62 (8.72)	150400	13C2_6:2 FTS	39400	950.0	805.7	84.8	0.85/ 0.91		
PFHpS	449.0 / 80.0	8.67 (8.76)	1172000	13C8_PFOS	66240	950.0	907.8	95.6	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.66 (8.76)	242700	13C8_PFOS	66240	950.0	933.6	98.3	0.21/ 0.20		
PFNA	463.0 / 419.0	9.38 (9.47)	818000	13C9_PFNA	216000	1000.0	1126.8	112.7	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.38 (9.47)	185100	13C9_PFNA	216000	1000.0	1057.7	105.8	0.23/ 0.24		

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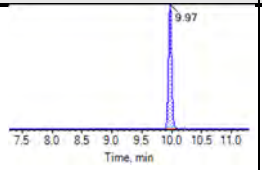
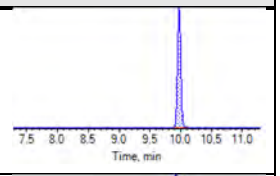
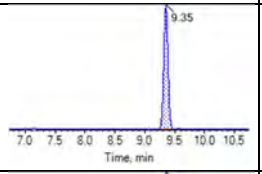
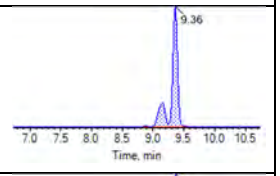
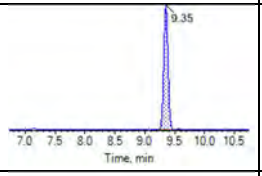
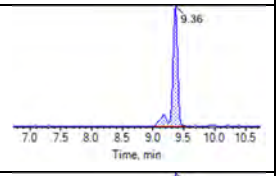
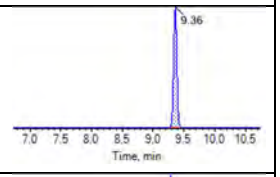
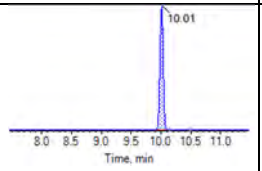
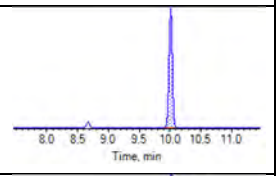
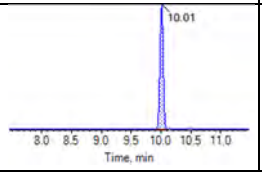
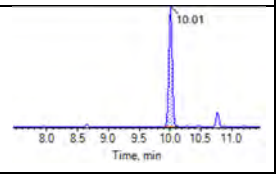
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	9.97 (10.04)	1724000	13C8_PFOSA	531800	925.5	866.2	93.6	1.00/ 1.00		
PFOS	499.0 / 80.0	9.36 (9.45)	1050000	13C8_PFOS	66240	1000.0	976.1	97.6	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.36 (9.45)	149900	13C8_PFOS	66240	1000.0	943.2	94.3	0.14/ 0.15		
13C4_PFOS	503.0 / 80.0	9.36 (9.45)	1634000	N/A	N/A	1000.0	974.4	97.4	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.01 (10.08)	805300	13C6_PFDA	122200	1000.0	1278.4	127.8	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.01 (10.08)	112200	13C6_PFDA	122200	1000.0	1421.8	142.2	0.14/ 0.13		

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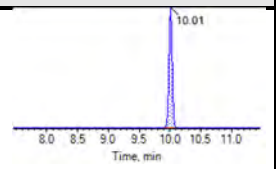
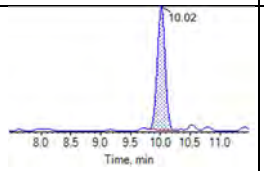
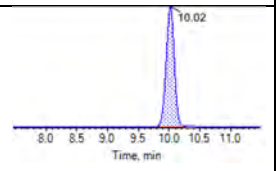
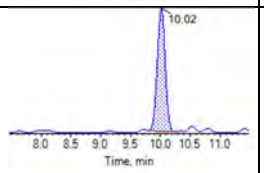
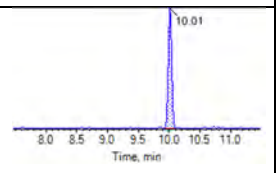
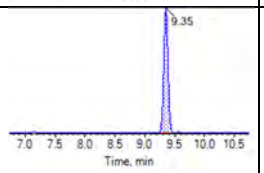
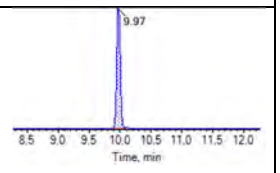
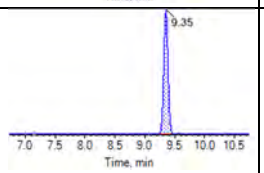
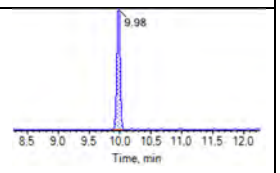
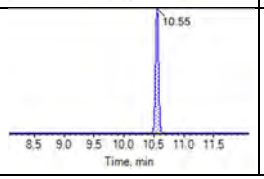
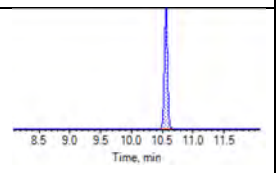
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1130000	N/A	N/A	1000.0	979.1	97.9	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.02 (10.09)	122800	13C2_8:2 FTS	23000	960.0	1036.4	108.0	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.01 (10.09)	104000	13C2_8:2 FTS	23000	960.0	905.5	94.3	0.85/ 0.96		
PFNS	549.0 / 80.0	9.97 (9.97)	991900	13C8_PFOS	66240	960.0	948.8	98.8	1.00/ 1.00		
PFNS_2	549.0 / 99.0	9.98 (9.98)	195000	13C8_PFOS	66240	960.0	1023.9	106.7	0.20/ 0.18		
PFUdA	563.0 / 519.0	10.56 (10.62)	649900	13C7_PFUdA	200500	1000.0	910.2	91.0	1.00/ 1.00		

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LCMSMS#6

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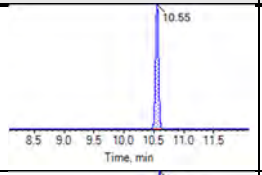
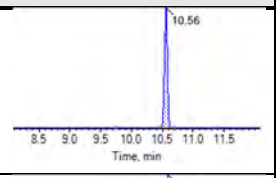
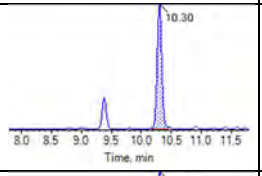
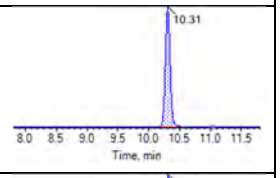
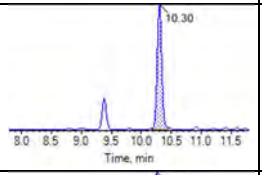
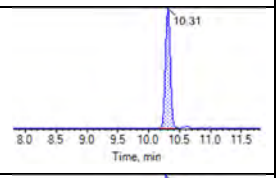
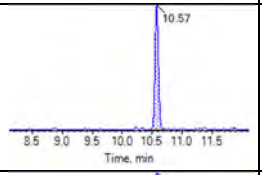
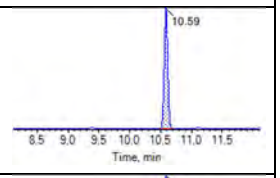
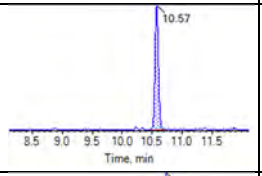
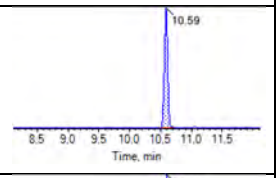
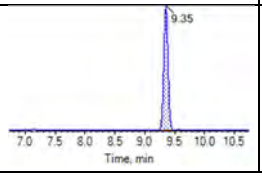
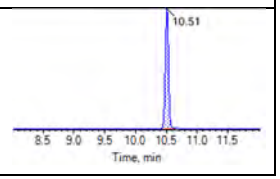
PFC103117205.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.56 (10.62)	97150	13C7_PFUdA	200500	1000.0	1141.8	114.2	0.15/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.31 (10.37)	182900	d3-N-MeFOSAA	44890	1000.0	1027.5	102.8	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.31 (10.37)	74990	d3-N-MeFOSAA	44890	1000.0	855.2	85.5	0.41/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.59 (10.64)	169100	d5-N-EtFOSAA	42500	1000.0	979.9	98.0	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.59 (10.64)	91060	d5-N-EtFOSAA	42500	1000.0	1110.7	111.1	0.54/ 0.48		
PFDS	599.0 / 80.0	10.51 (10.93)	1159000	13C8_PFOS	66240	965.0	908.7	94.2	1.00/ 1.00		

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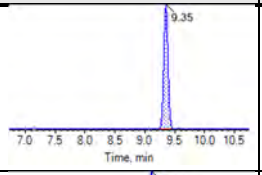
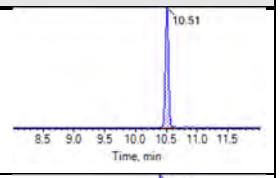
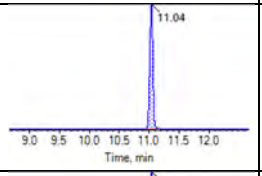
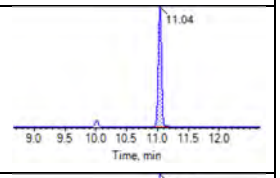
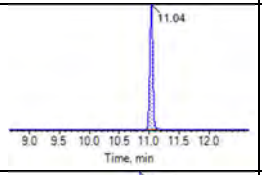
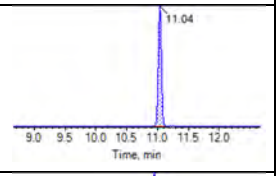
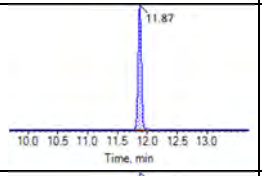
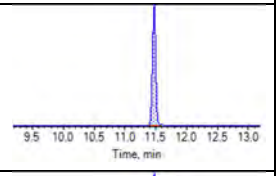
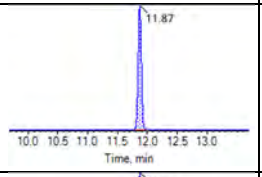
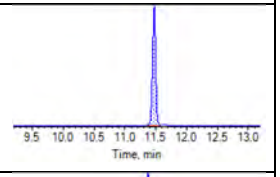
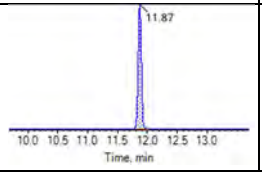
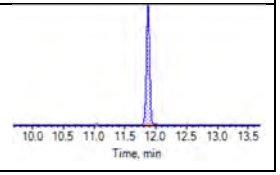
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.51 (10.93)	299300	13C8_PFOS	66240	965.0	880.9	91.3	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.04 (11.09)	631200	13C2_PFDoA	176800	1000.0	947.9	94.8	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.04 (11.09)	122400	13C2_PFDoA	176800	1000.0	1124.2	112.4	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.47 (11.82)	540600	13C2_PFTeDA	116200	1000.0	946.4	94.6	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.47 (11.82)	129600	13C2_PFTeDA	116200	1000.0	1025.7	102.6	0.24/ 0.22		
PFTeDA	713.0 / 669.0	11.87 (11.91)	401900	13C2_PFTeDA	116200	1000.0	960.3	96.0	1.00/ 1.00		

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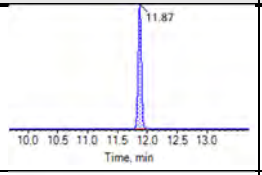
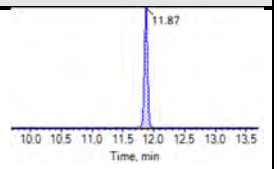
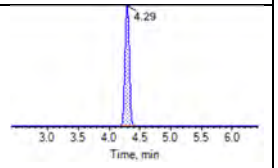
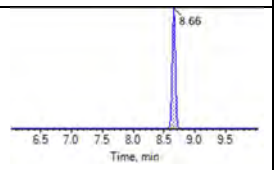
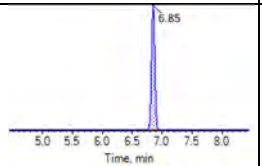
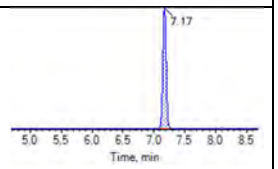
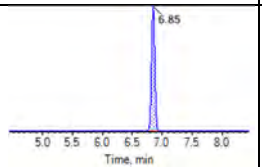
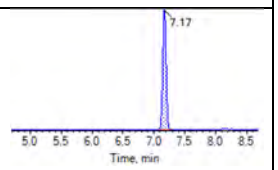
PFC103117205.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	11.87 (11.91)	99290	13C2_PFTeDA	116200	1000.0	1077.4	107.7	0.25/ 0.22		
13C3_PFBA	216.0 / 172.0	4.29 (4.60)	1803000	N/A	N/A	1000.0	1042.1	104.2	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.66 (8.75)	1166000	N/A	N/A	1000.0	947.3	94.7	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.17 (7.26)	608100	13C5_PFHxA	283700	1000.0	861.8	86.2	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.17 (7.26)	497900	13C5_PFHxA	283700	1000.0	937.9	93.8	0.82/ 0.75		

Continuing Calibration Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 10-NOV-17 00:38

Data File: PFC103117220.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID WPF171108-09

Method: EPA 537 Modified

Column ID: Gemini 3u C-18

Quant Type: ISTD

Compound	True Value	Result	Recovery	Q
N-ethylperfluoro-1-octanesulfonamidoacetic acid	1000	763.384	76.3	
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	958.672	95.9	
Perfluorotetradecanoic acid (PFTeDA)	1000	890.971	89.1	
Perfluorotridecanoic acid (PFTrDA)	1000	903.699	90.4	
Perfluorododecanoic acid (PFDoA)	1000	928.044	92.8	
Perfluoroundecanoic acid (PFUdA)	1000	952.335	95.2	
Perfluorononanoic acid (PFNA)	1000	982.971	98.3	
Perfluorodecanoic acid (PFDA)	1000	1239.207	123.9	
Perfluorooctanoic acid (PFOA)	1000	861.869	86.2	
Perfluorooctanesulfonate (PFOS)	1000	1143.833	114.4	
Perfluoroheptanoic acid (PFHpA)	1000	883.338	88.3	
Perfluorohexanoic acid (PFHxA)	1000	1009.88	101	
Perfluorohexanesulfonate (PFHxS)	912	734.327	80.5	
Perfluorobutanesulfonate (PFBS)	885	839.807	94.9	

Recovery criteria is 70% - 130%

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LCMSMS#6

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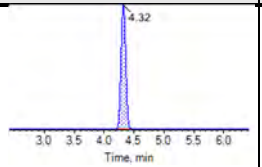
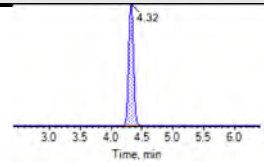
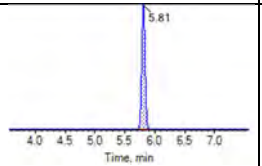
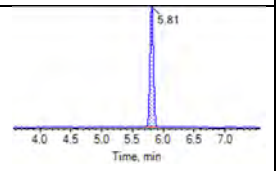
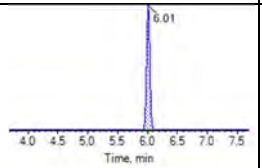
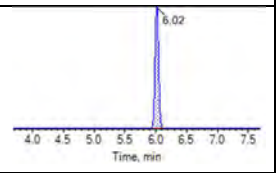
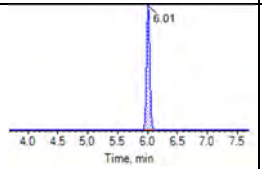
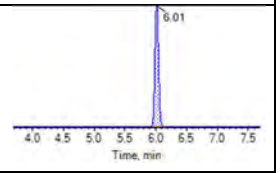
PFC103117220.wiff			
Sample Name	WPF171108-09CCV	**Injection Vial**	13
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Quality Control	**Data File**	PFC103117220.wiff
Acquisition Date	11/10/2017 00:38:44	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_C

Results Summary

PFC103117220.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.32 (4.25)	1062000	13C4_PFBA	146800	1000.0	1026.8	102.7	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.81 (5.69)	917200	13C5_PFPeA	231700	1000.0	920.1	92.0	1.00/ 1.00		
PFBS	298.9 / 80.0	6.02 (5.89)	1320000	13C3_PFBS	159400	885.0	839.8	94.9	1.00/ 1.00		
PFBS_2	298.9 / 99.0	6.01 (5.89)	583200	13C3_PFBS	159400	885.0	826.6	93.4	0.44/ 0.45		

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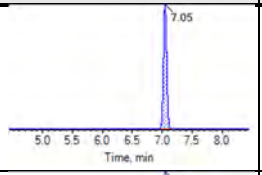
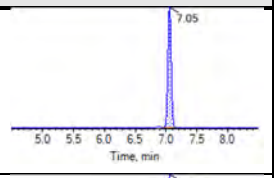
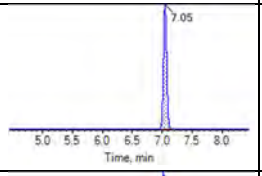
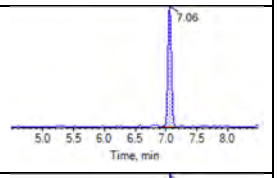
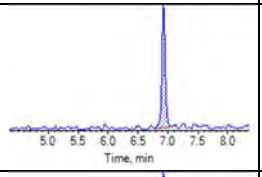
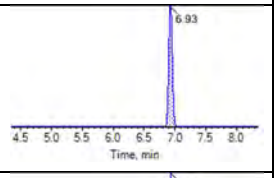
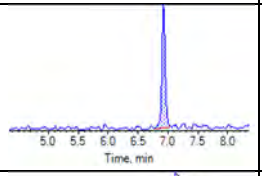
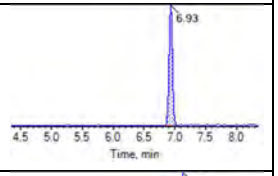
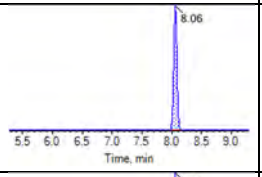
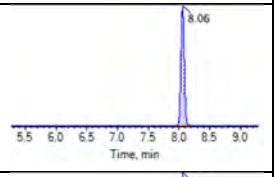
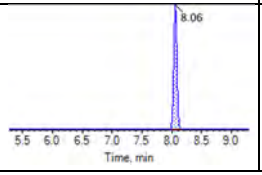
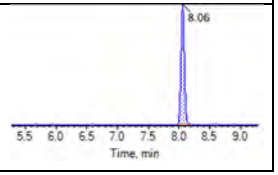
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	7.05 (6.92)	1144000	13C5_PFHxA	298400	1000.0	1009.9	101.0	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	7.06 (6.92)	83130	13C5_PFHxA	298400	1000.0	1038.1	103.8	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	6.93 (6.80)	171200	13C2_4:2 FTS	43440	935.0	658.5	70.4	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.93 (6.80)	142100	13C2_4:2 FTS	43440	935.0	760.8	81.4	0.83/ 0.72		
PFHpA	363.0 / 319.0	8.06 (7.93)	1099000	13C4_PFHpA	297500	1000.0	883.3	88.3	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	8.06 (7.93)	278400	13C4_PFHpA	297500	1000.0	855.9	85.6	0.25/ 0.26		

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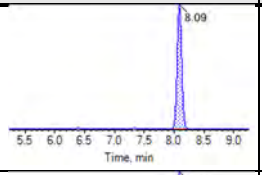
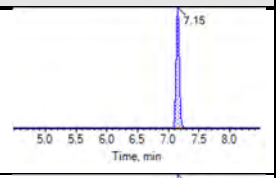
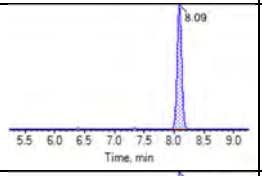
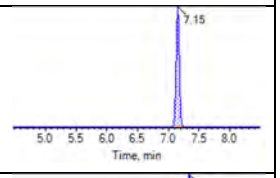
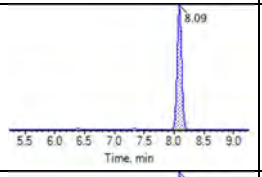
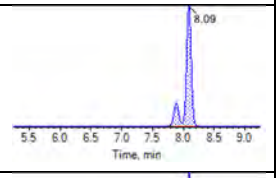
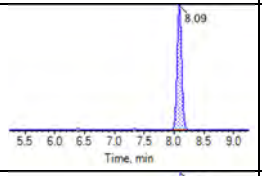
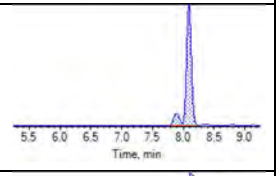
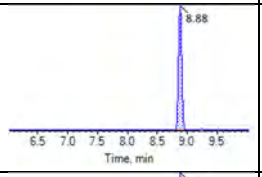
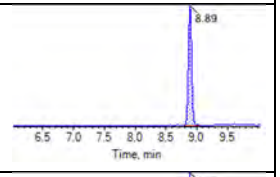
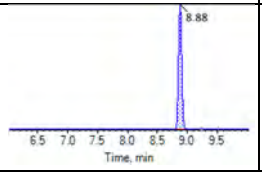
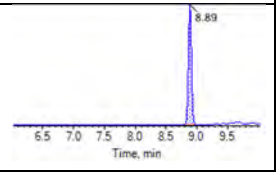
PFPeS	349.0 / 80.0	7.15 (7.02)	1453000	13C3_PFHxS	86970	940.0	798.2	84.9	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.15 (7.02)	532400	13C3_PFHxS	86970	940.0	836.9	89.0	0.37/ 0.35		
PFHxS	399.0 / 80.0	8.09 (7.96)	1232000	13C3_PFHxS	86970	912.0	734.3	80.5	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	8.09 (7.96)	335900	13C3_PFHxS	86970	912.0	793.0	87.0	0.27/ 0.25		
PFOA	413.0 / 369.0	8.89 (8.75)	871000	13C8_PFOA	239500	1000.0	861.9	86.2	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.89 (8.75)	338000	13C8_PFOA	239500	1000.0	896.4	89.6	0.39/ 0.37		

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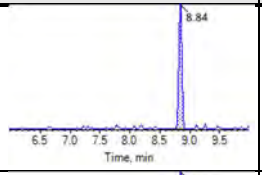
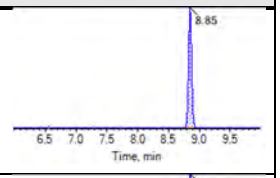
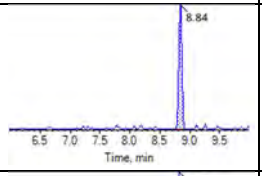
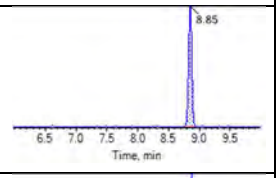
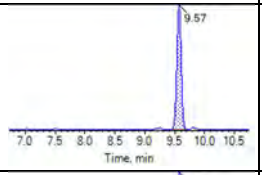
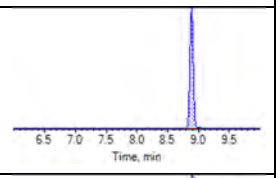
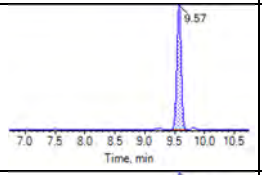
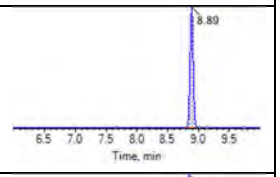
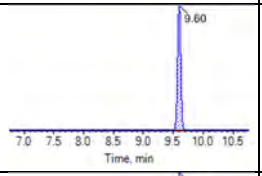
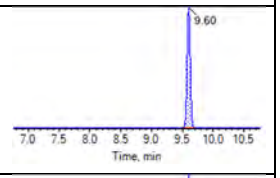
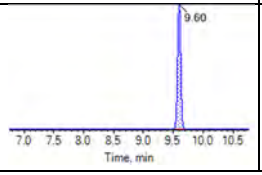
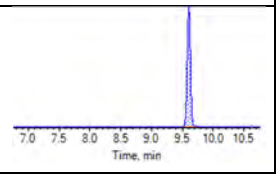
6:2 FTS	427.0 / 407.0	8.85 (8.72)	165700	13C2_6:2 FTS	36480	950.0	861.6	90.7	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.85 (8.72)	140000	13C2_6:2 FTS	36480	950.0	810.5	85.3	0.84/ 0.91		
PFHpS	449.0 / 80.0	8.89 (8.76)	1036000	13C8_PFOS	52720	950.0	1008.1	106.1	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.89 (8.76)	234300	13C8_PFOS	52720	950.0	1132.4	119.2	0.23/ 0.20		
PFNA	463.0 / 419.0	9.60 (9.47)	782700	13C9_PFNA	236900	1000.0	983.0	98.3	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.61 (9.47)	187200	13C9_PFNA	236900	1000.0	974.7	97.5	0.24/ 0.24		

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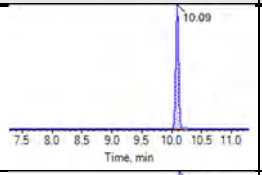
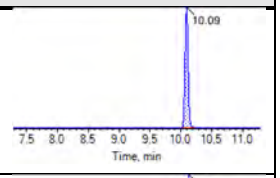
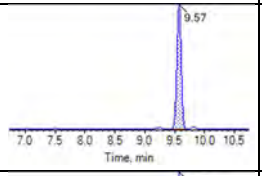
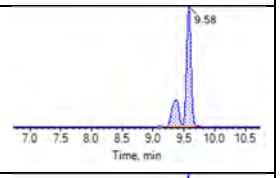
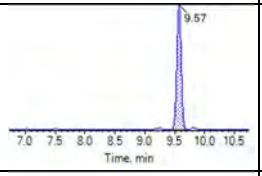
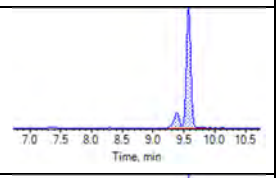
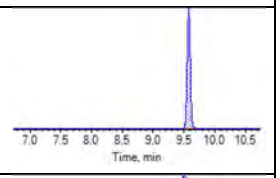
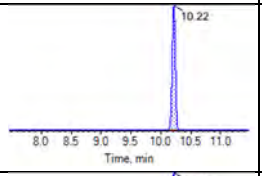
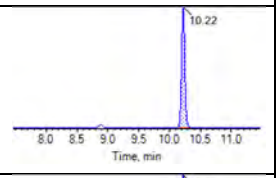
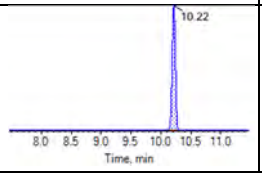
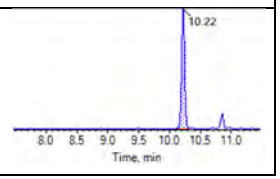
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.09 (10.04)	1628000	13C8_PFOSA	527000	925.5	825.8	89.2	1.00/ 1.00		
PFOS	499.0 / 80.0	9.58 (9.45)	979800	13C8_PFOS	52720	1000.0	1143.8	114.4	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.58 (9.45)	149900	13C8_PFOS	52720	1000.0	1184.8	118.5	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.58 (9.45)	1434000	N/A	N/A	1000.0	855.0	85.5	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.22 (10.08)	785300	13C6_PFDA	123000	1000.0	1239.2	123.9	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.22 (10.08)	92800	13C6_PFDA	123000	1000.0	1169.3	116.9	0.12/ 0.13		

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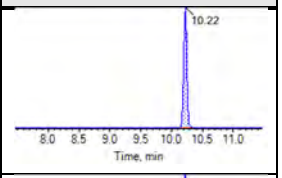
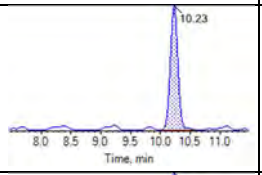
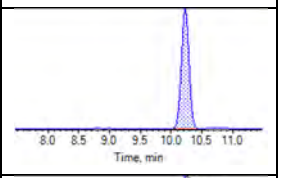
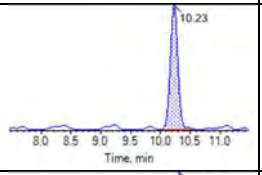
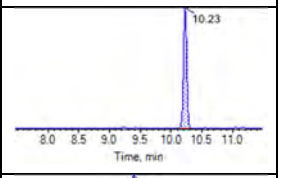
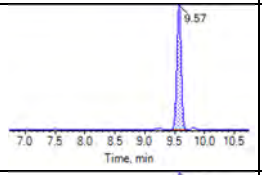
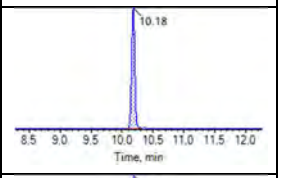
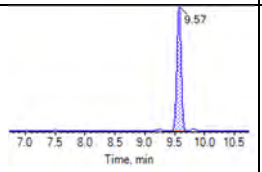
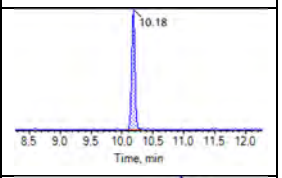
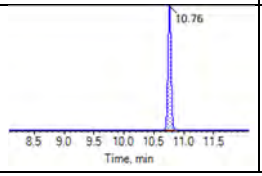
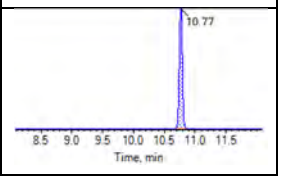
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.22 (10.02)	1019000	N/A	N/A	1000.0	883.7	88.4	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.23 (10.09)	113600	13C2_8:2 FTS	22990	960.0	958.4	99.8	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.23 (10.09)	97500	13C2_8:2 FTS	22990	960.0	849.1	88.4	0.86/ 0.96		
PFNS	549.0 / 80.0	10.18 (10.49)	983600	13C8_PFOS	52720	960.0	1181.9	123.1	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.18 (10.49)	171300	13C8_PFOS	52720	960.0	1130.0	117.7	0.17/ 0.18		
PFUdA	563.0 / 519.0	10.77 (10.62)	627100	13C7_PFUdA	184900	1000.0	952.3	95.2	1.00/ 1.00		

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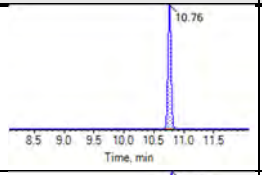
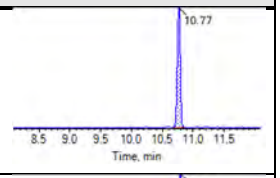
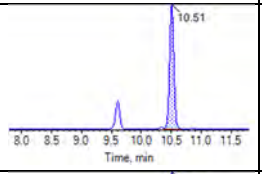
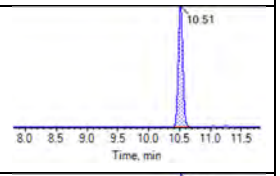
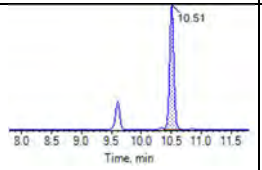
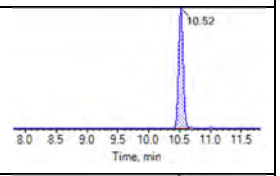
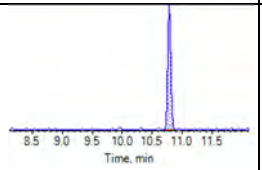
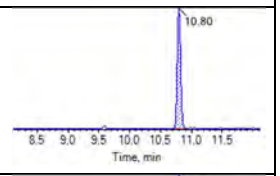
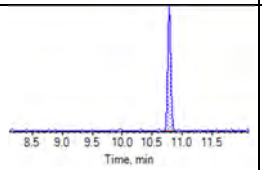
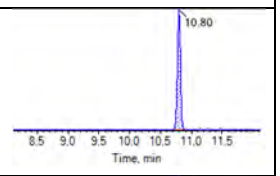
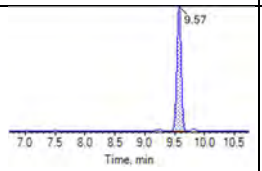
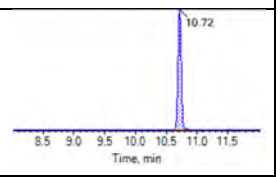
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.77 (10.62)	78810	13C7_PFUdA	184900	1000.0	1004.3	100.4	0.13/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.51 (10.37)	160800	d3-N-MeFOSAA	42310	1000.0	958.7	95.9	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.52 (10.37)	73170	d3-N-MeFOSAA	42310	1000.0	885.3	88.5	0.45/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.80 (10.64)	137700	d5-N-EtFOSAA	44430	1000.0	763.4	76.3	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.80 (10.64)	78170	d5-N-EtFOSAA	44430	1000.0	911.9	91.2	0.57/ 0.48		
PFDS	599.0 / 80.0	10.72 (10.93)	1082000	13C8_PFOS	52720	965.0	1066.2	110.5	1.00/ 1.00		

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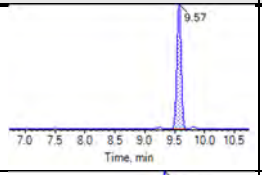
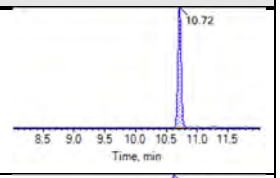
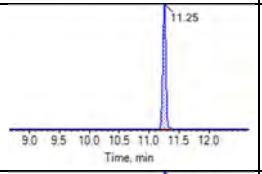
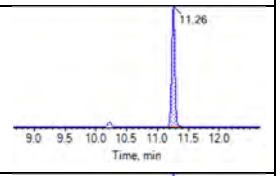
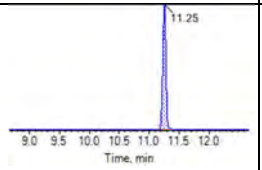
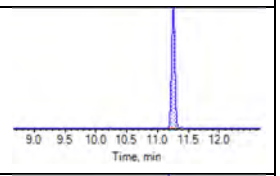
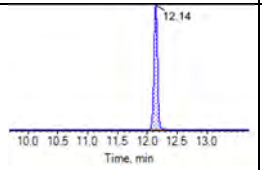
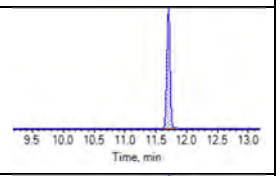
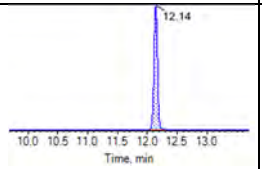
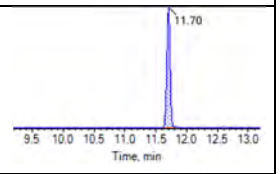
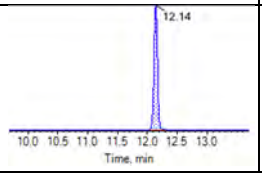
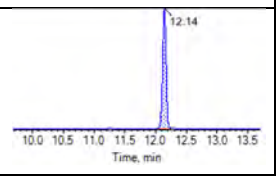
PFDS_2	599.0 / 99.0	10.72 (10.93)	296500	13C8_PFOS	52720	965.0	1096.5	113.6	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.26 (11.09)	581900	13C2_PFDoA	166500	1000.0	928.0	92.8	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.25 (11.09)	107400	13C2_PFDoA	166500	1000.0	1047.6	104.8	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.70 (11.82)	574400	13C2_PFTeDA	129300	1000.0	903.7	90.4	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.70 (11.82)	130300	13C2_PFTeDA	129300	1000.0	927.1	92.7	0.23/ 0.22		
PFTeDA	713.0 / 669.0	12.14 (11.91)	414800	13C2_PFTeDA	129300	1000.0	891.0	89.1	1.00/ 1.00		

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LCMSMS#6

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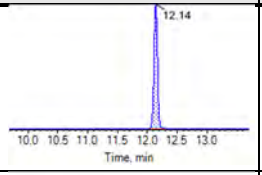
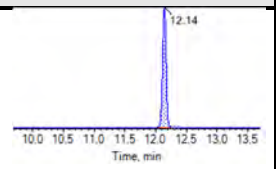
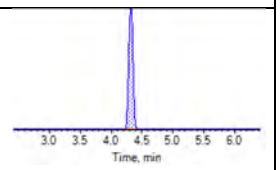
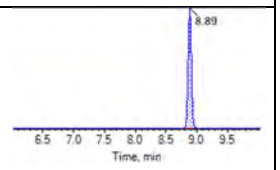
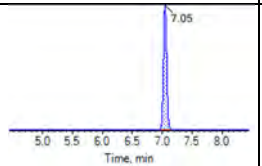
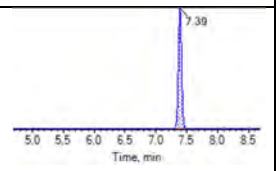
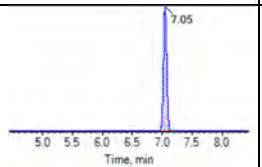
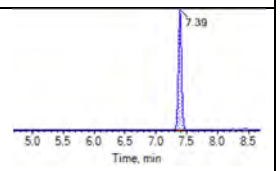
PFC103117220.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	12.14 (11.91)	99200	13C2_PFTeDA	129300	1000.0	967.6	96.8	0.24/ 0.22		
13C3_PFBA	216.0 / 172.0	4.32 (4.60)	1740000	N/A	N/A	1000.0	1005.9	100.6	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.89 (8.75)	1175000	N/A	N/A	1000.0	955.0	95.5	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.39 (7.26)	646700	13C5_PFHxA	298400	1000.0	871.3	87.1	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.39 (7.26)	487200	13C5_PFHxA	298400	1000.0	872.5	87.2	0.75/ 0.75		

Quality Control Data

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**437370**			**Matrix:**	**WATER**
Lab Sample ID:	**1203916041**				
Client Sample:	**QC for batch 1717445**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**MB for batch 1717445**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1717446**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/09/2017 21:04**	**Analyst:**	**JLS**		
Prep Date:	**11/09/2017 11:00**	**Aliquot:**	**252.27 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117210.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	0.00264	ug/L	0.00131	0.00264	0.00396
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA	U	0.00264	ug/L	0.00131	0.00264	0.00396
375-73-5	Perfluorobutanesulfonate (PFBS)	U	0.00133	ug/L	0.000654	0.00133	0.00176
335-76-2	Perfluorodecanoic acid (PFDA)	U	0.00133	ug/L	0.000773	0.00133	0.00198
307-55-1	Perfluorododecanoic acid (PFDoA)	U	0.00133	ug/L	0.000654	0.00133	0.00198
375-85-9	Perfluoroheptanoic acid (PFHpA)	U	0.00133	ug/L	0.000654	0.00133	0.00198
355-46-4	Perfluorohexanesulfonate (PFHxS)	U	0.00121	ug/L	0.000654	0.00121	0.0018
307-24-4	Perfluorohexanoic acid (PFHxA)	U	0.00133	ug/L	0.000654	0.00133	0.00198
375-95-1	Perfluorononanoic acid (PFNA)	U	0.00131	ug/L	0.000654	0.00131	0.00198
1763-23-1	Perfluorooctanesulfonate (PFOS)	U	0.00131	ug/L	0.000654	0.00131	0.00198
335-67-1	Perfluorooctanoic acid (PFOA)	U	0.00131	ug/L	0.000694	0.00131	0.00198
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	U	0.00131	ug/L	0.000654	0.00131	0.00198
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	U	0.00131	ug/L	0.000654	0.00131	0.00198
2058-94-8	Perfluoroundecanoic acid (PFUdA)	U	0.00131	ug/L	0.000654	0.00131	0.00198

GC
11/10/2017

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LCMSMS#6

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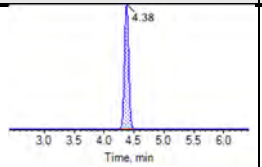
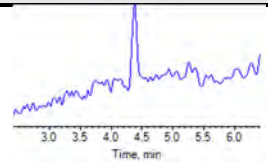
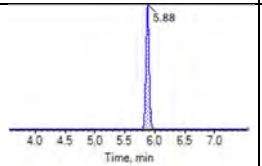
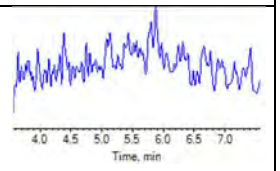
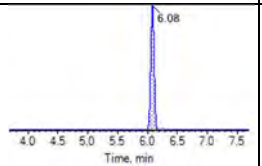
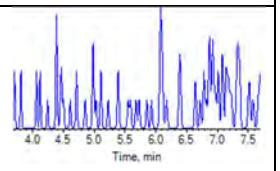
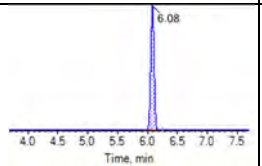
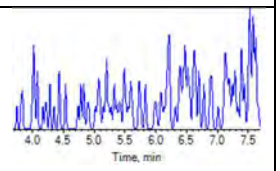
PFC103117210.wiff			
Sample Name	1203916041	**Injection Vial**	3
Batch|Dilution|Analyst	1717446|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117210.wiff
Acquisition Date	11/9/2017 21:04:46	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117210.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	139900	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	246500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	160300	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	160300	N/A	N/A	N/A	N/A/ 0.45		

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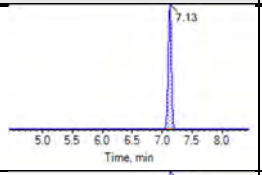
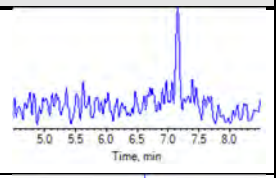
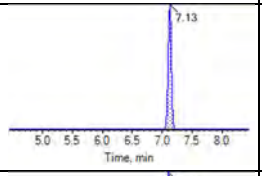
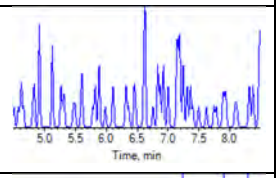
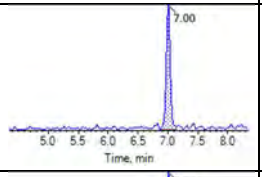
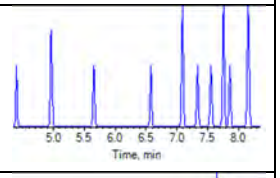
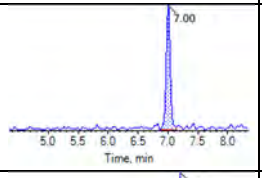
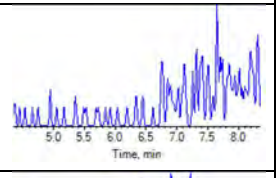
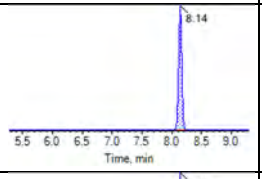
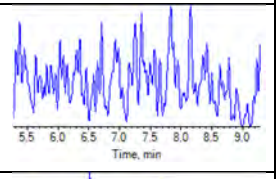
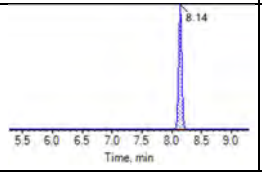
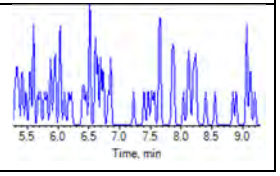
PFC103117210.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	289300	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	289300	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	63200	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	63200	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	278300	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	278300	N/A	N/A	N/A	N/A/ 0.26		

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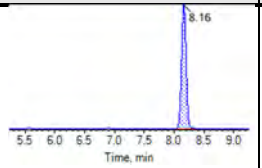
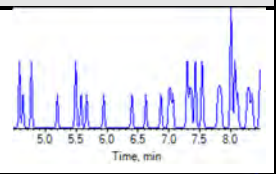
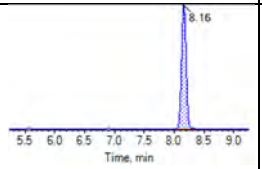
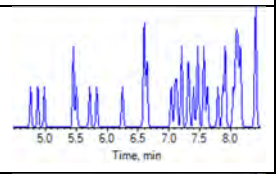
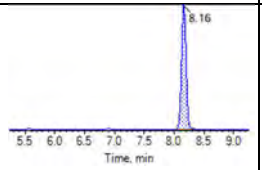
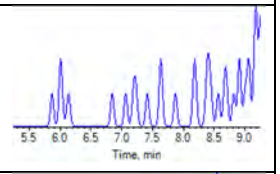
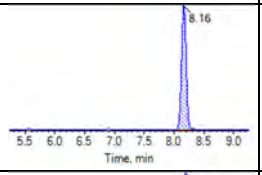
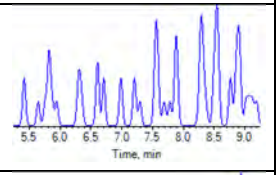
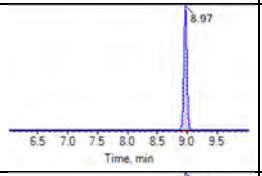
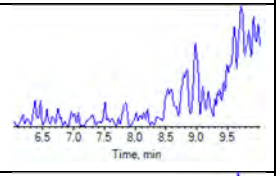
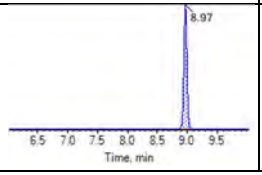
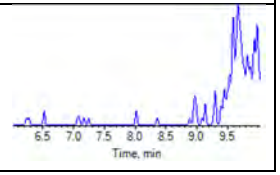
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	83570	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	83570	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	83570	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	83570	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	223700	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	223700	N/A	N/A	N/A	N/A/ 0.37		

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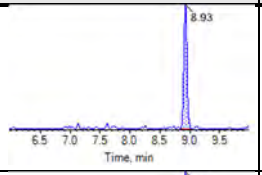
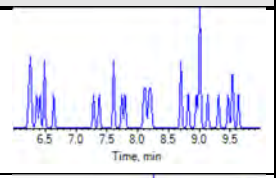
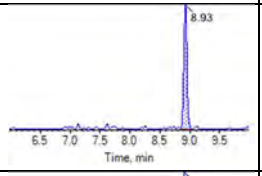
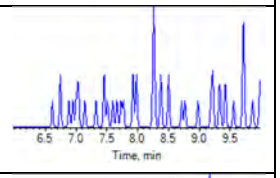
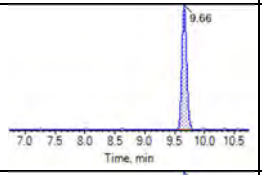
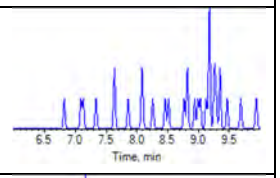
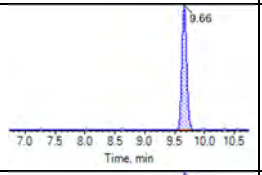
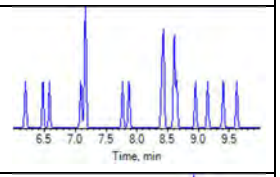
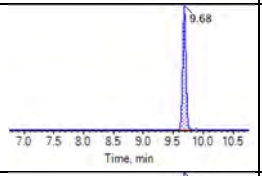
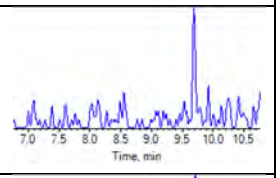
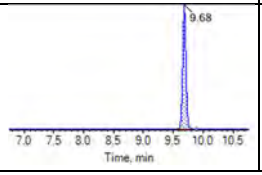
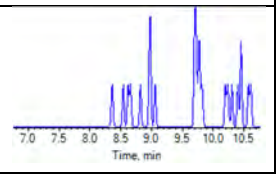
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35630	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35630	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	226300	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	226300	N/A	N/A	N/A	N/A/ 0.24		

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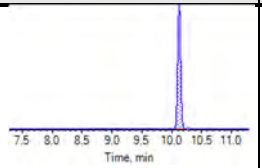
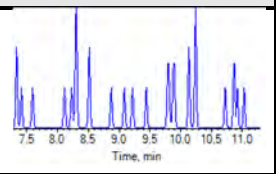
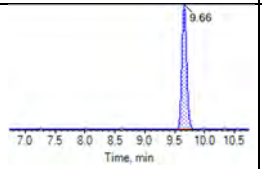
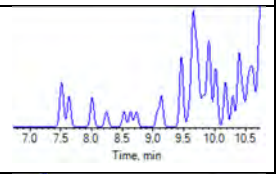
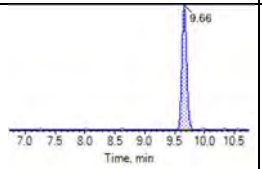
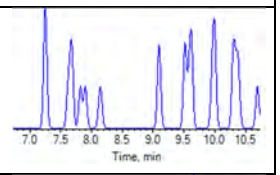
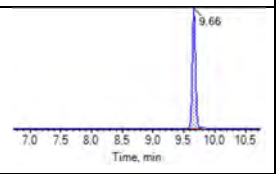
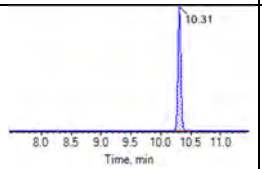
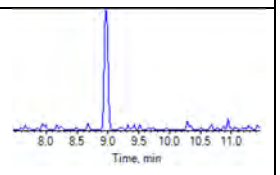
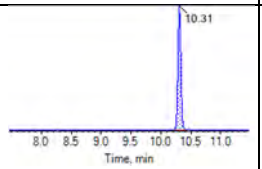
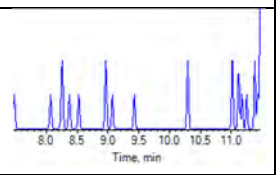
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	423300	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.66 (9.45)	1364000	N/A	N/A	N/A	813.4	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	133100	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	133100	N/A	N/A	N/A	N/A/ 0.13		

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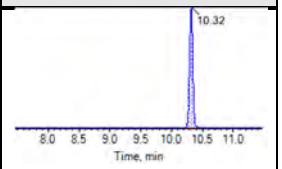
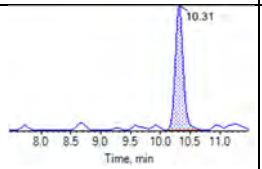
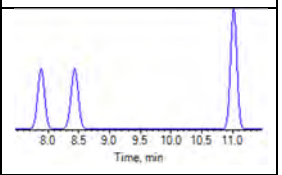
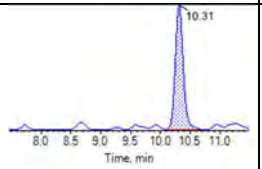
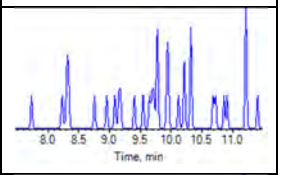
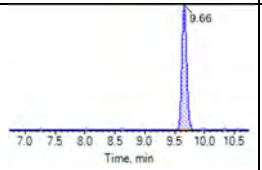
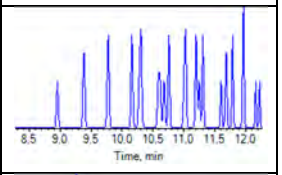
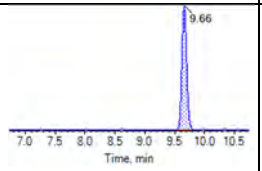
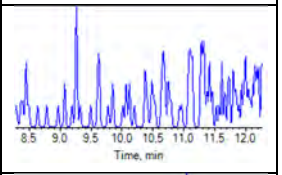
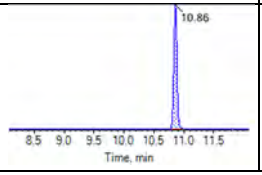
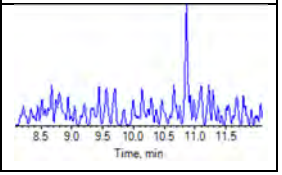
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.32 (10.02)	987600	N/A	N/A	N/A	856.1	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	16030	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	16030	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	179800	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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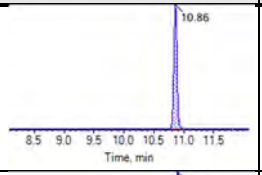
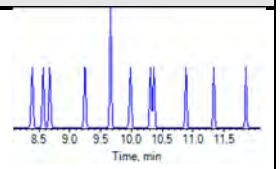
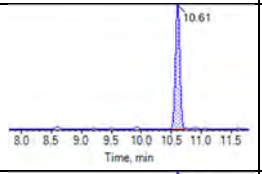
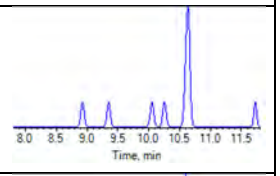
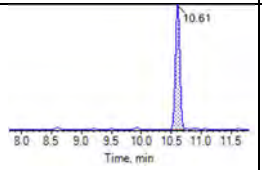
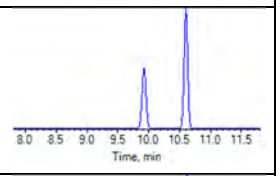
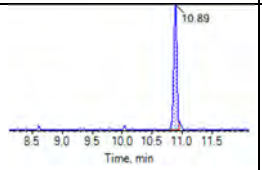
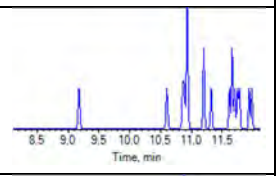
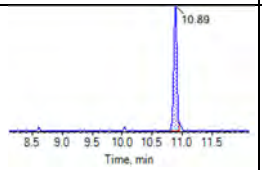
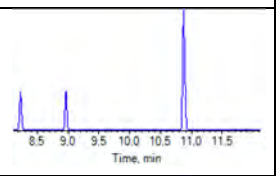
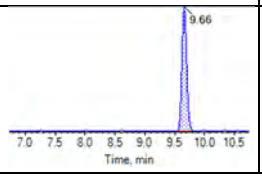
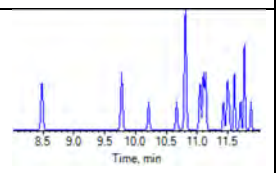
PFC103117210.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	179800	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37150	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	37150	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	36730	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	36730	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 1.00		

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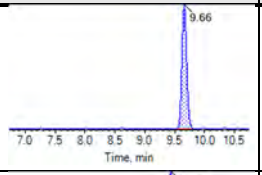
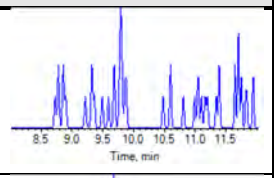
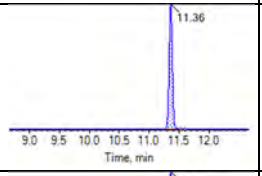
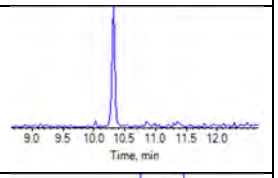
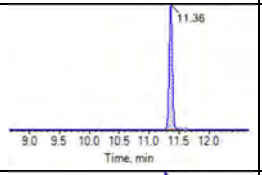
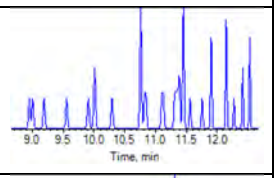
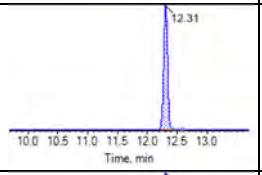
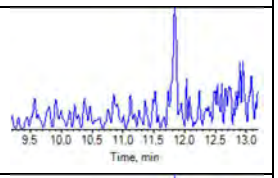
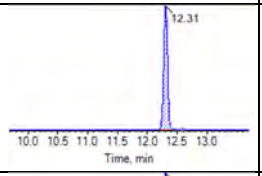
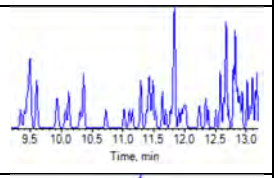
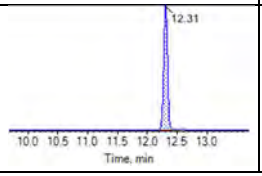
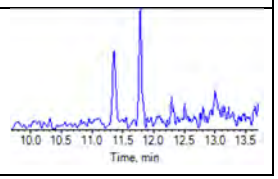
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	60430	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	150500	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	150500	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	117800	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	117800	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	117800	N/A	N/A	N/A	N/A/ 1.00		

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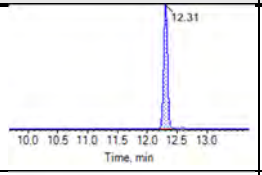
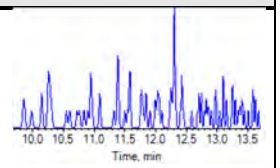
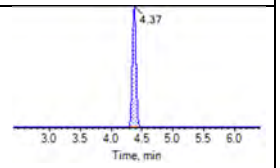
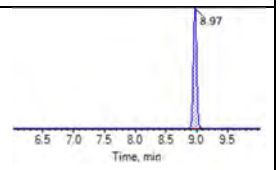
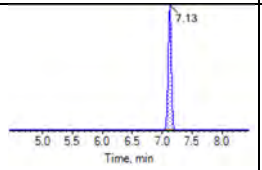
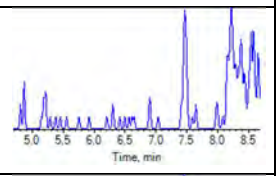
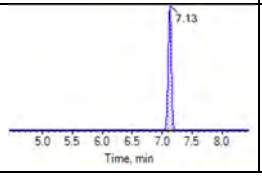
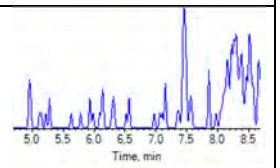
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	117800	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.37 (4.60)	1537000	N/A	N/A	N/A	888.4	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.97 (8.75)	1070000	N/A	N/A	N/A	869.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	289300	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	289300	N/A	N/A	N/A	N/A/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**437370**			**Matrix:**	**WATER**
Lab Sample ID:	**1203916042**				
Client Sample:	**QC for batch 1717445**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**LCS for batch 1717445**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1717446**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/09/2017 21:26**	**Analyst:**	**JLS**		
Prep Date:	**11/09/2017 11:00**	**Aliquot:**	**252.17 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117211.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0184	ug/L	0.00131	0.00264	0.00397
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0201	ug/L	0.00131	0.00264	0.00397
375-73-5	Perfluorobutanesulfonate (PFBS)		0.0168	ug/L	0.000654	0.00133	0.00176
335-76-2	Perfluorodecanoic acid (PFDA)		0.0207	ug/L	0.000773	0.00133	0.00198
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0206	ug/L	0.000654	0.00133	0.00198
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0188	ug/L	0.000654	0.00133	0.00198
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0185	ug/L	0.000654	0.00121	0.0018
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0186	ug/L	0.000654	0.00133	0.00198
375-95-1	Perfluorononanoic acid (PFNA)		0.0204	ug/L	0.000654	0.00131	0.00198
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0204	ug/L	0.000654	0.00131	0.00198
335-67-1	Perfluorooctanoic acid (PFOA)		0.0213	ug/L	0.000694	0.00131	0.00198
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0195	ug/L	0.000654	0.00131	0.00198
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0178	ug/L	0.000654	0.00131	0.00198
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0193	ug/L	0.000654	0.00131	0.00198

GC
11/10/2017

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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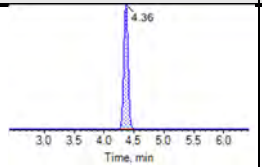
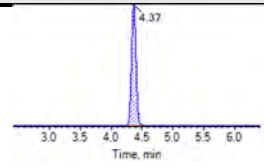
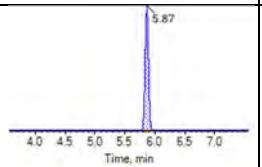
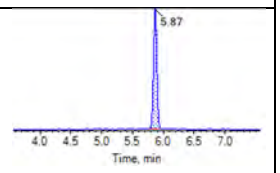
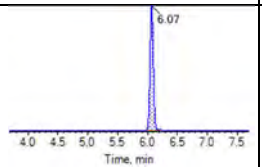
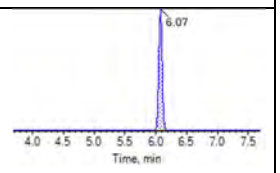
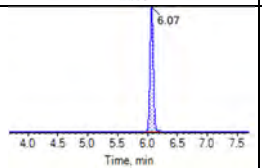
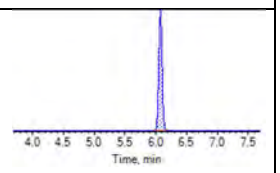
PFC103117211.wiff			
Sample Name	1203916042	**Injection Vial**	4
Batch|Dilution|Analyst	1717446|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117211.wiff
Acquisition Date	11/9/2017 21:26:09	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117211.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.37 (4.25)	983500	13C4_PFBA	141700	N/A	985.1	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.87 (5.69)	1012000	13C5_PFPeA	239200	N/A	983.2	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	6.07 (5.89)	1403000	13C3_PFBS	168600	N/A	844.8	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	6.07 (5.89)	622100	13C3_PFBS	168600	N/A	834.1	N/A	0.44/ 0.45		

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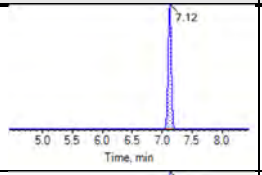
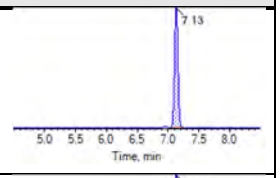
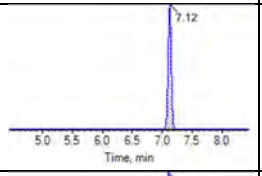
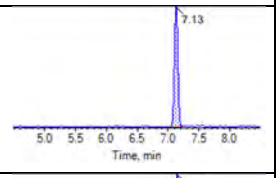
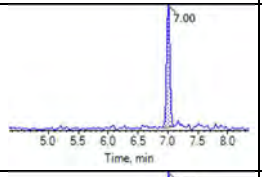
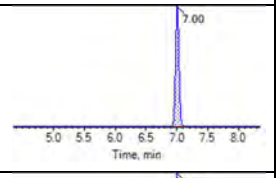
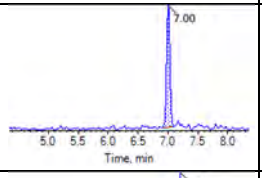
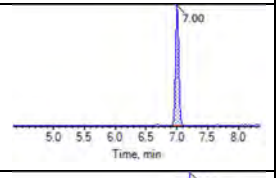
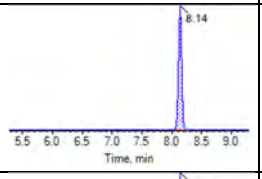
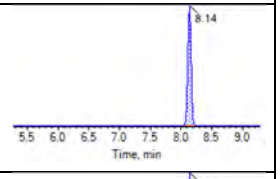
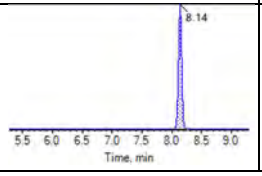
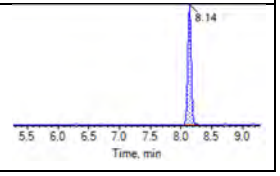
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	7.13 (6.92)	1184000	13C5_PFHxA	332800	N/A	937.1	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	7.13 (6.92)	86030	13C5_PFHxA	332800	N/A	963.3	N/A	0.07/ 0.07		
4:2 FTS	327.0 / 307.0	7.00 (6.80)	229100	13C2_4:2 FTS	46670	N/A	820.0	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	7.00 (6.80)	189500	13C2_4:2 FTS	46670	N/A	943.9	N/A	0.83/ 0.72		
PFHpA	363.0 / 319.0	8.14 (7.93)	1158000	13C4_PFHpA	292600	N/A	946.3	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	8.14 (7.93)	278200	13C4_PFHpA	292600	N/A	869.6	N/A	0.24/ 0.26		

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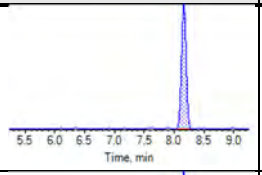
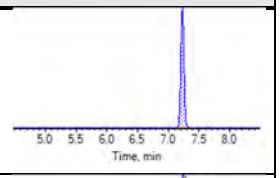
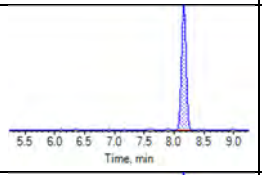
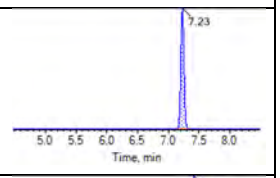
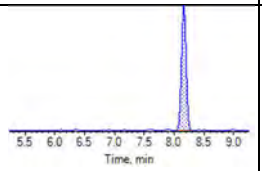
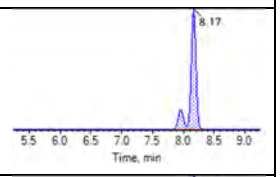
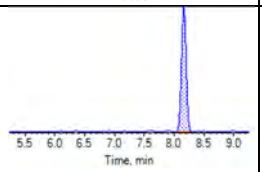
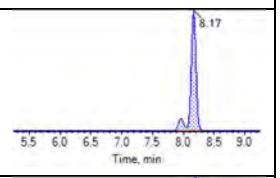
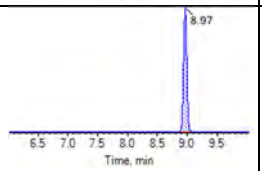
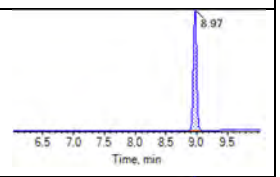
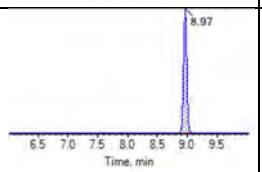
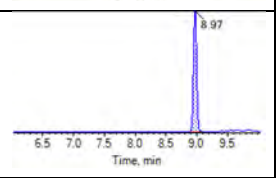
PFPeS	349.0 / 80.0	7.23 (7.02)	1400000	13C3_PFHxS	75140	N/A	889.6	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.23 (7.02)	519600	13C3_PFHxS	75140	N/A	945.2	N/A	0.37/ 0.35		
PFHxS	399.0 / 80.0	8.17 (7.96)	1353000	13C3_PFHxS	75140	N/A	933.4	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	8.17 (7.96)	367300	13C3_PFHxS	75140	N/A	1003.5	N/A	0.27/ 0.25		
PFOA	413.0 / 369.0	8.97 (8.75)	983700	13C8_PFOA	216800	N/A	1075.6	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.97 (8.75)	344300	13C8_PFOA	216800	N/A	1009.1	N/A	0.35/ 0.37		

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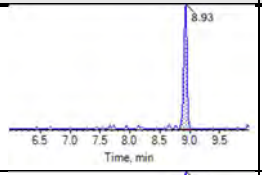
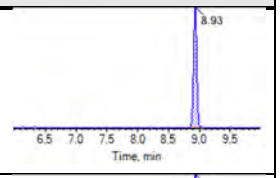
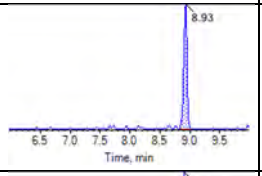
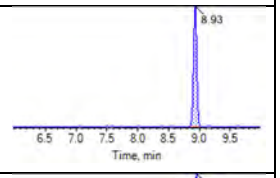
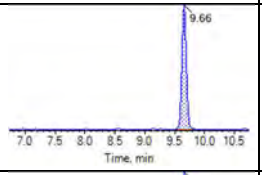
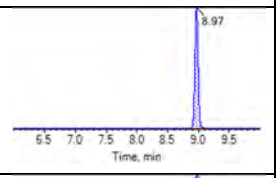
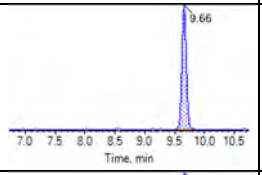
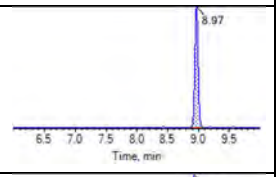
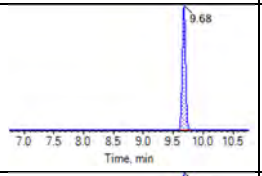
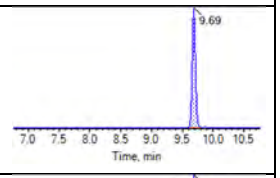
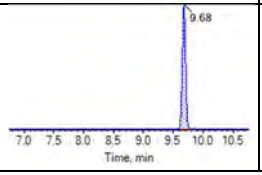
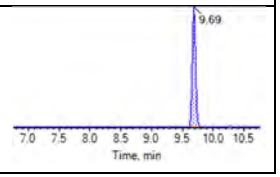
6:2 FTS	427.0 / 407.0	8.93 (8.72)	156000	13C2_6:2 FTS	33810	N/A	874.9	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.93 (8.72)	154400	13C2_6:2 FTS	33810	N/A	964.2	N/A	0.99/ 0.91		
PFHpS	449.0 / 80.0	8.97 (8.76)	1264000	13C8_PFOS	60150	N/A	1077.6	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.97 (8.76)	262700	13C8_PFOS	60150	N/A	1112.8	N/A	0.21/ 0.20		
PFNA	463.0 / 419.0	9.69 (9.47)	850300	13C9_PFNA	245800	N/A	1029.2	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.69 (9.47)	166300	13C9_PFNA	245800	N/A	834.6	N/A	0.20/ 0.24		

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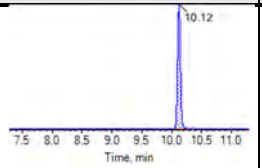
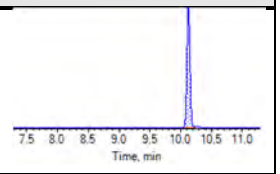
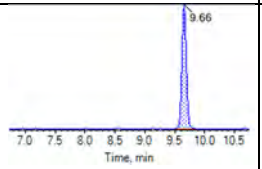
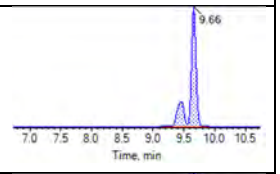
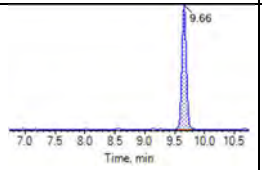
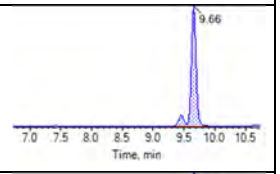
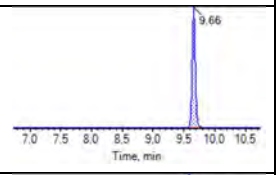
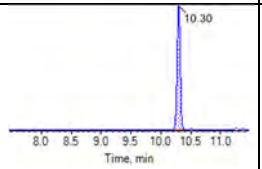
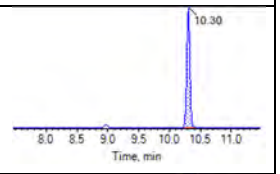
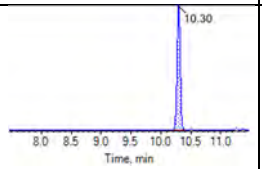
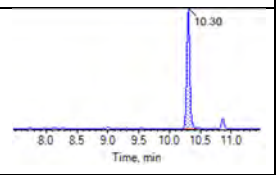
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.12 (10.04)	1325000	13C8_PFOSA	434300	N/A	815.1	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.66 (9.45)	1003000	13C8_PFOS	60150	N/A	1026.6	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.66 (9.45)	175400	13C8_PFOS	60150	N/A	1215.5	N/A	0.17/ 0.15		
13C4_PFOS	503.0 / 80.0	9.66 (9.45)	1365000	N/A	N/A	N/A	814.2	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.30 (10.08)	696200	13C6_PFDA	129600	N/A	1042.1	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.30 (10.08)	80910	13C6_PFDA	129600	N/A	967.0	N/A	0.12/ 0.13		

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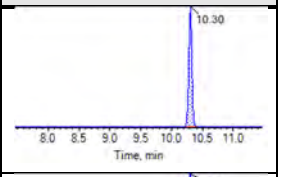
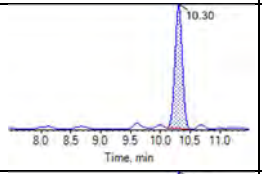
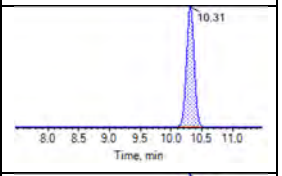
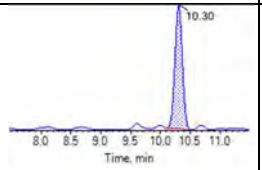
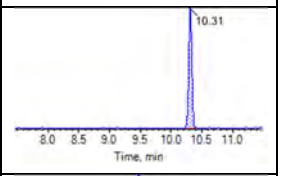
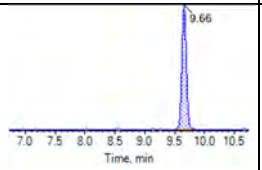
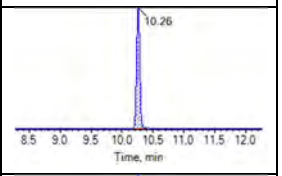
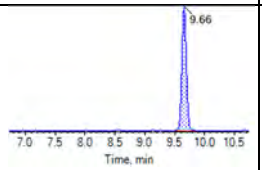
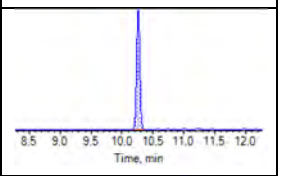
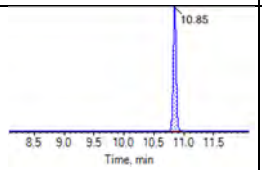
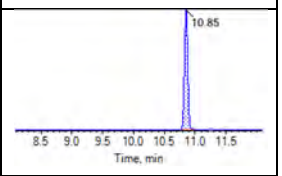
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.30 (10.02)	957100	N/A	N/A	N/A	829.7	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.31 (10.09)	92120	13C2_8:2 FTS	22970	N/A	778.1	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.31 (10.09)	111100	13C2_8:2 FTS	22970	N/A	968.2	N/A	1.21/ 0.96		
PFNS	549.0 / 80.0	10.26 (10.49)	996500	13C8_PFOS	60150	N/A	1049.7	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.26 (10.49)	188700	13C8_PFOS	60150	N/A	1091.4	N/A	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.85 (10.62)	602000	13C7_PFUdA	173700	N/A	973.1	N/A	1.00/ 1.00		

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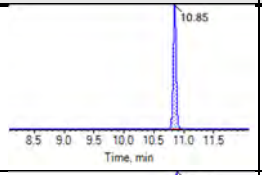
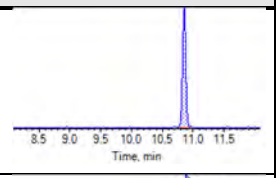
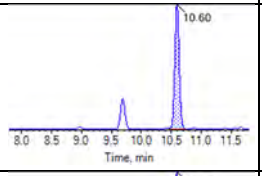
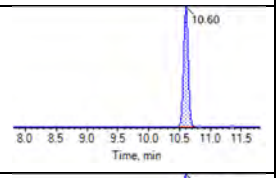
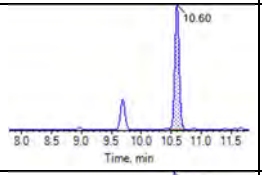
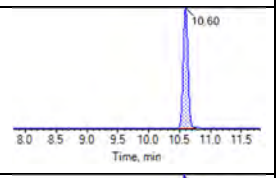
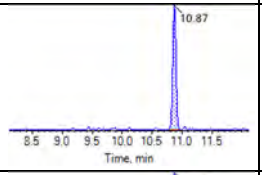
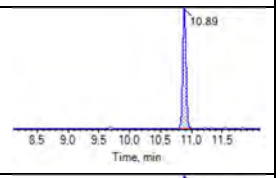
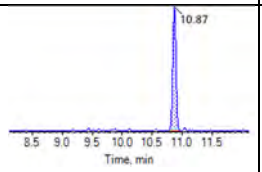
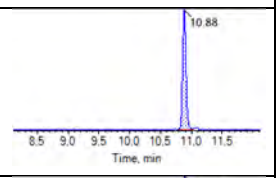
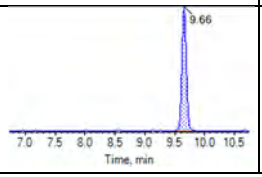
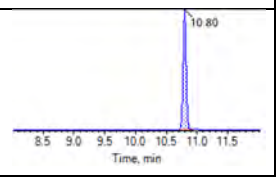
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.85 (10.62)	83090	13C7_PFUdA	173700	N/A	1127.2	N/A	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.60 (10.37)	155100	d3-N-MeFOSAA	38580	N/A	1013.5	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.60 (10.37)	67610	d3-N-MeFOSAA	38580	N/A	897.1	N/A	0.44/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.89 (10.64)	156000	d5-N-EtFOSAA	41450	N/A	927.1	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.88 (10.64)	74970	d5-N-EtFOSAA	41450	N/A	937.6	N/A	0.48/ 0.48		
PFDS	599.0 / 80.0	10.80 (10.93)	1049000	13C8_PFOS	60150	N/A	906.0	N/A	1.00/ 1.00		

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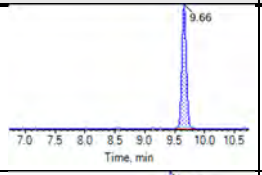
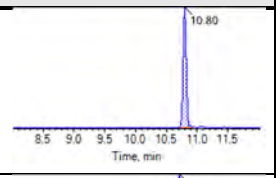
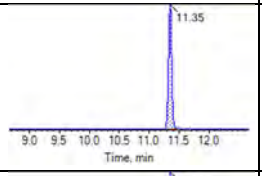
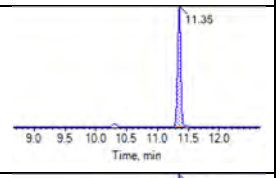
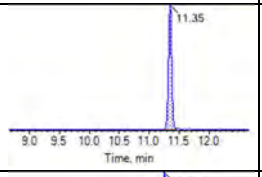
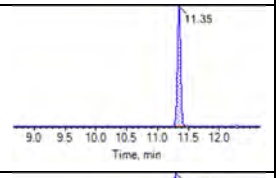
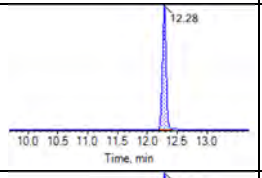
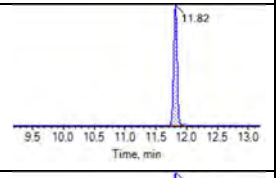
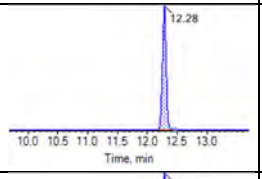
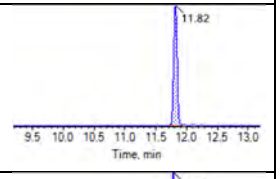
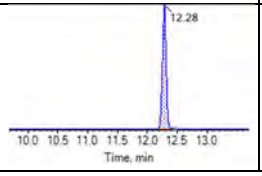
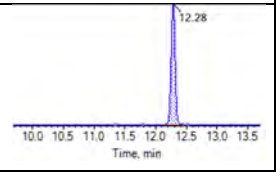
PFDS_2	599.0 / 99.0	10.80 (10.93)	287600	13C8_PFOS	60150	N/A	932.3	N/A	0.27/ 0.27		
PFDoA	613.0 / 569.0	11.35 (11.09)	609500	13C2_PFDoA	155500	N/A	1041.0	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.35 (11.09)	116000	13C2_PFDoA	155500	N/A	1212.1	N/A	0.19/ 0.16		
PFTrDA	663.0 / 619.0	11.82 (11.82)	541300	13C2_PFTeDA	122900	N/A	895.7	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.82 (11.82)	131100	13C2_PFTeDA	122900	N/A	980.7	N/A	0.24/ 0.22		
PFTeDA	713.0 / 669.0	12.28 (11.91)	435800	13C2_PFTeDA	122900	N/A	984.5	N/A	1.00/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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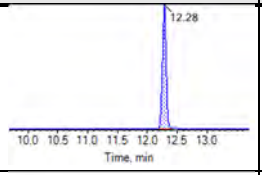
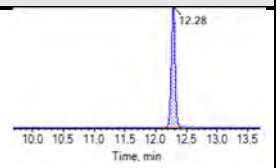
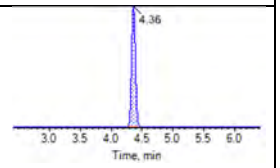
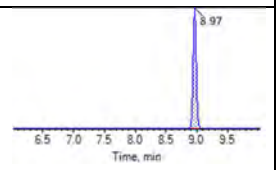
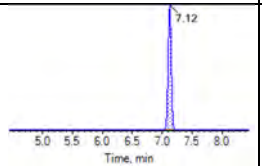
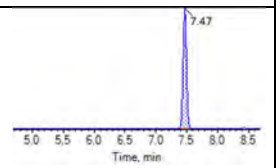
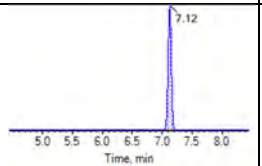
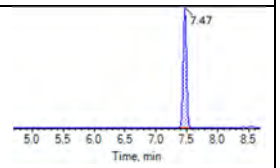
PFC103117211.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	12.28 (11.91)	100900	13C2_PFTeDA	122900	N/A	1034.5	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.36 (4.60)	1572000	N/A	N/A	N/A	908.8	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.97 (8.75)	1149000	N/A	N/A	N/A	934.0	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.47 (7.26)	639800	13C5_PFHxA	332800	N/A	773.0	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.47 (7.26)	500400	13C5_PFHxA	332800	N/A	803.5	N/A	0.78/ 0.75		

LC-MS/MS
Certificate of Analysis
Sample Summary

SDG Number:	**437370**			**Matrix:**	**WATER**
Lab Sample ID:	**1203916043**				
Client Sample:	**QC for batch 1717445**	**Client:**	**ESAF001**	**Project:**	**QC**
Client ID:	**LCSD for batch 1717445**	**Method:**	**EPA 537 Modified**	**SOP Ref:**	**GL-OA-E-076**
Batch ID:	**1717446**	**Inst:**	**LCMSMS6**	**Dilution:**	**1**
Run Date:	**11/09/2017 21:47**	**Analyst:**	**JLS**		
Prep Date:	**11/09/2017 11:00**	**Aliquot:**	**251.42 mL**	**Final Volume:**	**5 mL**
Data File:	**PFC103117212.wiff**				

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)		0.0171	ug/L	0.00131	0.00264	0.00398
2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSA		0.0205	ug/L	0.00131	0.00264	0.00398
375-73-5	Perfluorobutanesulfonate (PFBS)		0.017	ug/L	0.000656	0.00133	0.00177
335-76-2	Perfluorodecanoic acid (PFDA)		0.0183	ug/L	0.000776	0.00133	0.00199
307-55-1	Perfluorododecanoic acid (PFDoA)		0.0191	ug/L	0.000656	0.00133	0.00199
375-85-9	Perfluoroheptanoic acid (PFHpA)		0.0205	ug/L	0.000656	0.00133	0.00199
355-46-4	Perfluorohexanesulfonate (PFHxS)		0.0169	ug/L	0.000656	0.00121	0.00181
307-24-4	Perfluorohexanoic acid (PFHxA)		0.0196	ug/L	0.000656	0.00133	0.00199
375-95-1	Perfluorononanoic acid (PFNA)		0.0198	ug/L	0.000656	0.00131	0.00199
1763-23-1	Perfluorooctanesulfonate (PFOS)		0.0184	ug/L	0.000656	0.00131	0.00199
335-67-1	Perfluorooctanoic acid (PFOA)		0.0187	ug/L	0.000696	0.00131	0.00199
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.0187	ug/L	0.000656	0.00131	0.00199
72629-94-8	Perfluorotridecanoic acid (PFTrDA)		0.0176	ug/L	0.000656	0.00131	0.00199
2058-94-8	Perfluoroundecanoic acid (PFUdA)		0.0182	ug/L	0.000656	0.00131	0.00199

GC
11/10/2017

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LCMSMS#6

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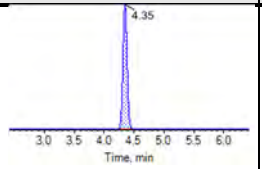
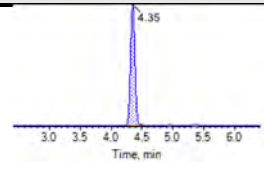
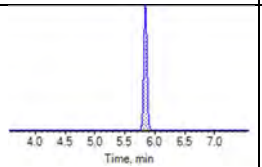
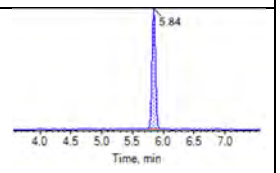
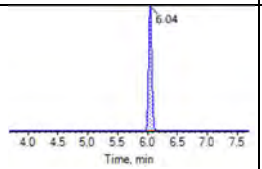
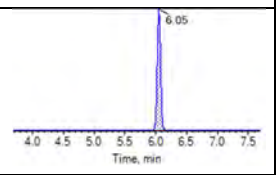
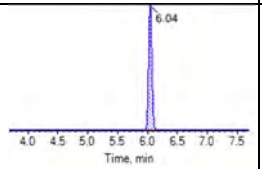
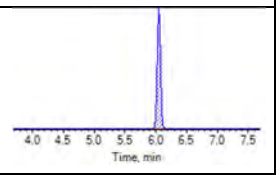
PFC103117212.wiff			
Sample Name	1203916043	**Injection Vial**	5
Batch|Dilution|Analyst	1717446|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117212.wiff
Acquisition Date	11/9/2017 21:47:34	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMPFC_L

Results Summary

PFC103117212.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	4.35 (4.25)	923600	13C4_PFBA	137200	N/A	955.3	N/A	1.00/ 1.00		
PFPeA	262.9 / 219.0	5.84 (5.69)	923400	13C5_PFPeA	238200	N/A	901.3	N/A	1.00/ 1.00		
PFBS	298.9 / 80.0	6.05 (5.89)	1439000	13C3_PFBS	170300	N/A	857.0	N/A	1.00/ 1.00		
PFBS_2	298.9 / 99.0	6.05 (5.89)	599800	13C3_PFBS	170300	N/A	795.8	N/A	0.42/ 0.45		

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LCMSMS#6

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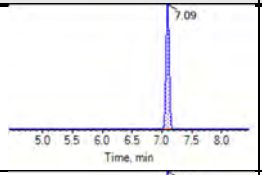
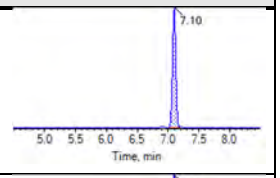
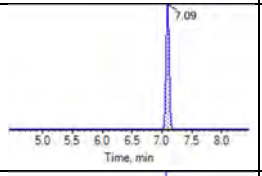
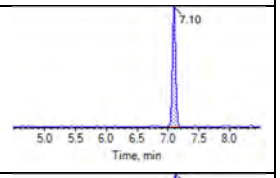
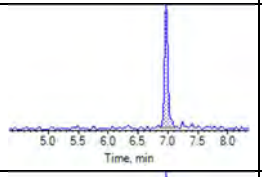
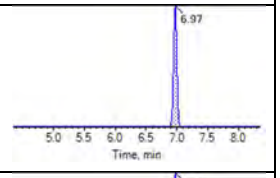
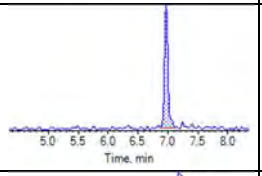
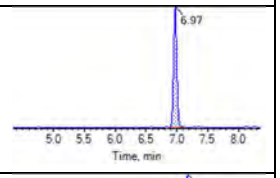
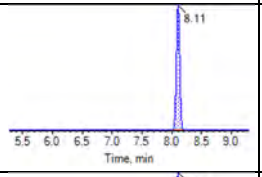
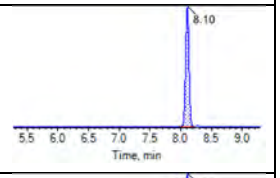
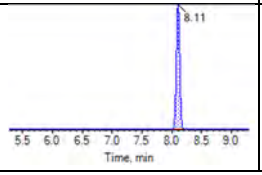
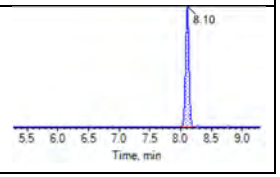
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	7.10 (6.92)	1162000	13C5_PFHxA	310700	N/A	985.1	N/A	1.00/ 1.00		
PFHxA_2	313.0 / 119.0	7.10 (6.92)	89070	13C5_PFHxA	310700	N/A	1068.2	N/A	0.08/ 0.07		
4:2 FTS	327.0 / 307.0	6.97 (6.80)	220500	13C2_4:2 FTS	52220	N/A	705.5	N/A	1.00/ 1.00		
4:2 FTS_2	327.0 / 81.0	6.97 (6.80)	158100	13C2_4:2 FTS	52220	N/A	703.8	N/A	0.72/ 0.72		
PFHpA	363.0 / 319.0	8.10 (7.93)	1204000	13C4_PFHpA	279700	N/A	1029.4	N/A	1.00/ 1.00		
PFHpA_2	363.0 / 169.0	8.10 (7.93)	258500	13C4_PFHpA	279700	N/A	845.0	N/A	0.21/ 0.26		

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LCMSMS#6

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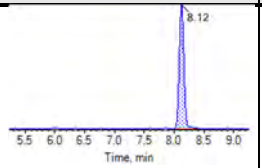
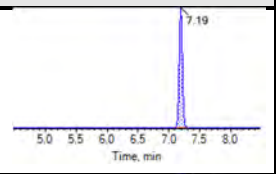
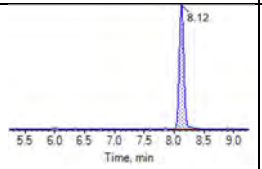
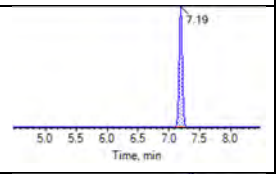
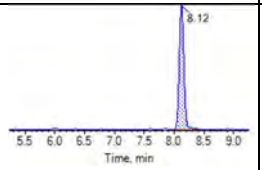
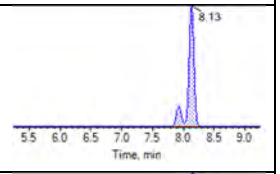
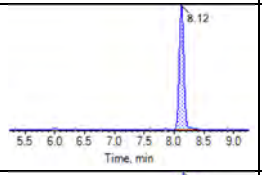
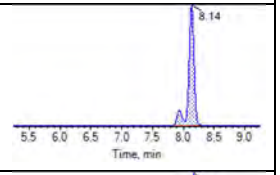
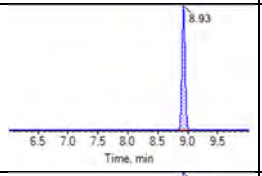
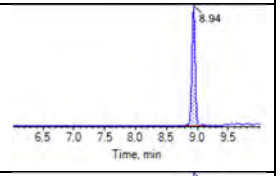
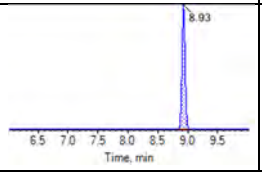
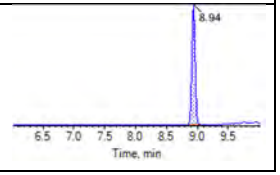
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	7.19 (7.02)	1392000	13C3_PFHxS	77120	N/A	862.0	N/A	1.00/ 1.00		
PFPeS_2	349.0 / 99.0	7.19 (7.02)	512800	13C3_PFHxS	77120	N/A	909.0	N/A	0.37/ 0.35		
PFHxS	399.0 / 80.0	8.13 (7.96)	1267000	13C3_PFHxS	77120	N/A	852.2	N/A	1.00/ 1.00		
PFHxS_2	399.0 / 99.0	8.14 (7.96)	343800	13C3_PFHxS	77120	N/A	915.1	N/A	0.27/ 0.25		
PFOA	413.0 / 369.0	8.94 (8.75)	859800	13C8_PFOA	216500	N/A	941.3	N/A	1.00/ 1.00		
PFOA_2	413.0 / 169.0	8.94 (8.75)	311400	13C8_PFOA	216500	N/A	913.6	N/A	0.36/ 0.37		

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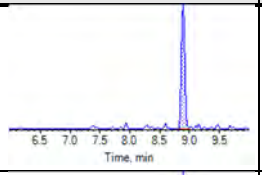
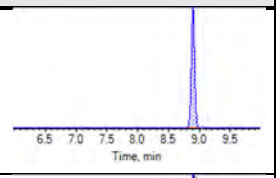
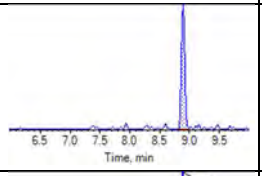
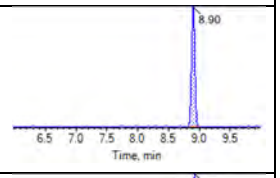
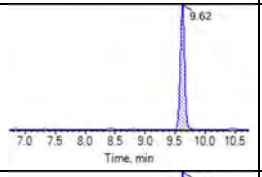
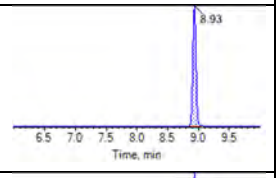
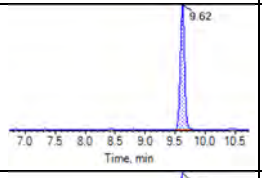
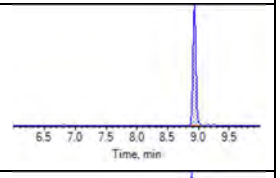
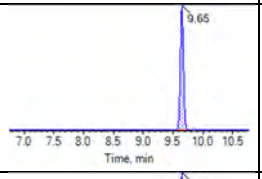
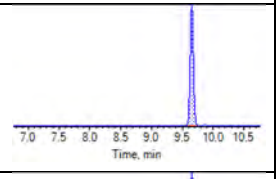
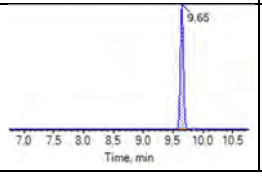
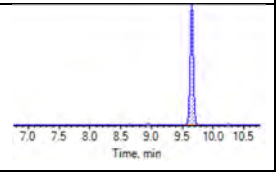
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	8.90 (8.72)	145500	13C2_6:2 FTS	37740	N/A	731.2	N/A	1.00/ 1.00		
6:2 FTS_2	427.0 / 81.0	8.90 (8.72)	134000	13C2_6:2 FTS	37740	N/A	749.8	N/A	0.92/ 0.91		
PFHpS	449.0 / 80.0	8.93 (8.76)	1109000	13C8_PFOS	60250	N/A	944.3	N/A	1.00/ 1.00		
PFHpS_2	449.0 / 99.0	8.94 (8.76)	209100	13C8_PFOS	60250	N/A	884.2	N/A	0.19/ 0.20		
PFNA	463.0 / 419.0	9.65 (9.47)	827700	13C9_PFNA	247800	N/A	993.8	N/A	1.00/ 1.00		
PFNA_2	463.0 / 169.0	9.65 (9.47)	208100	13C9_PFNA	247800	N/A	1036.5	N/A	0.25/ 0.24		

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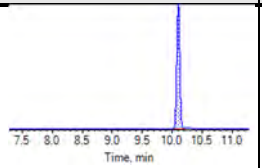
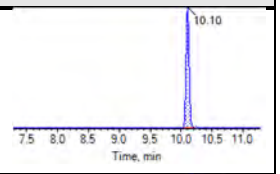
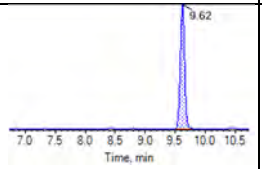
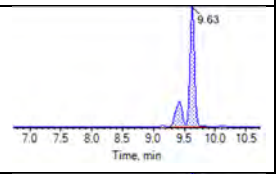
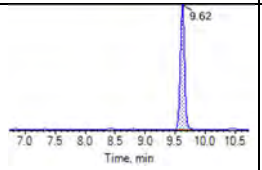
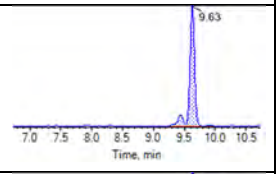
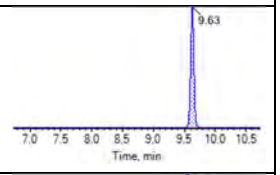
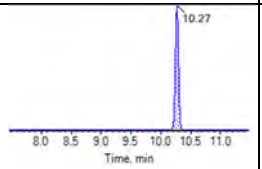
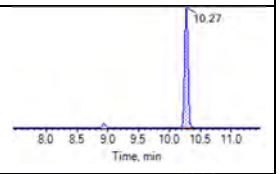
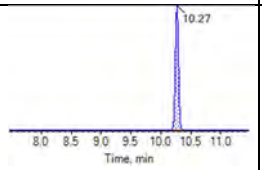
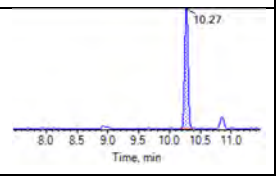
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	10.10 (10.04)	1285000	13C8_PFOSA	419200	N/A	819.3	N/A	1.00/ 1.00		
PFOS	499.0 / 80.0	9.63 (9.45)	907400	13C8_PFOS	60250	N/A	926.9	N/A	1.00/ 1.00		
PFOS_2	499.0 / 99.0	9.63 (9.45)	138600	13C8_PFOS	60250	N/A	958.4	N/A	0.15/ 0.15		
13C4_PFOS	503.0 / 80.0	9.63 (9.45)	1375000	N/A	N/A	N/A	819.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	10.27 (10.08)	649100	13C6_PFDA	136900	N/A	920.3	N/A	1.00/ 1.00		
PFDA_2	513.0 / 169.0	10.27 (10.08)	78350	13C6_PFDA	136900	N/A	886.9	N/A	0.12/ 0.13		

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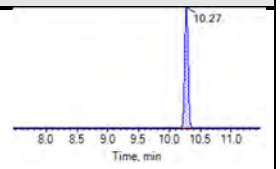
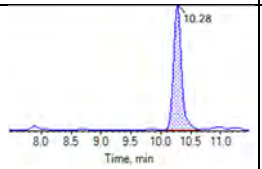
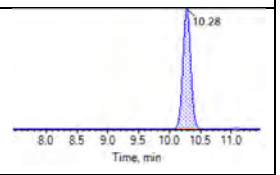
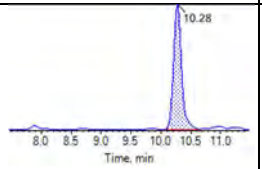
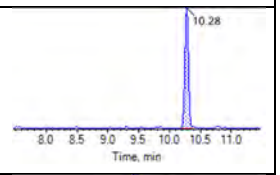
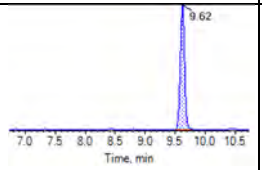
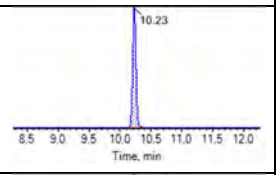
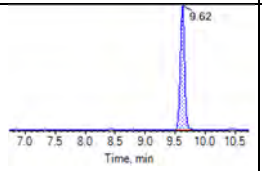
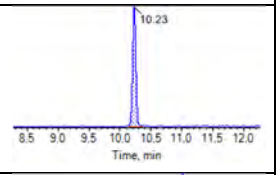
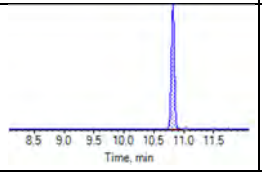
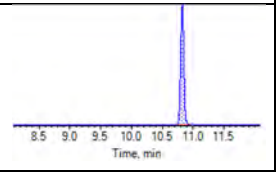
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.27 (10.02)	928400	N/A	N/A	N/A	804.8	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	10.28 (10.09)	99110	13C2_8:2 FTS	27900	N/A	689.4	N/A	1.00/ 1.00		
8:2 FTS_2	527.0 / 81.0	10.28 (10.09)	92500	13C2_8:2 FTS	27900	N/A	663.9	N/A	0.93/ 0.96		
PFNS	549.0 / 80.0	10.23 (10.49)	897300	13C8_PFOS	60250	N/A	943.5	N/A	1.00/ 1.00		
PFNS_2	549.0 / 99.0	10.23 (10.49)	166500	13C8_PFOS	60250	N/A	961.4	N/A	0.19/ 0.18		
PFUdA	563.0 / 519.0	10.82 (10.62)	586800	13C7_PFUdA	180200	N/A	914.6	N/A	1.00/ 1.00		

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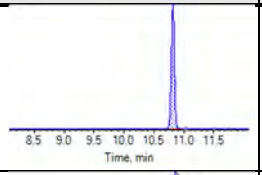
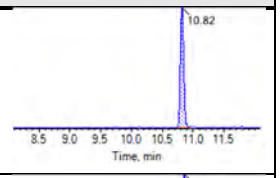
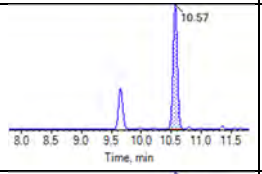
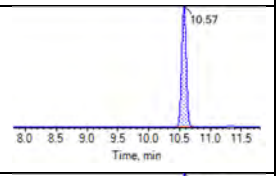
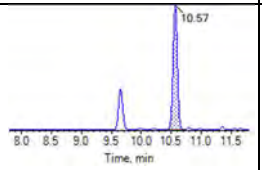
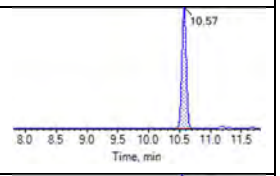
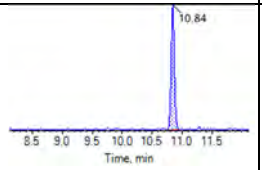
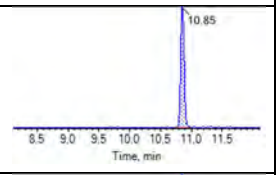
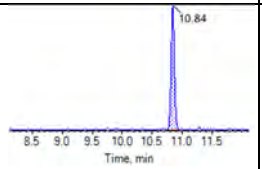
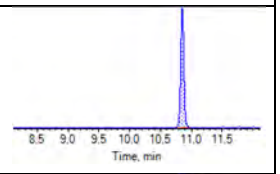
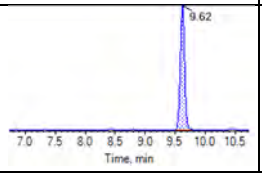
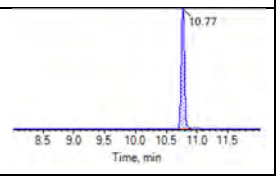
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	10.82 (10.62)	79660	13C7_PFUdA	180200	N/A	1041.9	N/A	0.14/ 0.12		
N-MeFOSAA	570.0 / 419.0	10.57 (10.37)	164200	d3-N-MeFOSAA	40110	N/A	1032.1	N/A	1.00/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	10.57 (10.37)	70710	d3-N-MeFOSAA	40110	N/A	902.4	N/A	0.43/ 0.49		
N-EtFOSAA	584.0 / 419.0	10.85 (10.64)	147000	d5-N-EtFOSAA	41990	N/A	862.1	N/A	1.00/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	10.85 (10.64)	81930	d5-N-EtFOSAA	41990	N/A	1011.3	N/A	0.56/ 0.48		
PFDS	599.0 / 80.0	10.77 (10.93)	1039000	13C8_PFOS	60250	N/A	895.8	N/A	1.00/ 1.00		

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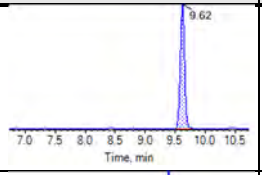
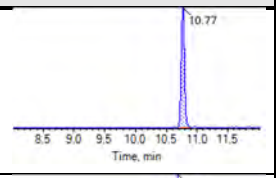
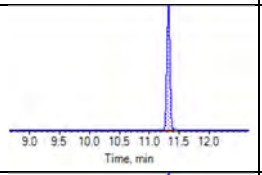
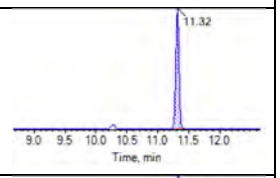
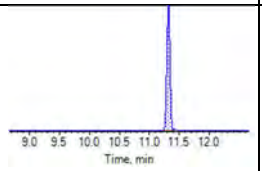
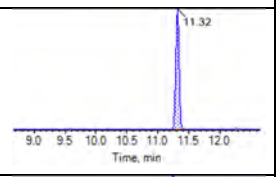
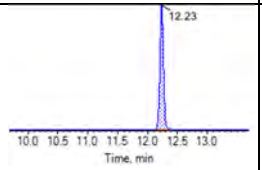
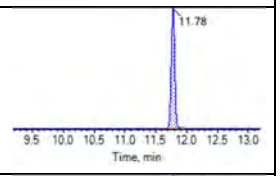
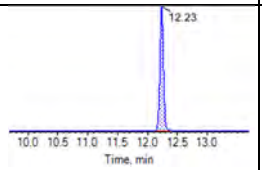
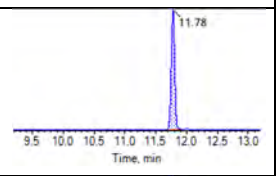
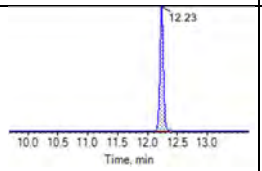
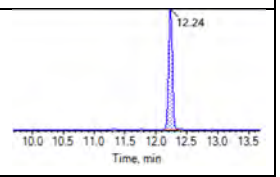
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	10.77 (10.93)	274500	13C8_PFOS	60250	N/A	888.2	N/A	0.26/ 0.27		
PFDoA	613.0 / 569.0	11.32 (11.09)	611800	13C2_PFDoA	168800	N/A	962.2	N/A	1.00/ 1.00		
PFDoA_2	613.0 / 169.0	11.32 (11.09)	110600	13C2_PFDoA	168800	N/A	1064.2	N/A	0.18/ 0.16		
PFTrDA	663.0 / 619.0	11.78 (11.82)	521800	13C2_PFTeDA	120100	N/A	883.2	N/A	1.00/ 1.00		
PFTrDA_2	663.0 / 169.0	11.78 (11.82)	127000	13C2_PFTeDA	120100	N/A	972.5	N/A	0.24/ 0.22		
PFTeDA	713.0 / 669.0	12.24 (11.91)	407100	13C2_PFTeDA	120100	N/A	940.7	N/A	1.00/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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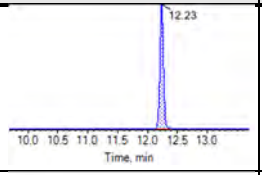
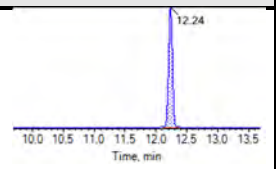
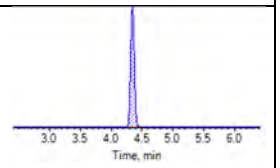
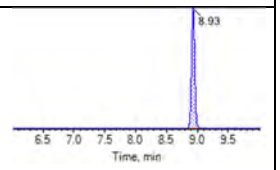
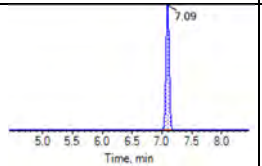
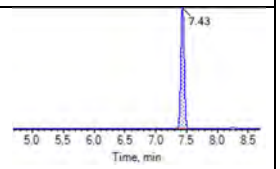
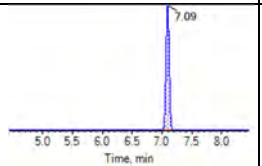
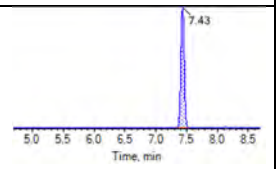
PFC103117212.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	12.24 (11.91)	95390	13C2_PFTeDA	120100	N/A	1000.9	N/A	0.23/ 0.22		
13C3_PFBA	216.0 / 172.0	4.35 (4.60)	1568000	N/A	N/A	N/A	906.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.93 (8.75)	1035000	N/A	N/A	N/A	841.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	7.43 (7.26)	616100	13C5_PFHxA	310700	N/A	797.3	N/A	1.00/ 1.00		
PFPrOPrA_2	284.9 / 184.9	7.43 (7.26)	494700	13C5_PFHxA	310700	N/A	850.9	N/A	0.80/ 0.75		

Initial Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 16:34

Data File: PFC103117002.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID ICB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

GC
11/06/2017

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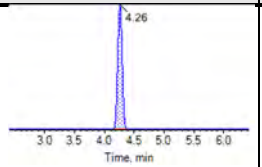
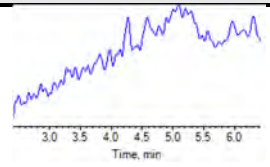
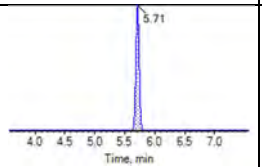
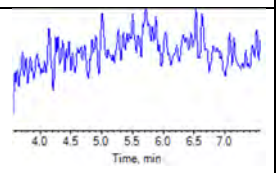
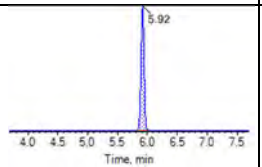
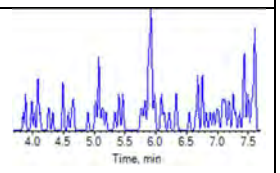
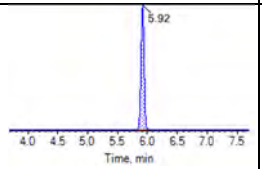
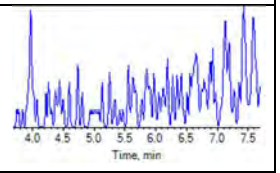
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 10:34:00

PFC103117002.wiff			
Sample Name	PFCIBLK01	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117002.wiff
Acquisition Date	10/31/2017 16:34:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117002.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	167800	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	266600	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	179400	N/A	N/A	N/A	N/A/ 0.45		

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LCMSMS#6

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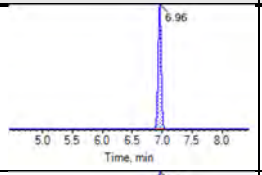
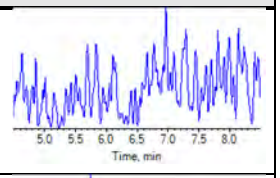
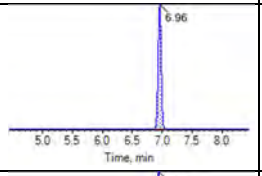
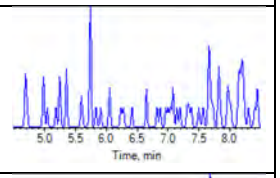
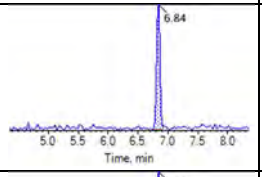
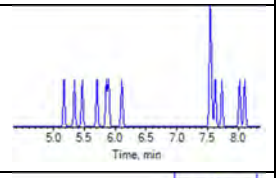
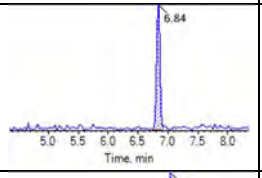
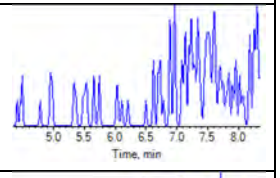
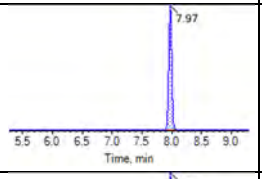
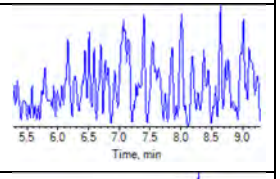
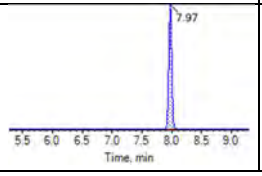
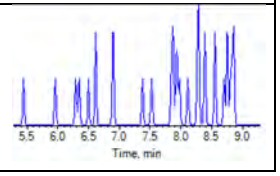
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	38490	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	264700	N/A	N/A	N/A	N/A/ 0.26		

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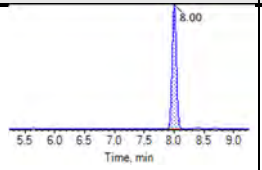
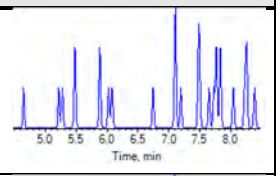
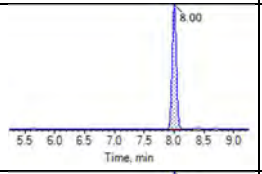
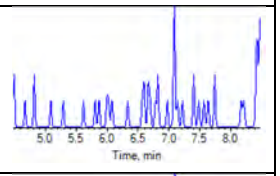
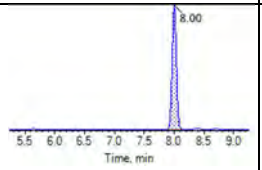
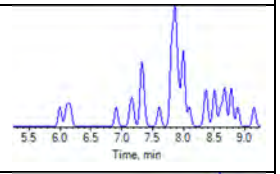
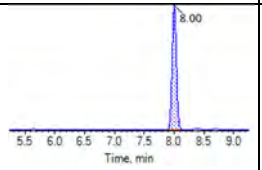
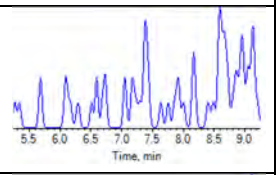
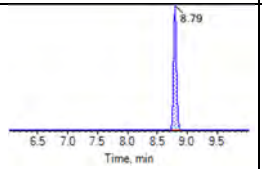
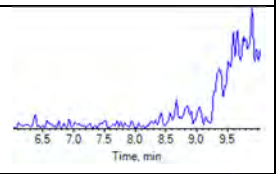
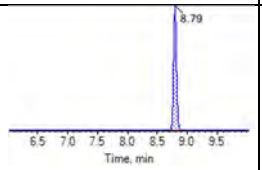
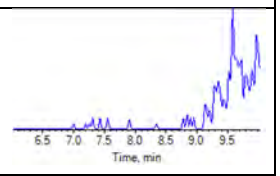
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	76310	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	283100	N/A	N/A	N/A	N/A/ 0.37		

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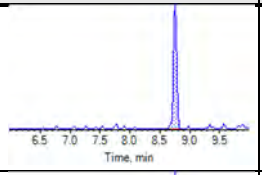
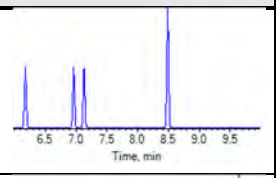
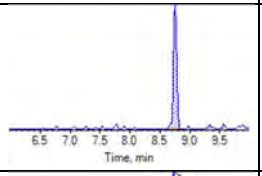
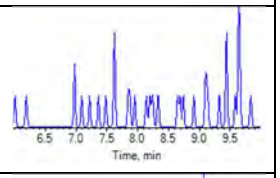
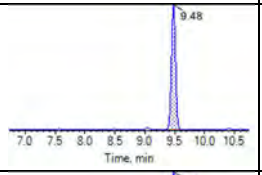
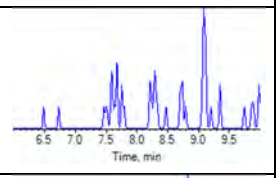
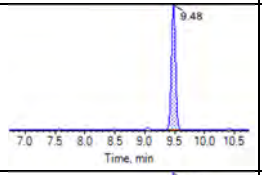
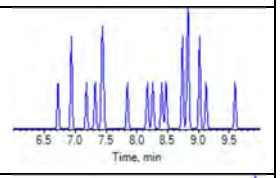
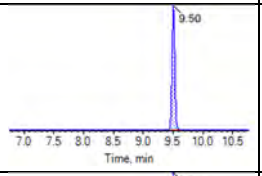
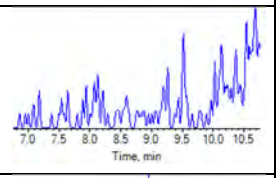
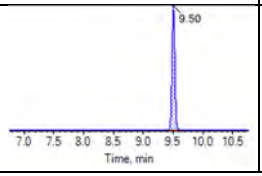
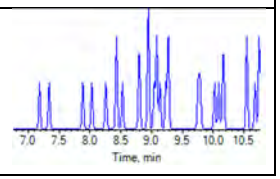
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	40230	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	271500	N/A	N/A	N/A	N/A/ 0.24		

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LCMSMS#6

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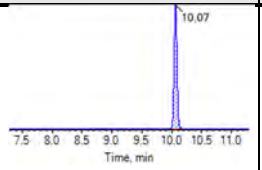
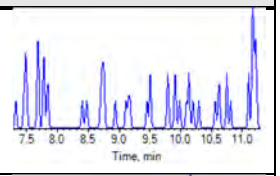
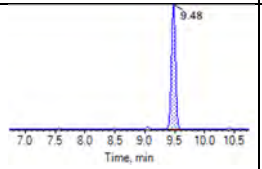
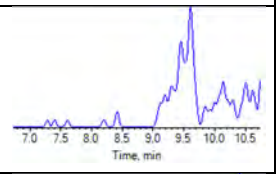
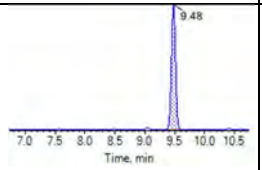
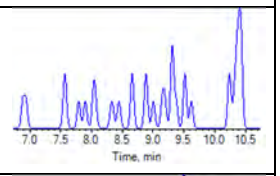
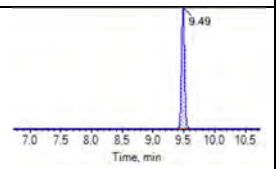
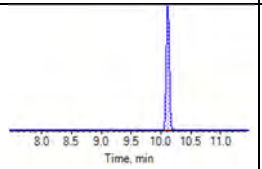
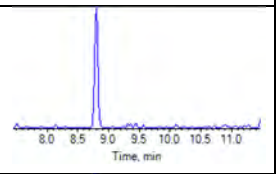
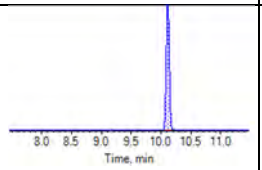
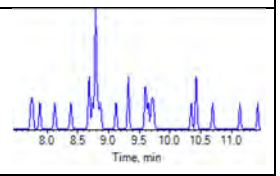
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	601400	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.49 (9.45)	1652000	N/A	N/A	N/A	985.1	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	152700	N/A	N/A	N/A	N/A/ 0.13		

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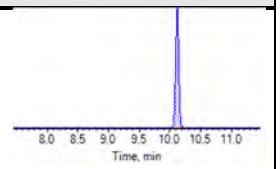
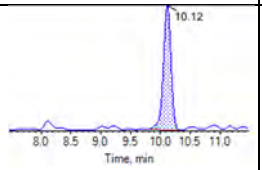
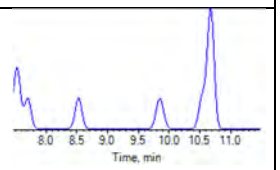
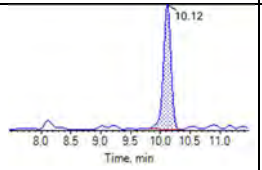
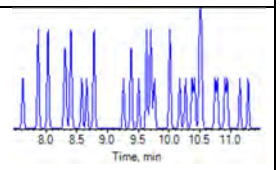
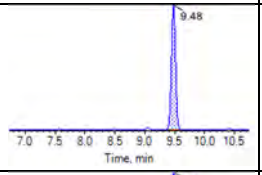
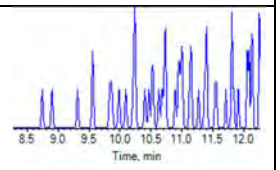
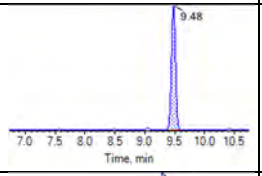
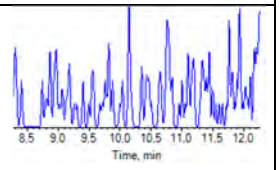
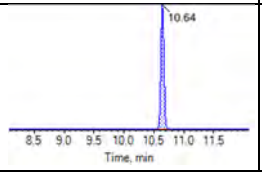
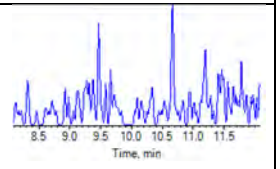
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.12 (10.02)	1236000	N/A	N/A	N/A	1071.4	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	24250	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 1.00		

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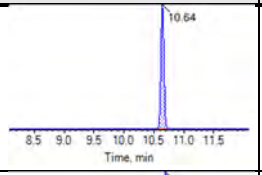
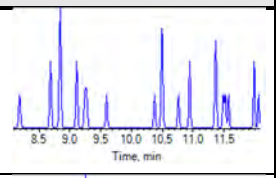
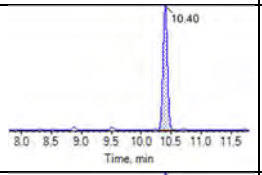
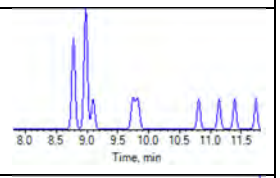
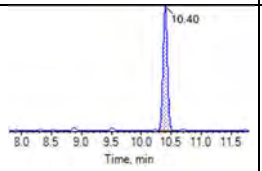
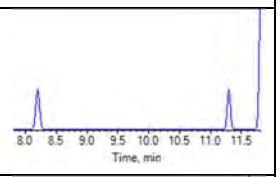
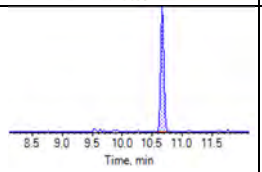
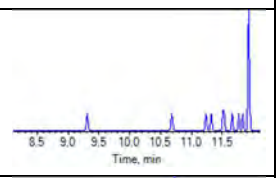
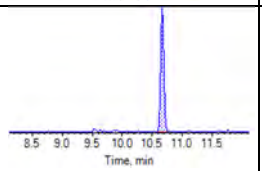
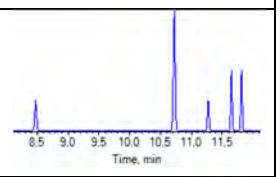
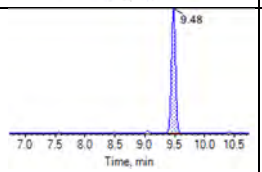
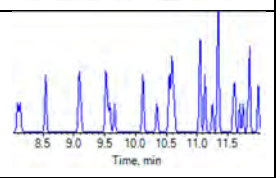
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	206300	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	59200	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	53590	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 1.00		

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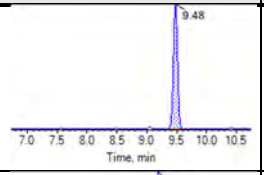
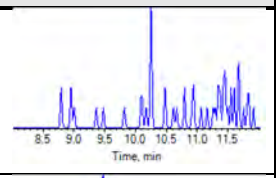
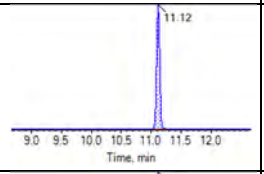
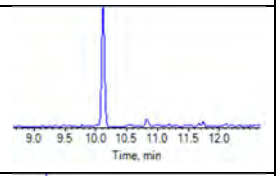
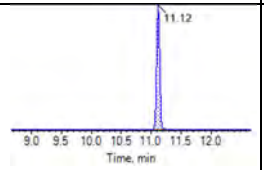
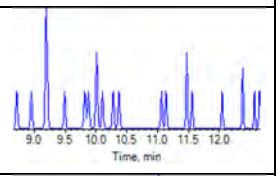
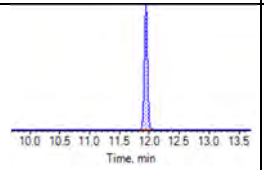
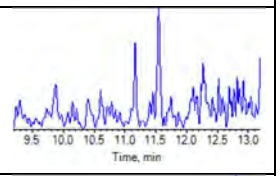
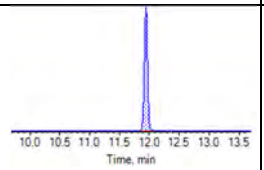
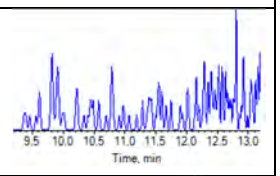
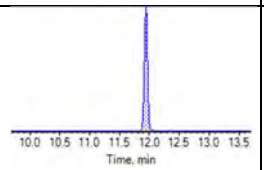
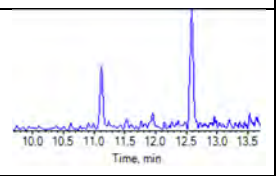
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	63350	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	206400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 1.00		

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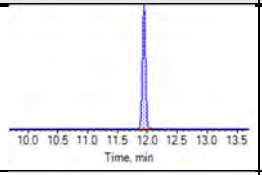
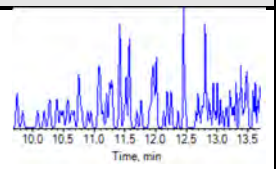
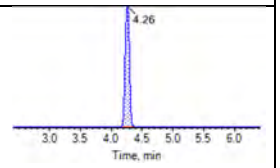
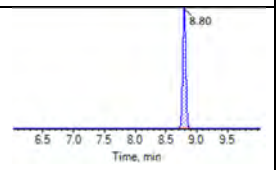
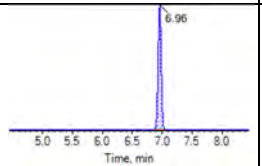
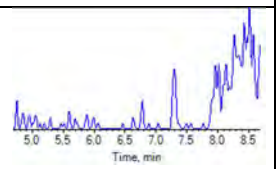
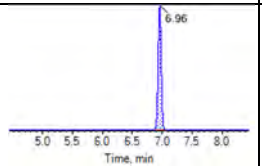
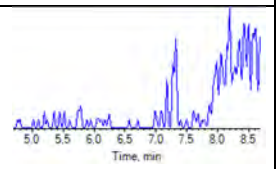
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	152000	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.26 (4.60)	1805000	N/A	N/A	N/A	1043.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.80 (8.75)	1241000	N/A	N/A	N/A	1008.4	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	308500	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 31-OCT-17 21:12

Data File: PFC103117015.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

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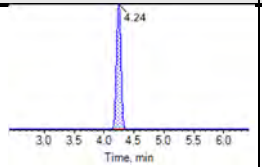
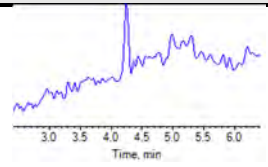
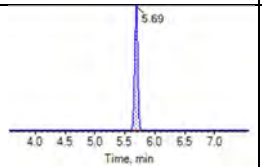
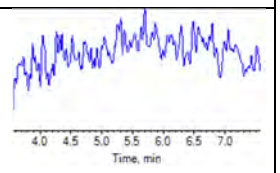
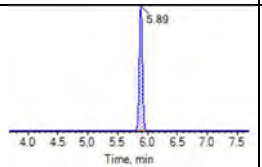
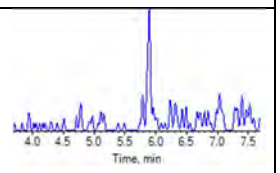
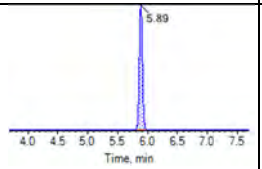
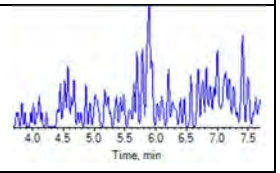
PFC103117015.wiff			
Sample Name	PFCIBLK02	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117015.wiff
Acquisition Date	10/31/2017 21:12:40	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117015.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	173300	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	262000	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	190400	N/A	N/A	N/A	N/A/ 0.45		

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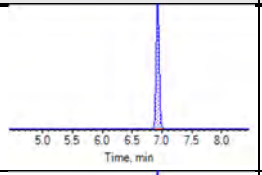
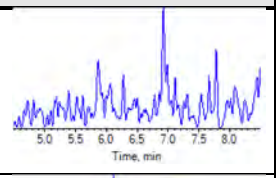
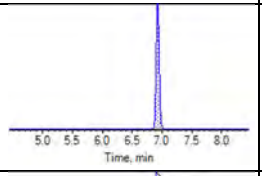
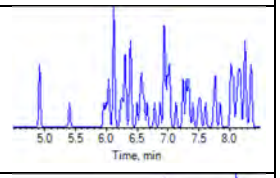
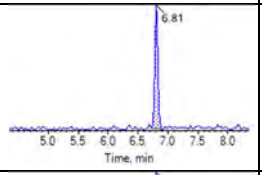
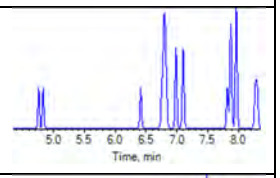
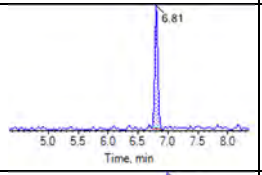
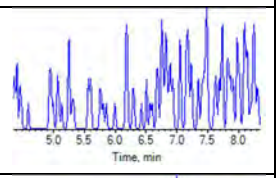
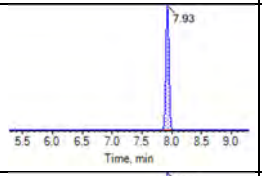
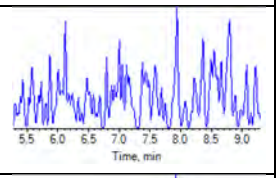
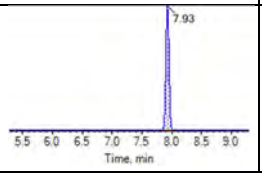
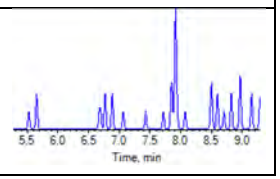
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	39290	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	287700	N/A	N/A	N/A	N/A/ 0.26		

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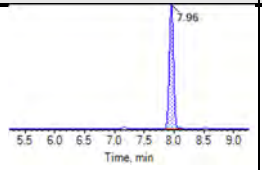
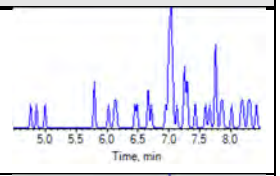
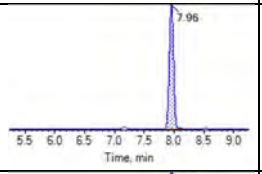
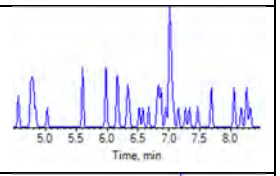
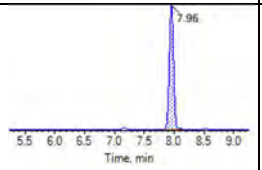
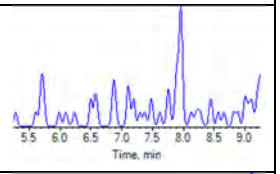
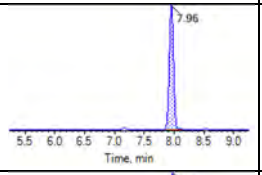
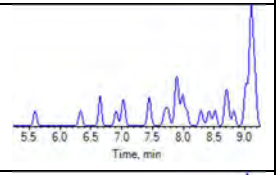
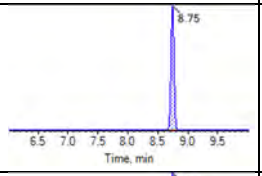
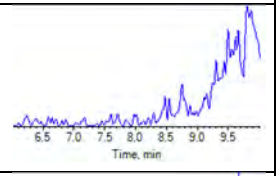
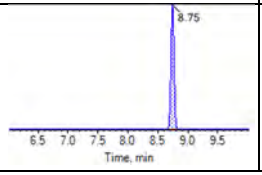
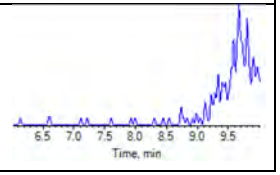
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	88270	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	258400	N/A	N/A	N/A	N/A/ 0.37		

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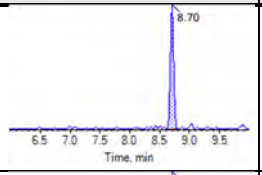
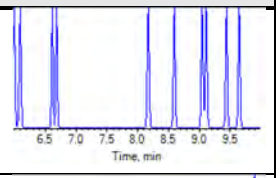
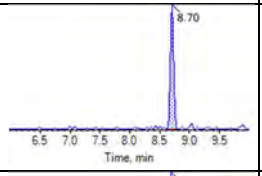
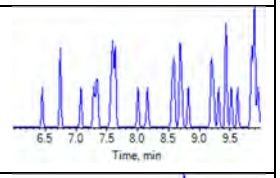
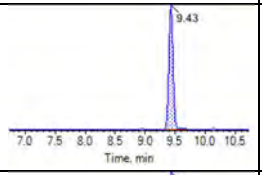
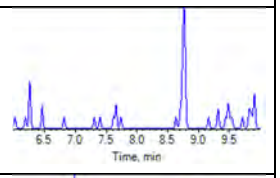
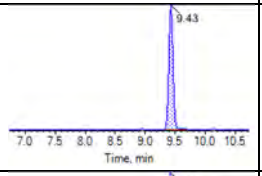
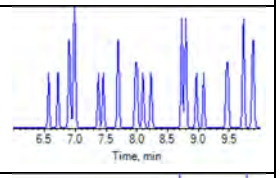
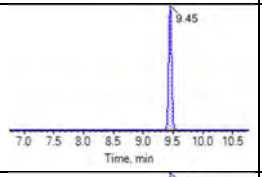
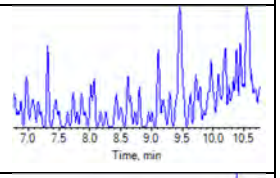
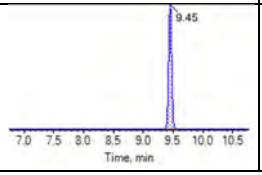
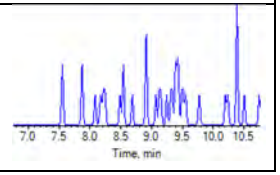
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35280	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	273600	N/A	N/A	N/A	N/A/ 0.24		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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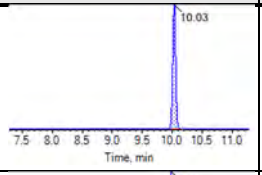
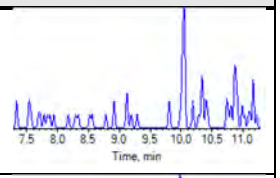
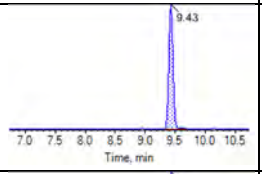
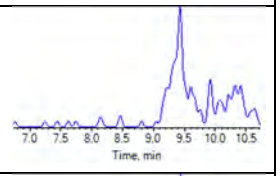
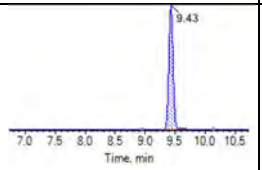
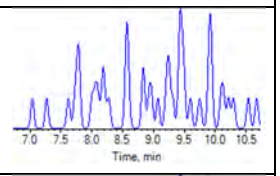
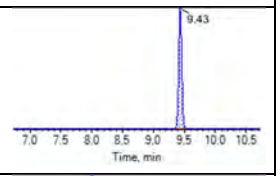
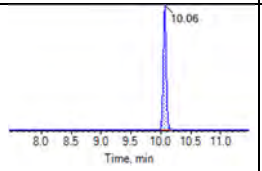
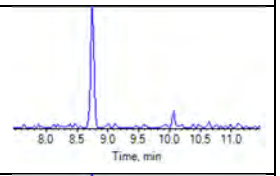
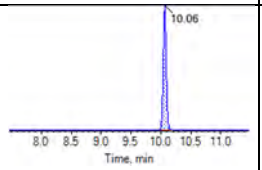
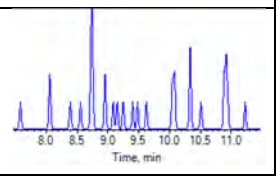
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	654800	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.43 (9.45)	1945000	N/A	N/A	N/A	1159.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.07)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	164800	N/A	N/A	N/A	N/A/ 0.13		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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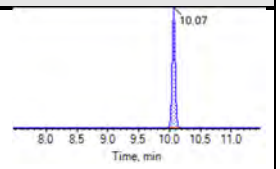
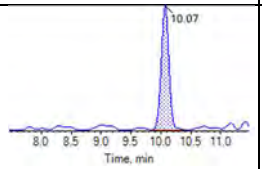
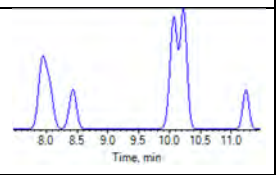
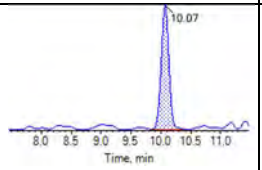
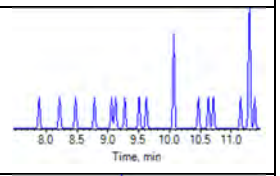
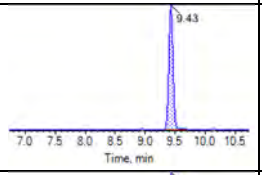
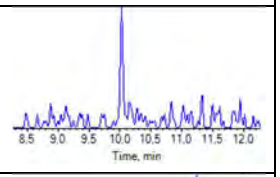
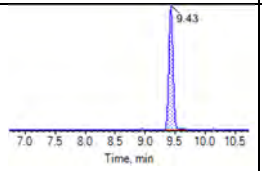
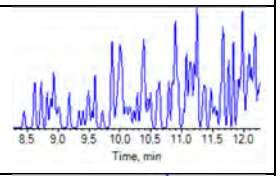
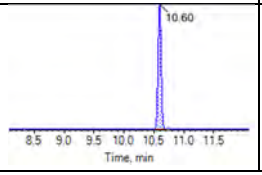
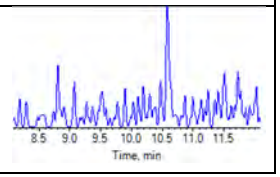
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.07 (10.02)	1255000	N/A	N/A	N/A	1087.9	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	21380	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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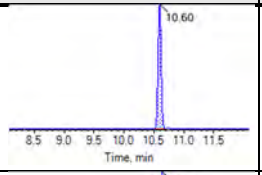
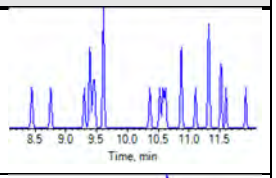
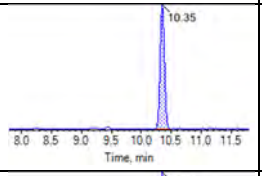
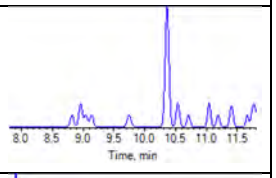
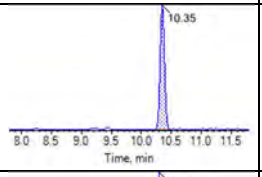
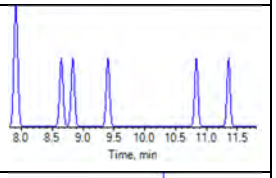
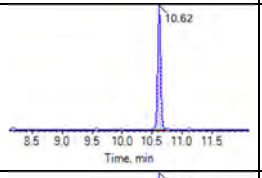
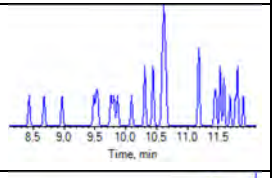
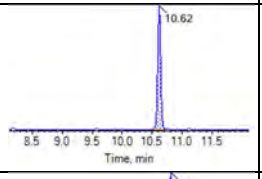
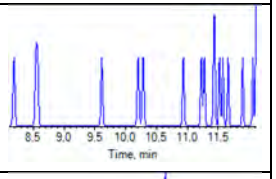
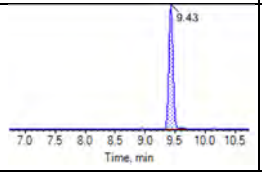
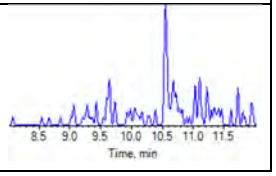
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	225100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	58740	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	61250	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 1.00		

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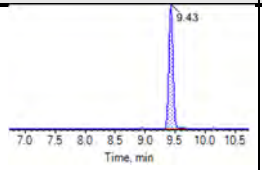
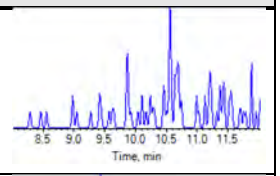
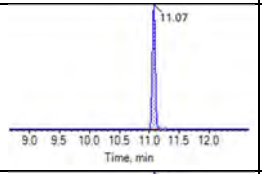
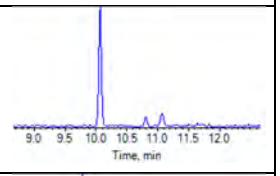
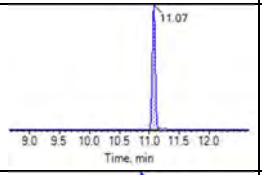
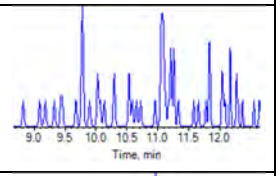
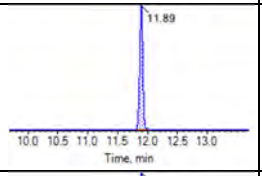
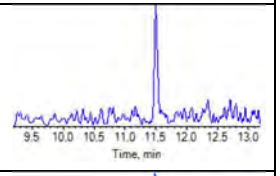
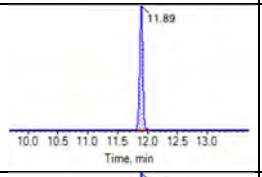
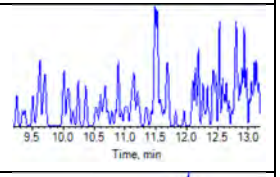
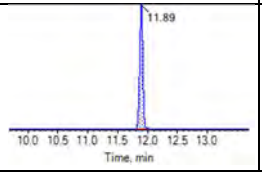
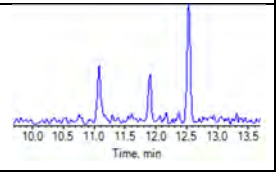
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	81980	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	210600	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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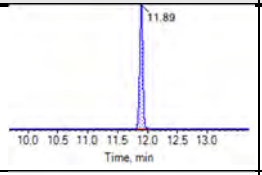
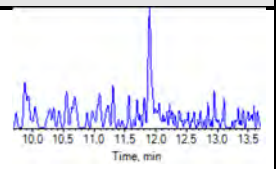
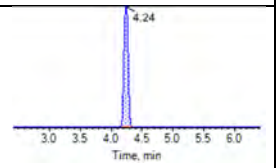
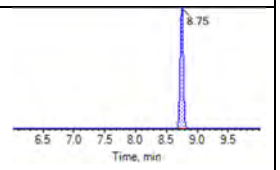
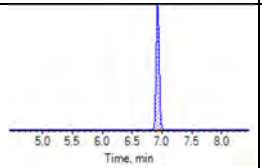
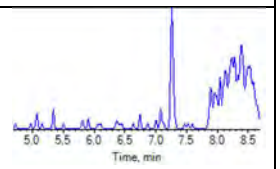
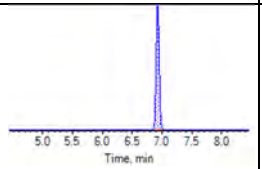
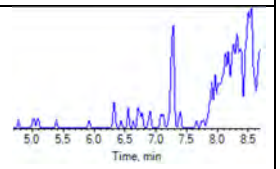
PFC103117015.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	158100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.24 (4.60)	1915000	N/A	N/A	N/A	1107.0	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.75 (8.75)	1426000	N/A	N/A	N/A	1159.1	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.28)	N/A	13C5_PFHxA	345700	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 09:25

Data File: PFC103117160.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JISB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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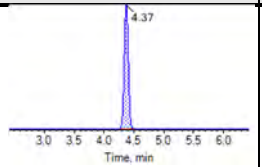
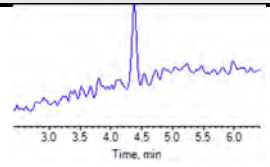
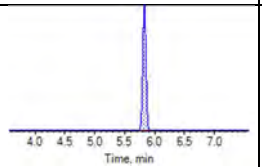
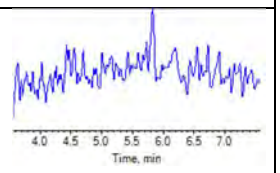
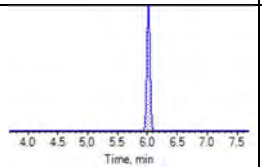
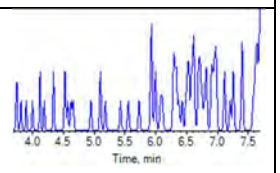
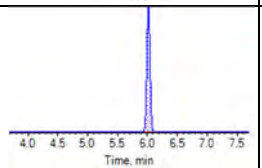
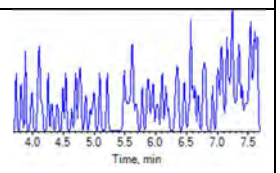
PFC103117160.wiff			
Sample Name	PFCIBLK17	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117160.wiff
Acquisition Date	11/3/2017 09:25:21	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117160.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	138200	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	198500	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	140200	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	140200	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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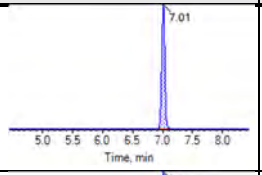
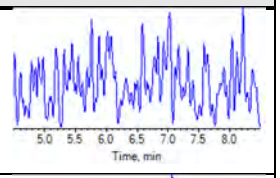
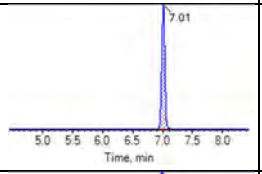
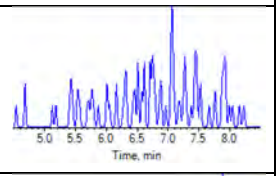
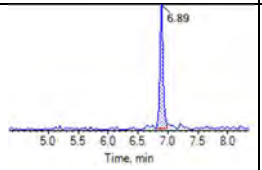
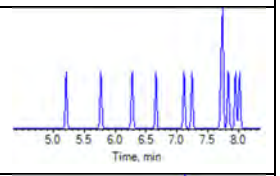
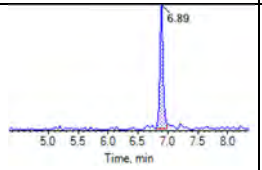
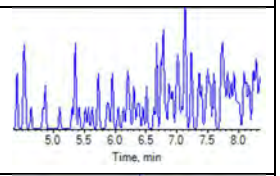
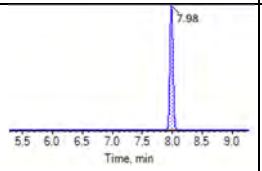
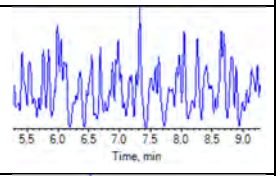
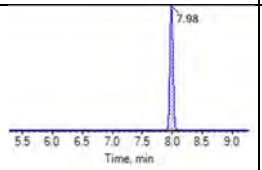
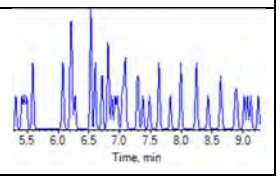
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	56730	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	56730	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	207900	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	207900	N/A	N/A	N/A	N/A/ 0.26		

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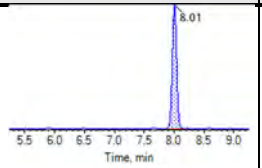
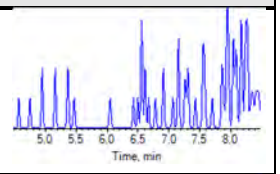
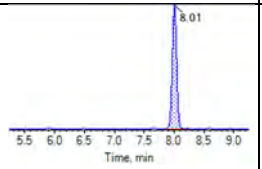
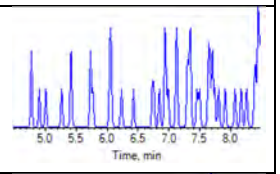
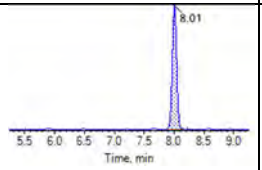
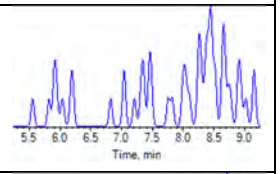
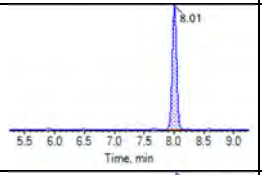
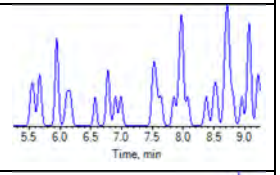
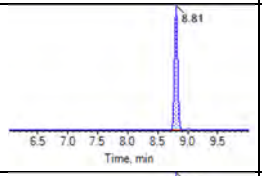
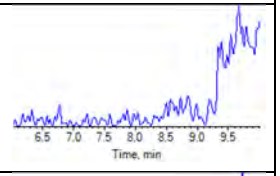
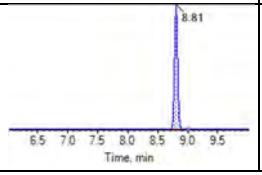
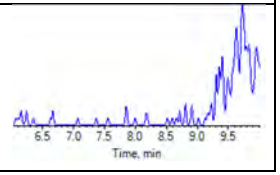
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	74830	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	187700	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	187700	N/A	N/A	N/A	N/A/ 0.37		

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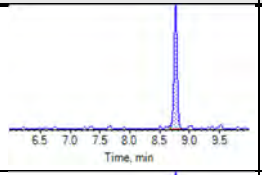
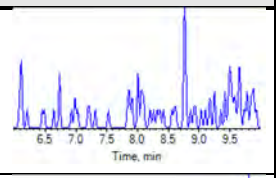
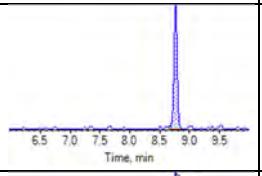
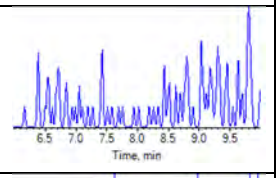
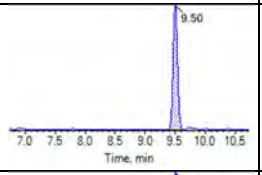
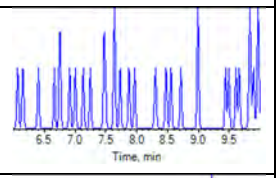
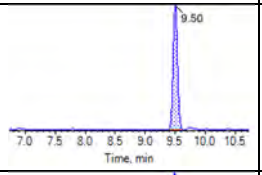
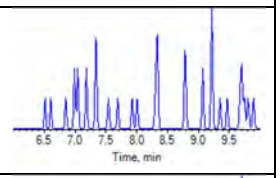
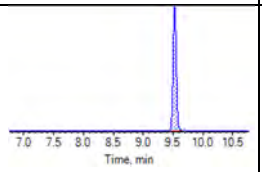
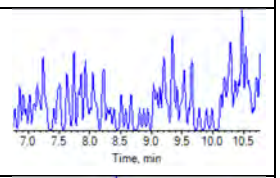
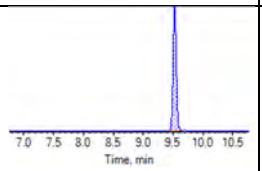
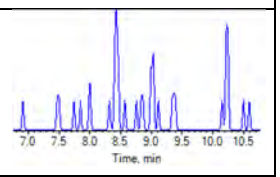
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35000	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35000	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	200900	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	200900	N/A	N/A	N/A	N/A/ 0.24		

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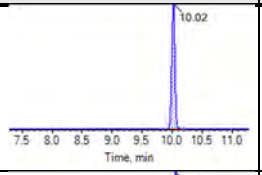
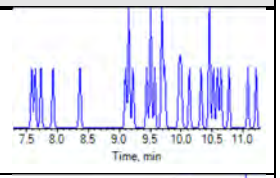
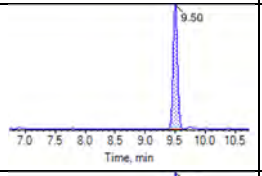
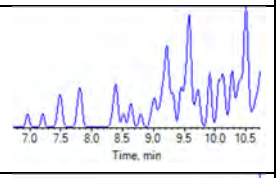
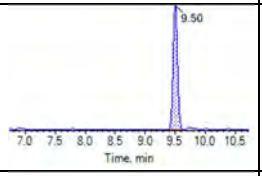
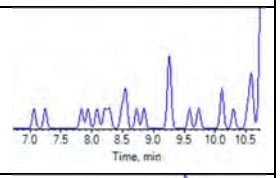
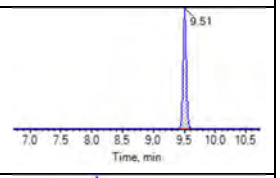
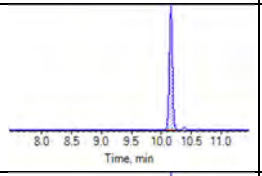
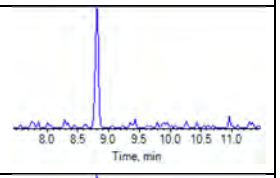
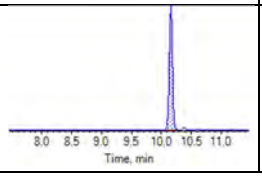
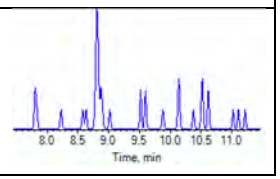
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	409000	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.51 (9.45)	1160000	N/A	N/A	N/A	691.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	103900	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	103900	N/A	N/A	N/A	N/A/ 0.13		

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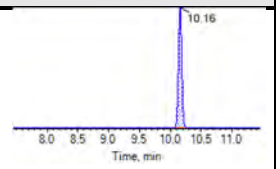
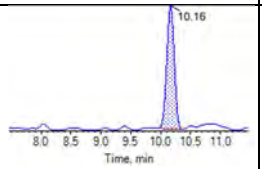
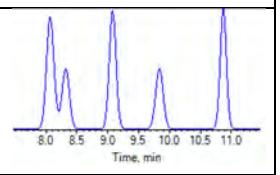
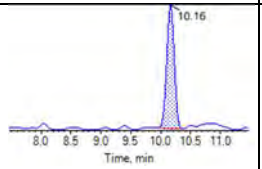
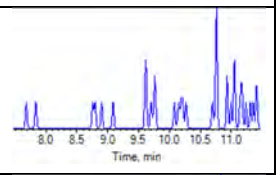
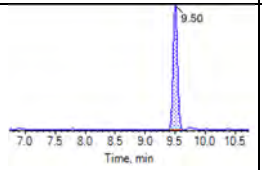
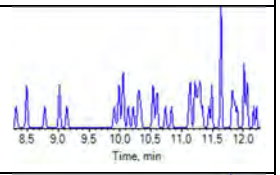
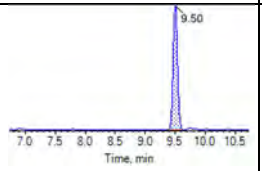
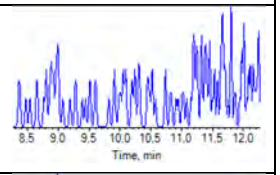
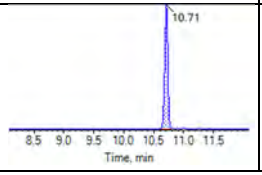
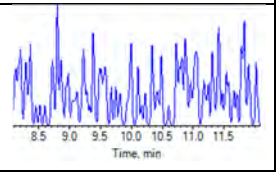
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.16 (10.02)	695900	N/A	N/A	N/A	603.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	17560	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	17560	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	134600	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
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LCMSMS#6

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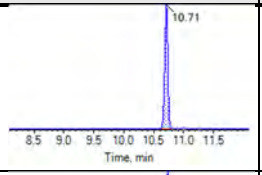
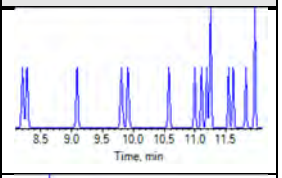
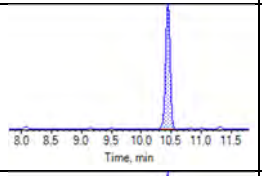
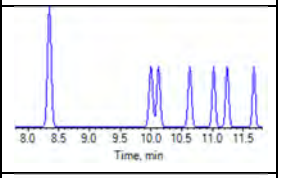
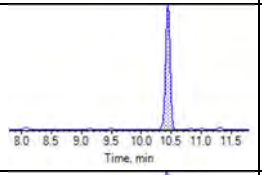
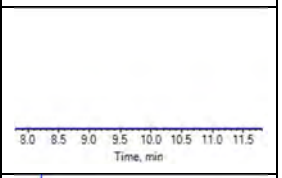
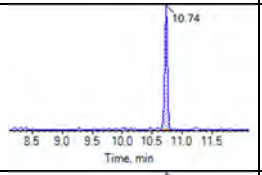
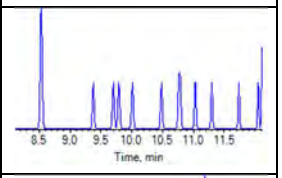
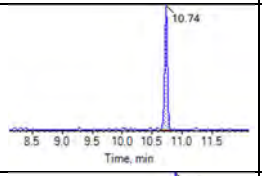
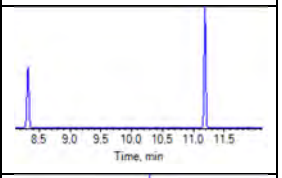
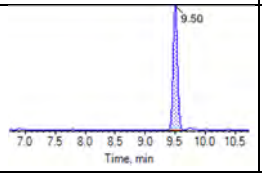
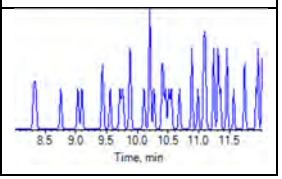
PFC103117160.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	134600	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	33490	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	33490	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	32280	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	32280	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 1.00		

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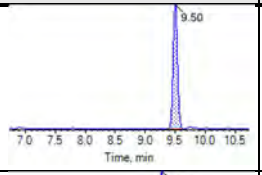
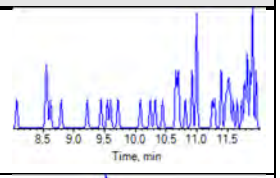
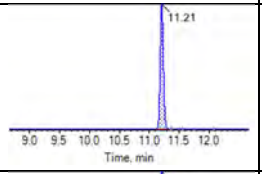
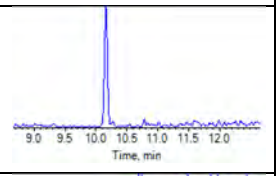
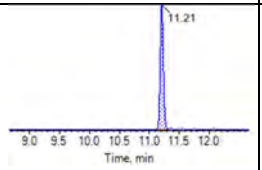
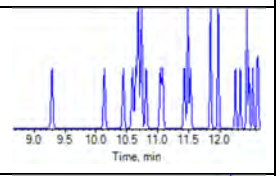
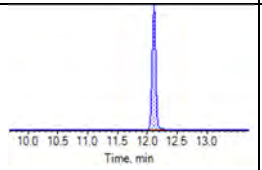
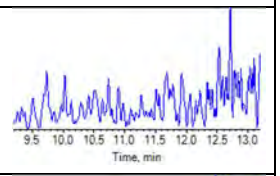
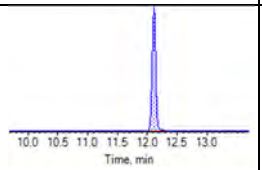
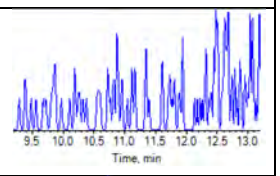
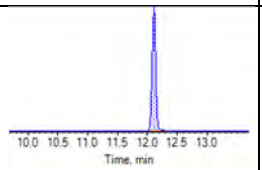
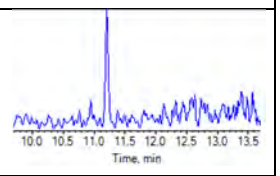
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	51700	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	129300	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	129300	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 1.00		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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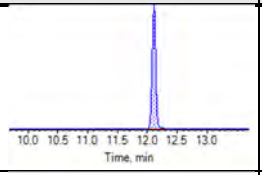
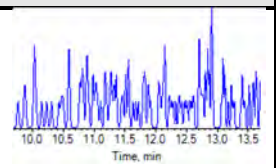
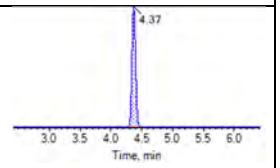
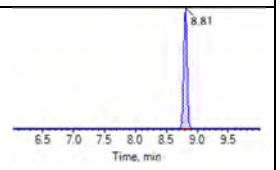
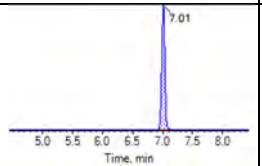
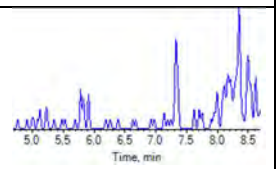
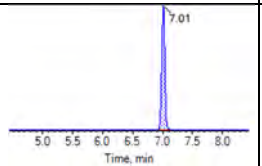
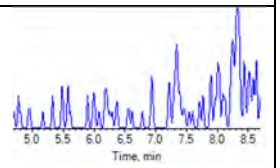
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	99200	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.37 (4.60)	1385000	N/A	N/A	N/A	800.6	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.81 (8.75)	869200	N/A	N/A	N/A	706.5	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	259700	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 03-NOV-17 10:08

Data File: PFC103117162.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

JTSB
11/06/2017

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LCMSMS#6

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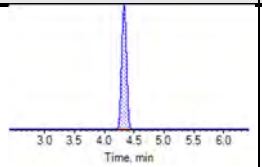
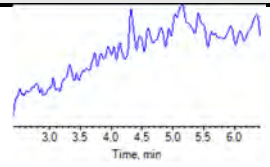
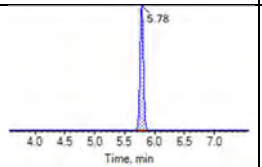
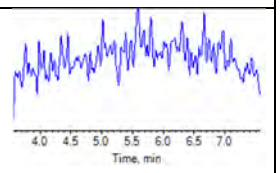
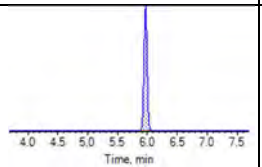
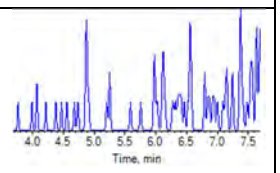
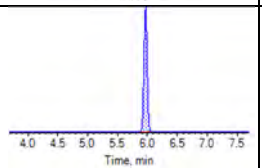
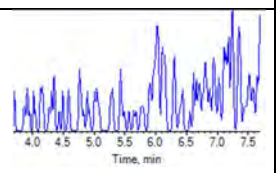
PFC103117162.wiff			
Sample Name	PFCIBLK18	**Injection Vial**	1
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117162.wiff
Acquisition Date	11/3/2017 10:08:11	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117162.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	173400	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	278300	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	189900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	189900	N/A	N/A	N/A	N/A/ 0.45		

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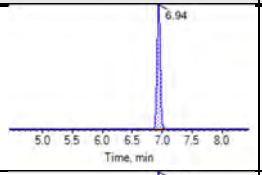
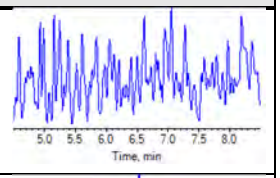
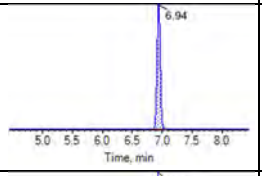
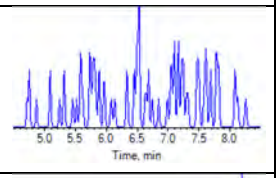
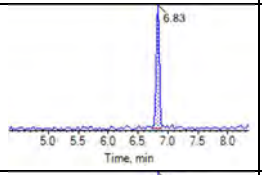
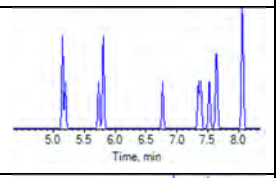
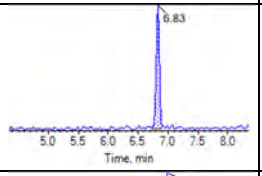
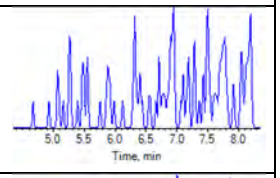
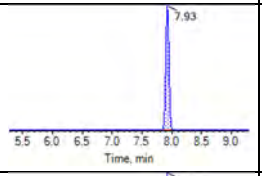
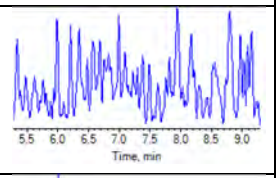
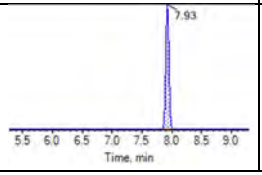
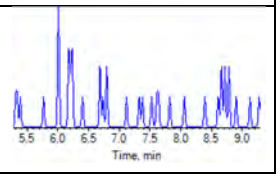
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	43120	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	43120	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	285800	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	285800	N/A	N/A	N/A	N/A/ 0.26		

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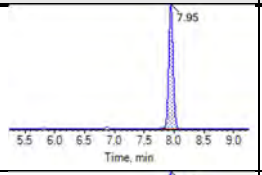
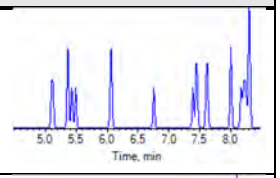
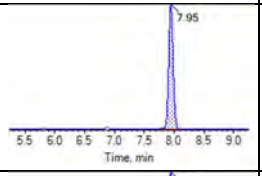
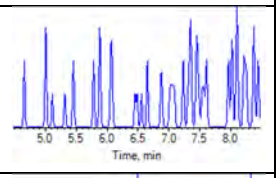
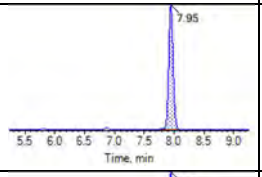
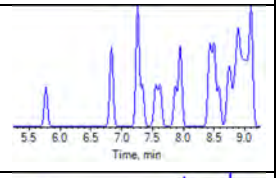
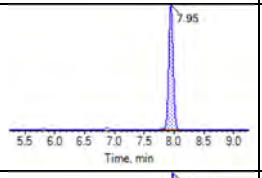
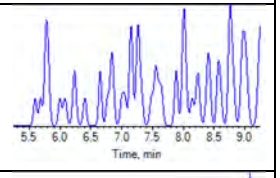
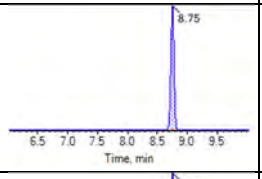
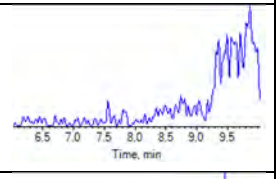
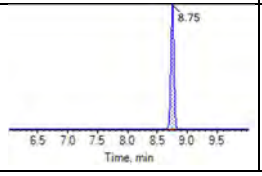
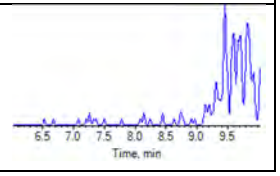
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	91390	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	261800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	261800	N/A	N/A	N/A	N/A/ 0.37		

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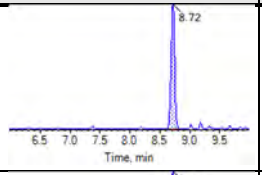
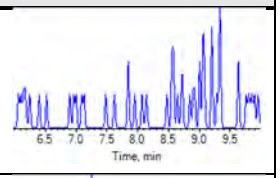
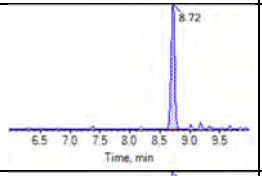
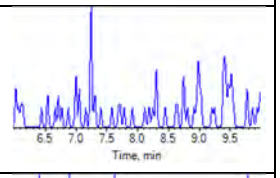
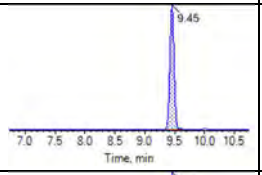
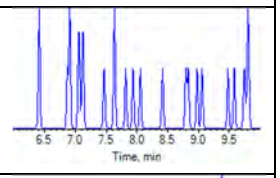
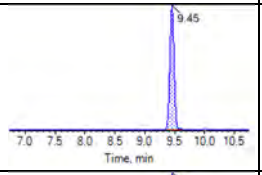
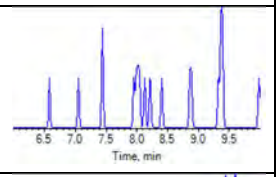
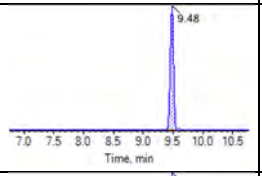
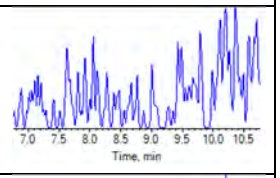
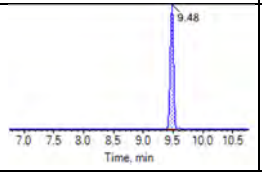
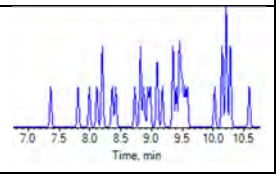
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	42240	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	42240	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	247600	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	247600	N/A	N/A	N/A	N/A/ 0.24		

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LCMSMS#6

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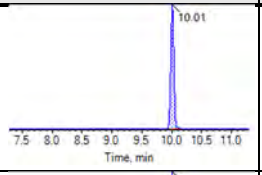
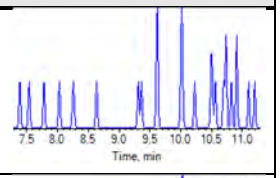
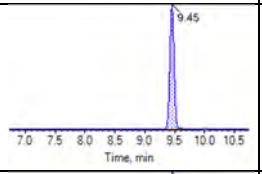
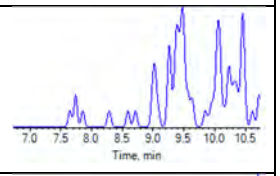
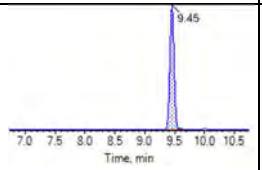
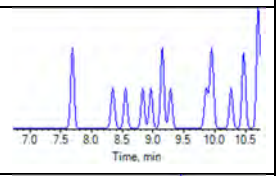
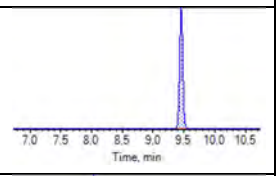
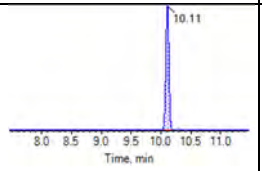
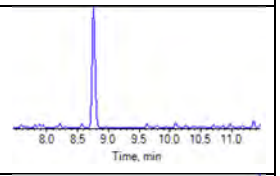
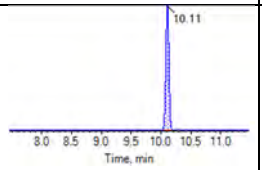
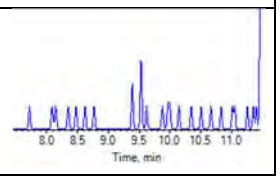
PFC103117162.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	592200	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.46 (9.45)	1524000	N/A	N/A	N/A	908.5	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	145400	N/A	N/A	N/A	N/A/ 0.13		

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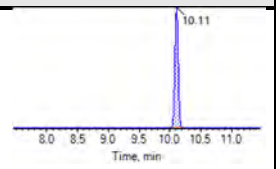
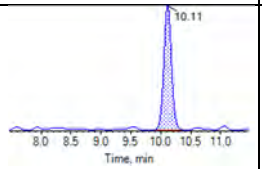
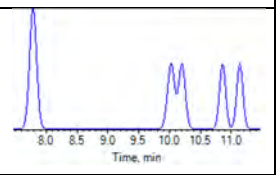
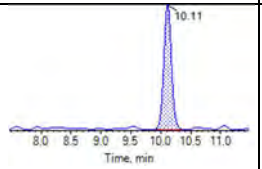
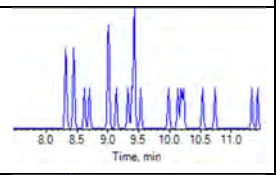
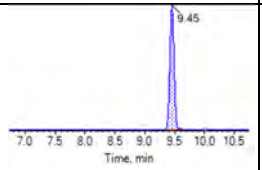
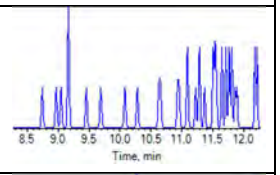
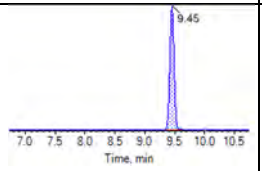
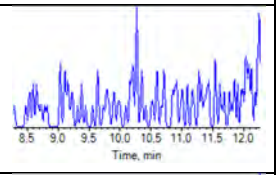
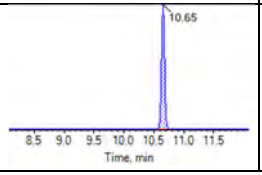
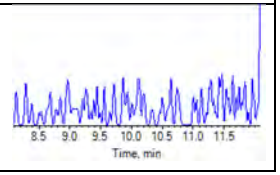
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.11 (10.02)	1028000	N/A	N/A	N/A	891.3	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	192900	N/A	N/A	N/A	N/A/ 1.00		

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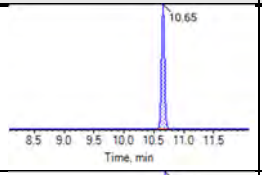
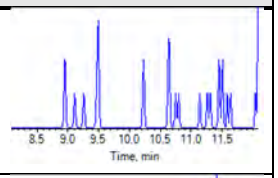
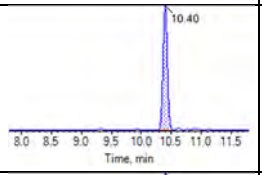
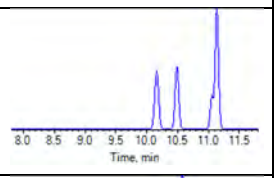
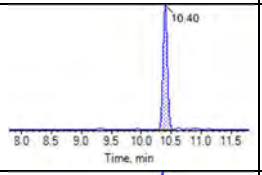
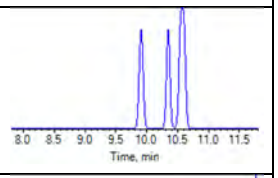
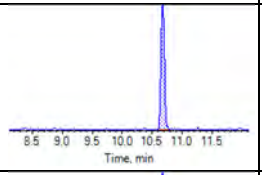
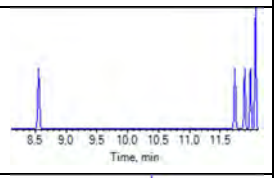
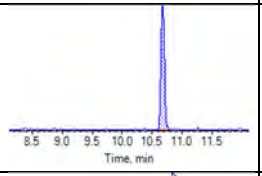
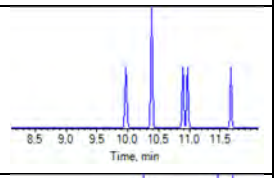
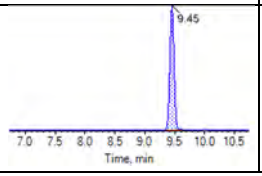
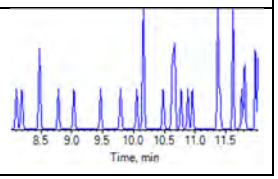
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	192900	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44410	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	44410	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47700	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47700	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 1.00		

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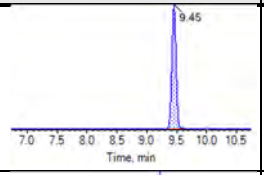
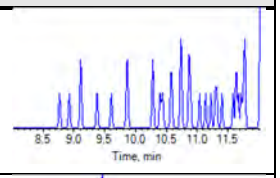
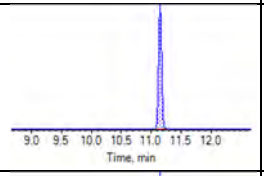
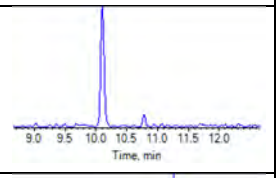
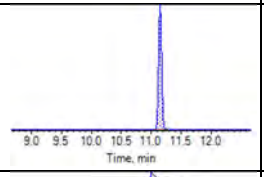
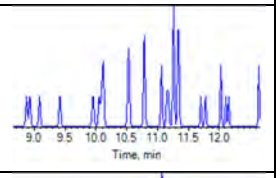
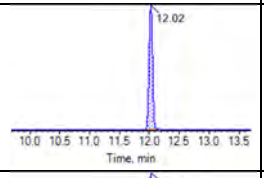
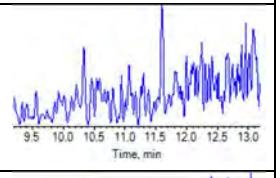
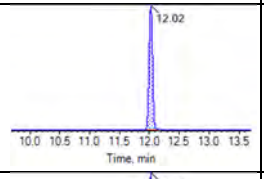
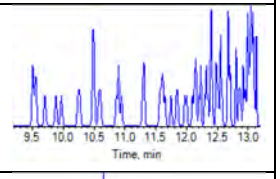
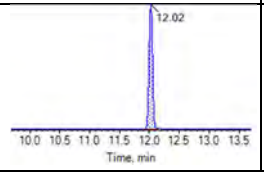
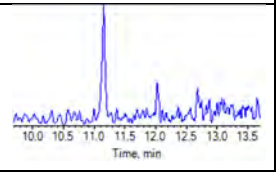
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	79430	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	204900	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	204900	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 1.00		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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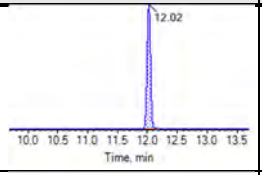
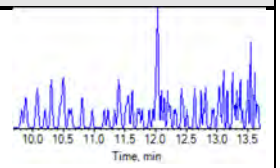
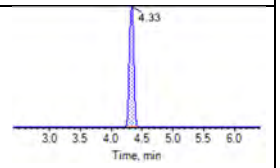
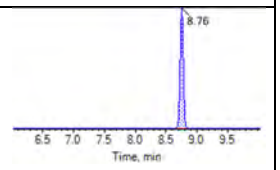
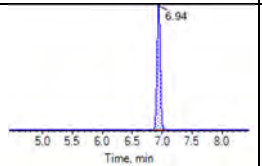
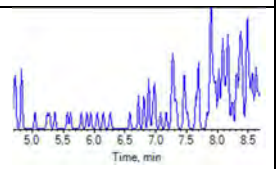
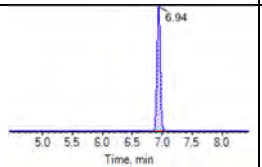
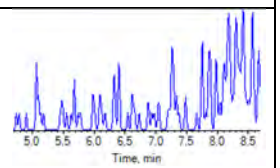
PFC103117162.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	145100	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.33 (4.60)	1773000	N/A	N/A	N/A	1024.7	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.76 (8.75)	1241000	N/A	N/A	N/A	1008.2	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	323900	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 04-NOV-17 01:49

Data File: PFC103117206.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

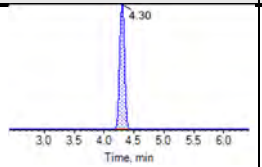
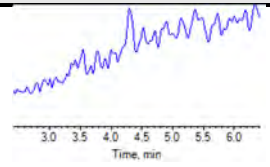
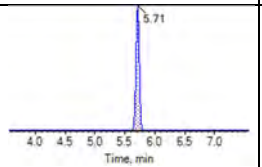
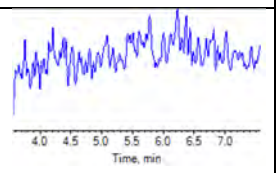
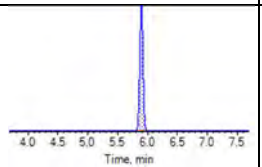
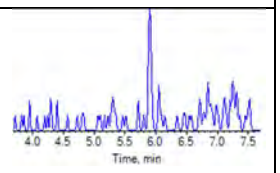
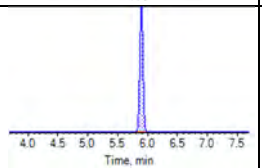
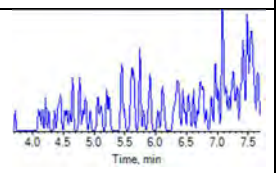
JTSB
11/06/2017

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 11:31:00

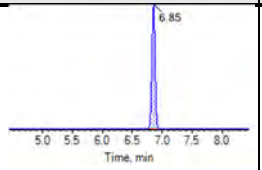
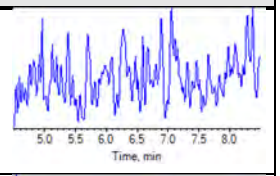
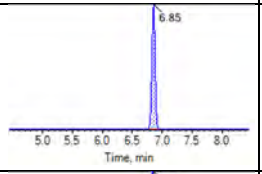
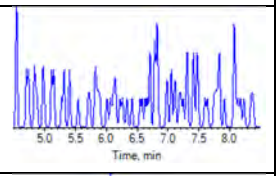
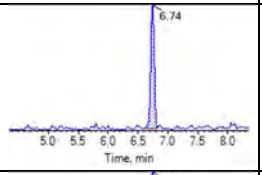
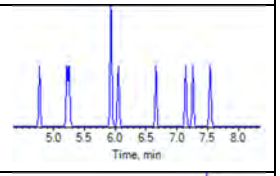
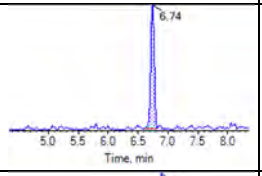
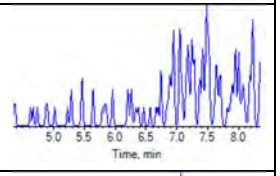
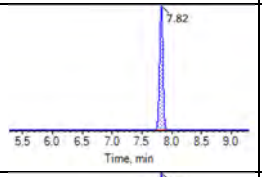
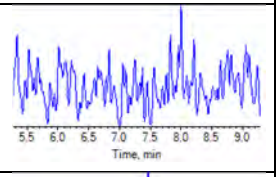
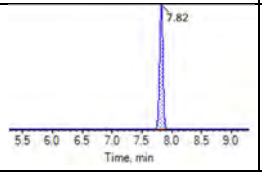
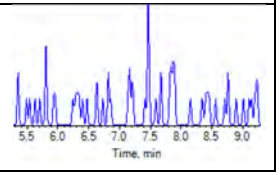
PFC103117206.wiff			
Sample Name	PFCIBLK22	**Injection Vial**	40
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117206.wiff
Acquisition Date	11/4/2017 01:49:30	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117206.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	171000	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	254300	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	180800	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	180800	N/A	N/A	N/A	N/A/ 0.45		

GEL Laboratories, LLC
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 11:31:00

PFC103117206.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	350500	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	350500	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	43580	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	43580	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	247300	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	247300	N/A	N/A	N/A	N/A/ 0.26		

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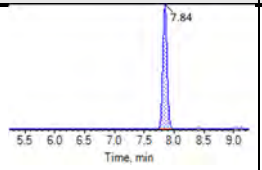
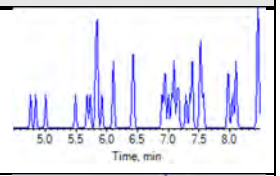
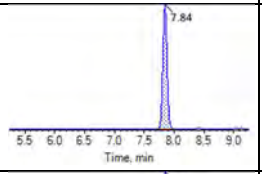
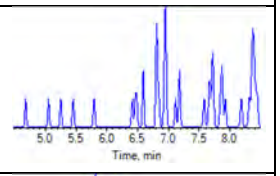
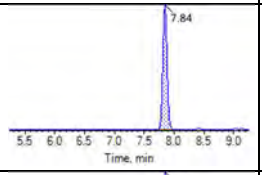
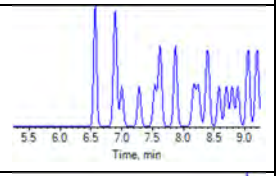
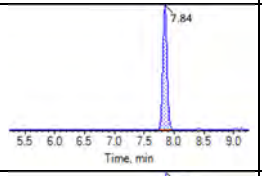
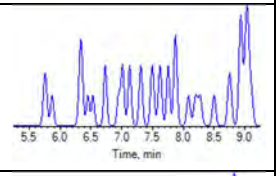
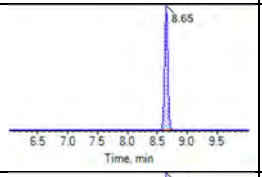
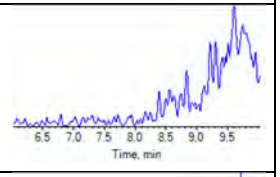
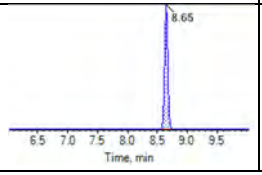
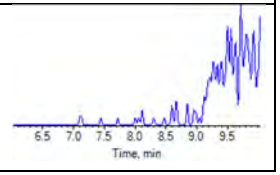
GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

Printed: 11/06/2017 11:31:00

PFC103117206.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	82640	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	82640	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	82640	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	82640	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	253800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	253800	N/A	N/A	N/A	N/A/ 0.37		

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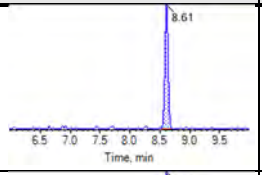
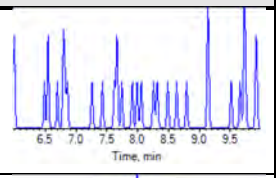
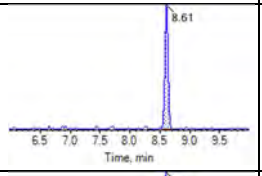
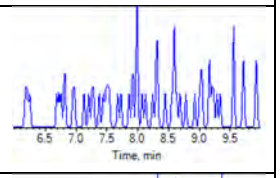
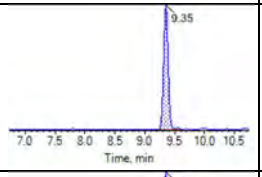
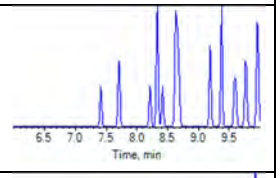
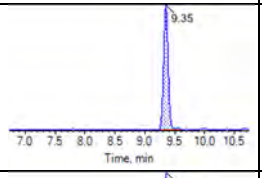
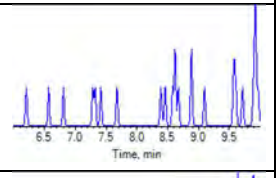
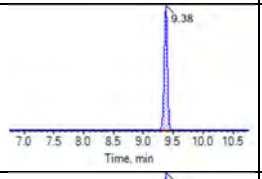
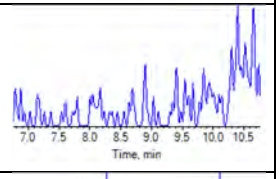
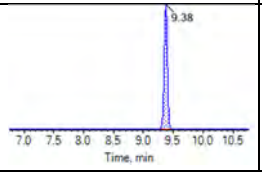
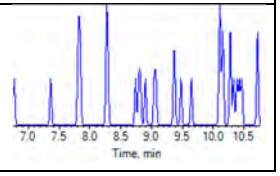
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	38400	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	38400	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	235300	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	235300	N/A	N/A	N/A	N/A/ 0.24		

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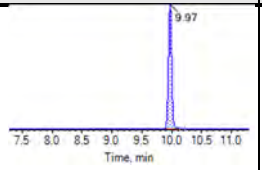
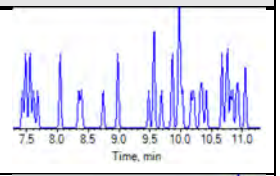
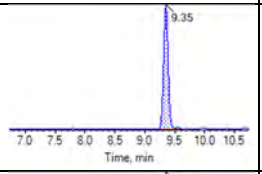
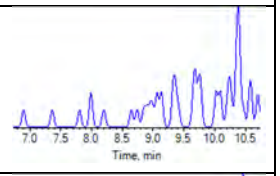
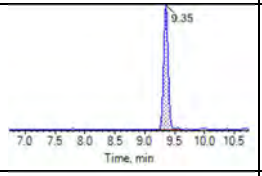
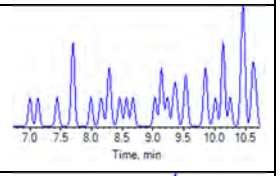
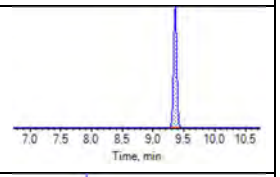
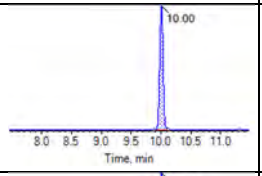
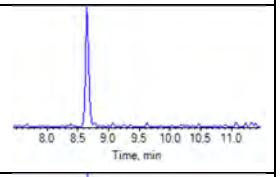
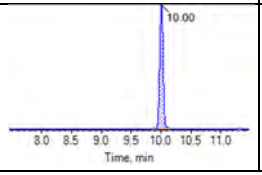
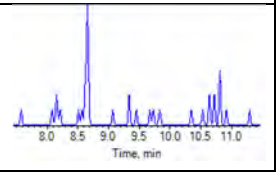
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	505600	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.36 (9.45)	1522000	N/A	N/A	N/A	907.7	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	132200	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	132200	N/A	N/A	N/A	N/A/ 0.13		

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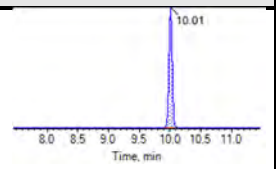
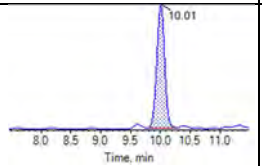
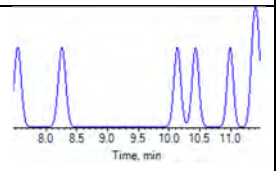
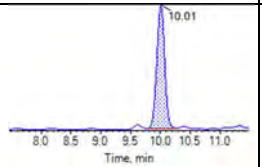
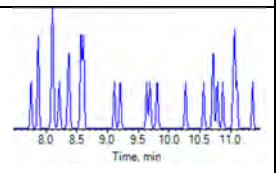
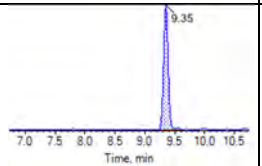
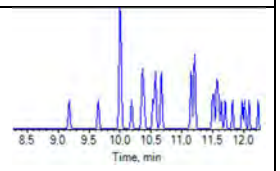
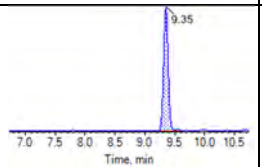
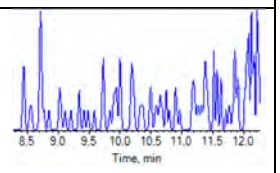
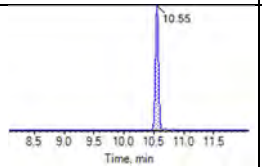
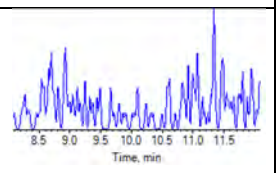
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.01 (10.02)	1054000	N/A	N/A	N/A	913.8	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	25810	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	213400	N/A	N/A	N/A	N/A/ 1.00		

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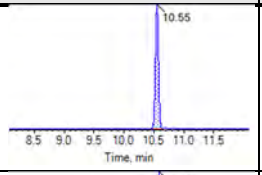
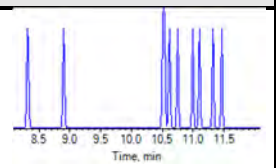
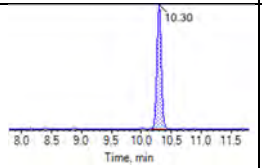
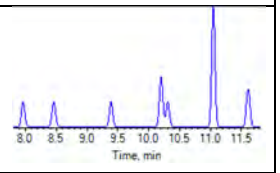
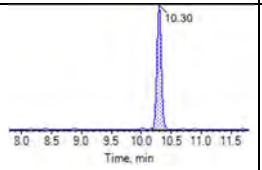
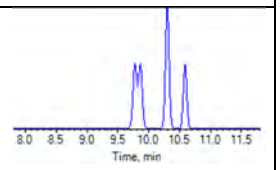
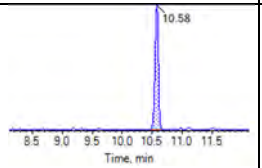
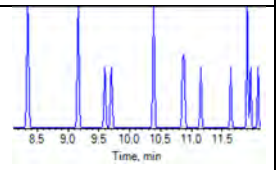
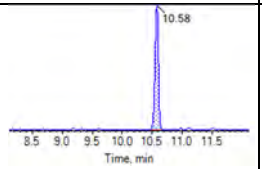
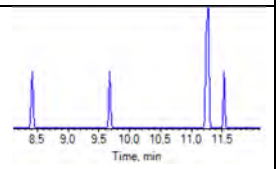
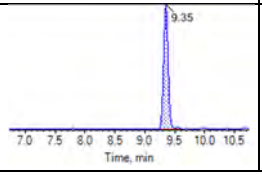
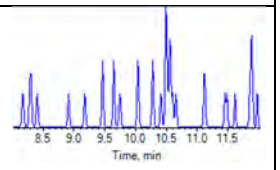
PFC103117206.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	213400	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	63650	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	63650	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	65230	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	65230	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 1.00		

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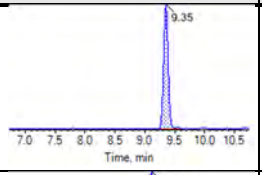
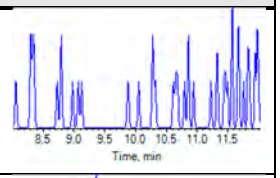
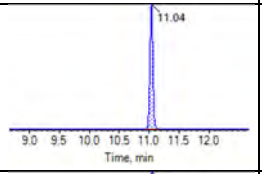
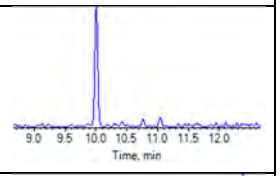
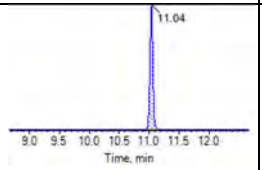
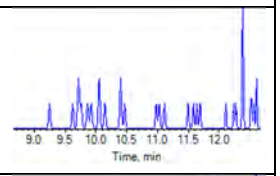
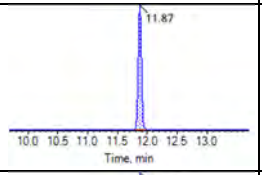
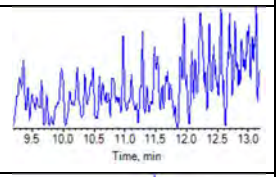
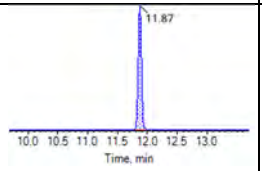
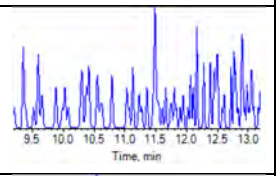
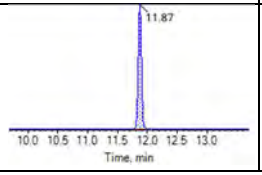
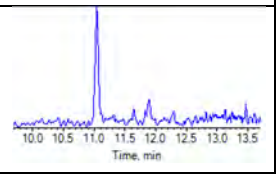
PFC103117206.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	65930	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	200400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	200400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	133900	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	133900	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	133900	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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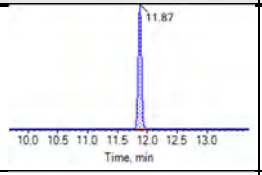
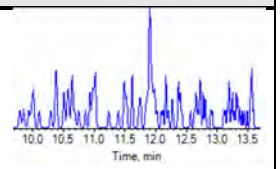
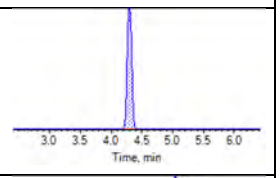
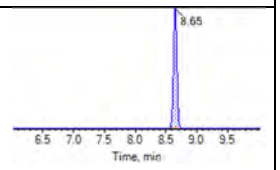
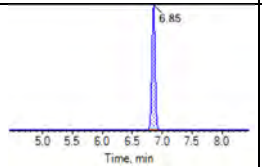
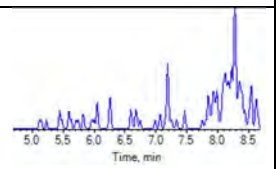
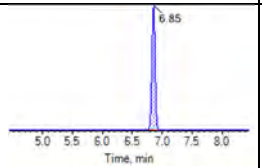
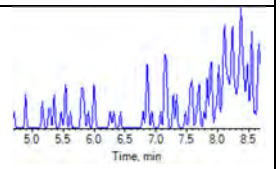
PFC103117206.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	133900	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.30 (4.60)	1721000	N/A	N/A	N/A	995.1	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.65 (8.75)	1161000	N/A	N/A	N/A	943.7	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	350500	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	350500	N/A	N/A	N/A	N/A/ 0.75		

Continuing Calibration Blank Summary

Client SDG: 437370

Instrument ID: LCMSMS6

Injection Date: 10-NOV-17 01:00

Data File: PFC103117221.wiff

Init. Cal. Date(s): 31-OCT-17 16:55 - 31-OCT-17 19:04

Lab Sample ID CCB01

Method: EPA 537

Column ID: Gemini 3u C-18

Quant Type: ESTD

Compound	True Value	Result
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	0
N-ethylperfluoro-1-octanesulfonamidoacetic acid	0	0
Perfluorobutanesulfonate (PFBS)	0	0
Perfluorodecanoic acid (PFDA)	0	0
Perfluorododecanoic acid (PFDoA)	0	0
Perfluoroheptanoic acid (PFHpA)	0	0
Perfluorohexanesulfonate (PFHxS)	0	0
Perfluorohexanoic acid (PFHxA)	0	0
Perfluorononanoic acid (PFNA)	0	0
Perfluorooctanesulfonate (PFOS)	0	0
Perfluorooctanoic acid (PFOA)	0	0
Perfluorotetradecanoic acid (PFTeDA)	0	0
Perfluorotridecanoic acid (PFTrDA)	0	0
Perfluoroundecanoic acid (PFUdA)	0	0

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LCMSMS#6

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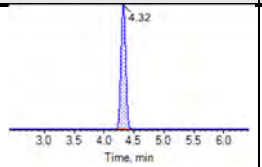
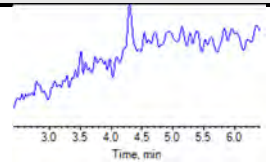
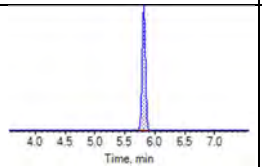
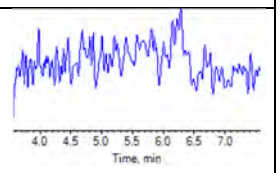
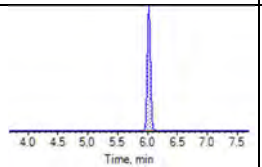
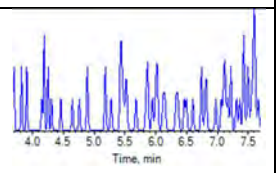
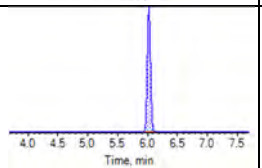
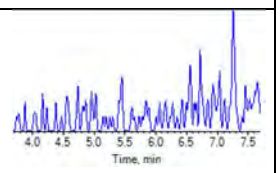
PFC103117221.wiff			
Sample Name	PFCIBLK25	**Injection Vial**	14
Batch|Dilution|Analyst	|1|JLS	**Injection Volume**	25.00
Sample Type	Unknown	**Data File**	PFC103117221.wiff
Acquisition Date	11/10/2017 01:00:07	**Result Table**	103117
Acquisition Method	PFC 062817 rev3.dam	**Procedure Code**	LCMSPFC_B

Results Summary

PFC103117221.wiff											
Analyte Peak Name	**MRM**	**Analyte RT (Exp. RT)**	**Analyte Peak Area (cps)**	**IS Peak Name**	**IS Area (cps)**	**Actual Conc. (ng/L)**	**Cal. Conc. (ng/L)**	**Accuracy %**	**Cal. /Exp. Ion Ratio**	**IS Peak Review**	**Analyte Peak Review**
PFBA	212.9 / 169.0	N/A (4.25)	N/A	13C4_PFBA	156400	N/A	N/A	N/A	N/A/ 1.00		
PFPeA	262.9 / 219.0	N/A (5.69)	N/A	13C5_PFPeA	238900	N/A	N/A	N/A	N/A/ 1.00		
PFBS	298.9 / 80.0	N/A (5.89)	N/A	13C3_PFBS	166900	N/A	N/A	N/A	N/A/ 1.00		
PFBS_2	298.9 / 99.0	N/A (5.89)	N/A	13C3_PFBS	166900	N/A	N/A	N/A	N/A/ 0.45		

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GEL SOP GL-OA-E-076, EPA 537-Modified
LCMSMS#6

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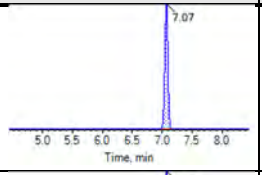
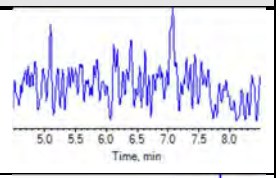
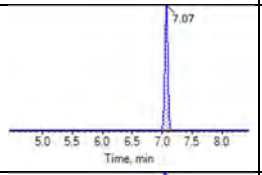
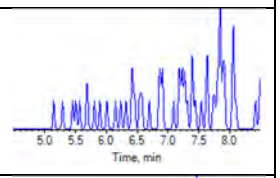
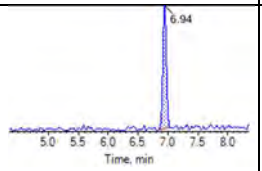
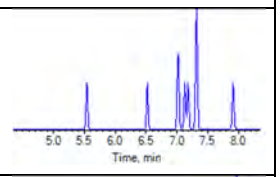
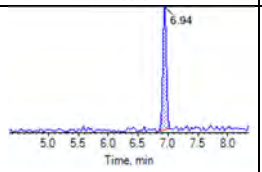
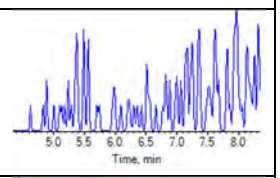
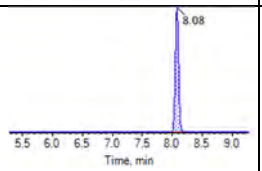
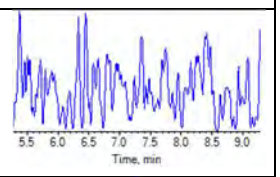
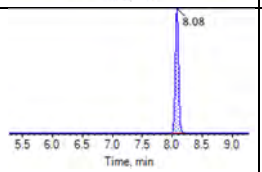
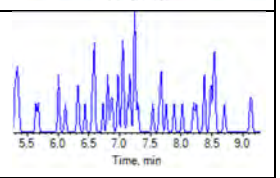
PFC103117221.wiff											
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFHxA	313.0 / 269.0	N/A (6.92)	N/A	13C5_PFHxA	324300	N/A	N/A	N/A	N/A/ 1.00		
PFHxA_2	313.0 / 119.0	N/A (6.92)	N/A	13C5_PFHxA	324300	N/A	N/A	N/A	N/A/ 0.07		
4:2 FTS	327.0 / 307.0	N/A (6.80)	N/A	13C2_4:2 FTS	44660	N/A	N/A	N/A	N/A/ 1.00		
4:2 FTS_2	327.0 / 81.0	N/A (6.80)	N/A	13C2_4:2 FTS	44660	N/A	N/A	N/A	N/A/ 0.72		
PFHpA	363.0 / 319.0	N/A (7.93)	N/A	13C4_PFHpA	310900	N/A	N/A	N/A	N/A/ 1.00		
PFHpA_2	363.0 / 169.0	N/A (7.93)	N/A	13C4_PFHpA	310900	N/A	N/A	N/A	N/A/ 0.26		

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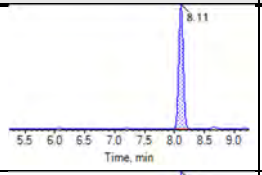
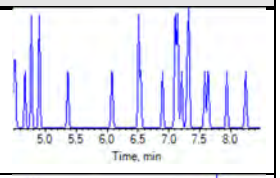
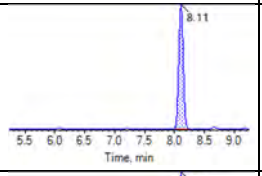
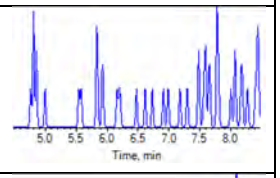
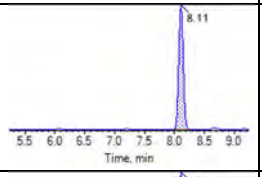
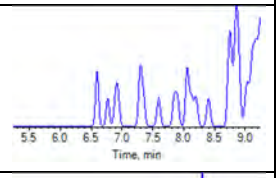
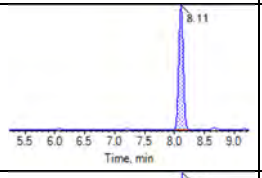
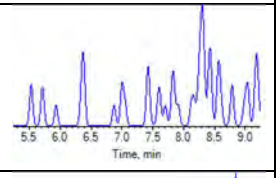
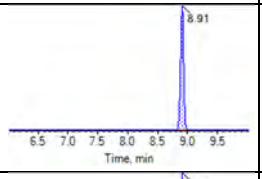
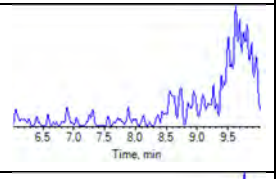
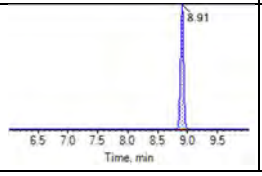
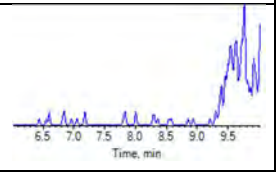
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
PFPeS	349.0 / 80.0	N/A (7.02)	N/A	13C3_PFHxS	84410	N/A	N/A	N/A	N/A/ 1.00		
PFPeS_2	349.0 / 99.0	N/A (7.02)	N/A	13C3_PFHxS	84410	N/A	N/A	N/A	N/A/ 0.35		
PFHxS	399.0 / 80.0	N/A (7.96)	N/A	13C3_PFHxS	84410	N/A	N/A	N/A	N/A/ 1.00		
PFHxS_2	399.0 / 99.0	N/A (7.96)	N/A	13C3_PFHxS	84410	N/A	N/A	N/A	N/A/ 0.25		
PFOA	413.0 / 369.0	N/A (8.75)	N/A	13C8_PFOA	226800	N/A	N/A	N/A	N/A/ 1.00		
PFOA_2	413.0 / 169.0	N/A (8.75)	N/A	13C8_PFOA	226800	N/A	N/A	N/A	N/A/ 0.37		

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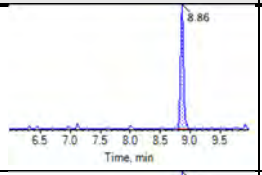
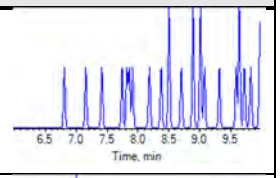
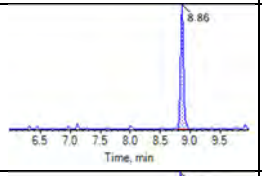
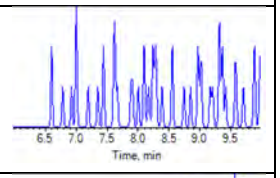
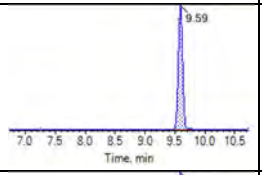
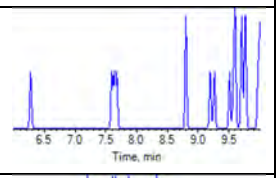
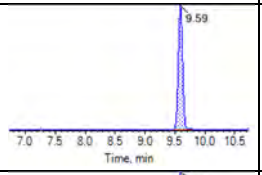
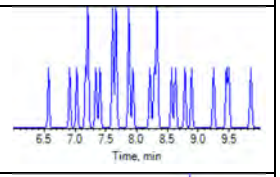
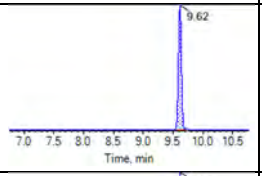
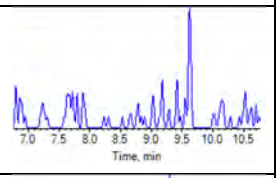
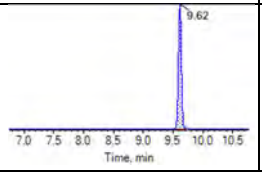
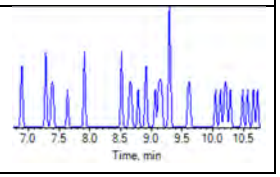
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
6:2 FTS	427.0 / 407.0	N/A (8.72)	N/A	13C2_6:2 FTS	35880	N/A	N/A	N/A	N/A/ 1.00		
6:2 FTS_2	427.0 / 81.0	N/A (8.72)	N/A	13C2_6:2 FTS	35880	N/A	N/A	N/A	N/A/ 0.91		
PFHpS	449.0 / 80.0	N/A (8.76)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 1.00		
PFHpS_2	449.0 / 99.0	N/A (8.76)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 0.20		
PFNA	463.0 / 419.0	N/A (9.47)	N/A	13C9_PFNA	245700	N/A	N/A	N/A	N/A/ 1.00		
PFNA_2	463.0 / 169.0	N/A (9.47)	N/A	13C9_PFNA	245700	N/A	N/A	N/A	N/A/ 0.24		

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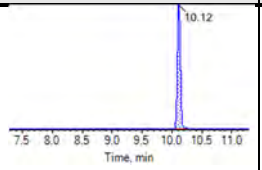
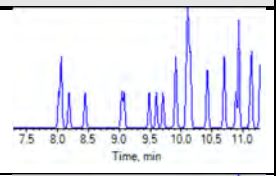
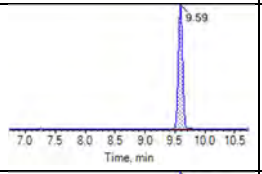
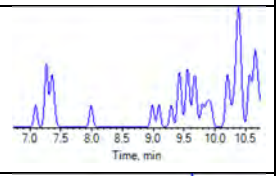
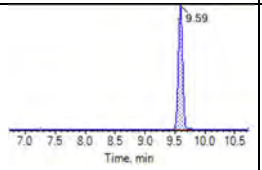
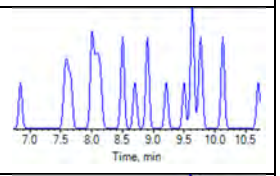
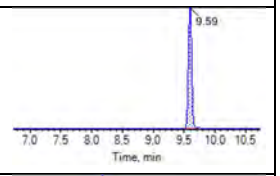
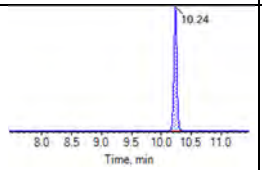
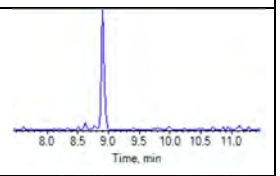
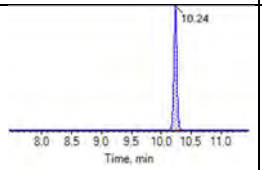
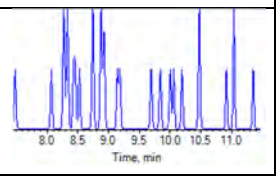
PFOSA	498.0 / 78.0	N/A (10.04)	N/A	13C8_PFOSA	534600	N/A	N/A	N/A	N/A/ 1.00		
PFOS	499.0 / 80.0	N/A (9.45)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 1.00		
PFOS_2	499.0 / 99.0	N/A (9.45)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 0.15		
13C4_PFOS	503.0 / 80.0	9.59 (9.45)	1400000	N/A	N/A	N/A	834.9	N/A	N/A/ N/A	No image available	
PFDA	513.0 / 469.0	N/A (10.08)	N/A	13C6_PFDA	143300	N/A	N/A	N/A	N/A/ 1.00		
PFDA_2	513.0 / 169.0	N/A (10.08)	N/A	13C6_PFDA	143300	N/A	N/A	N/A	N/A/ 0.13		

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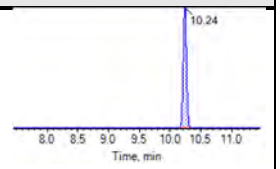
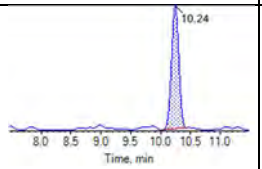
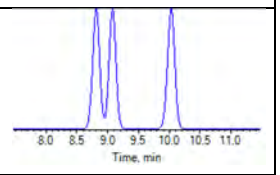
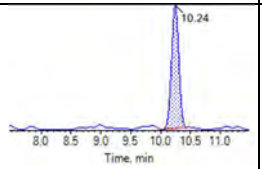
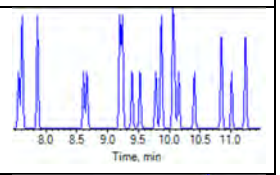
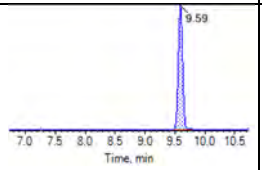
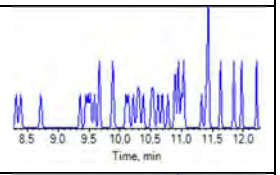
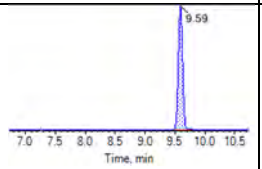
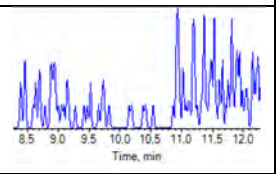
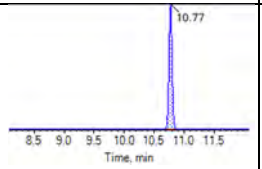
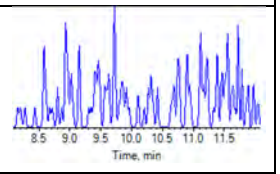
Analyte Peak Name	MRM	Analyte RT (Exp. RT)	Analyte Peak Area (cps)	IS Peak Name	IS Area (cps)	Actual Conc. (ng/L)	Cal. Conc. (ng/L)	Accuracy %	Cal. /Exp. Ion Ratio	IS Peak Review	Analyte Peak Review
13C2_PFDA	515.0 / 470.0	10.24 (10.02)	1027000	N/A	N/A	N/A	890.2	N/A	N/A/ N/A	No image available	
8:2 FTS	527.0 / 507.0	N/A (10.09)	N/A	13C2_8:2 FTS	27400	N/A	N/A	N/A	N/A/ 1.00		
8:2 FTS_2	527.0 / 81.0	N/A (10.09)	N/A	13C2_8:2 FTS	27400	N/A	N/A	N/A	N/A/ 0.96		
PFNS	549.0 / 80.0	N/A (10.49)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 1.00		
PFNS_2	549.0 / 99.0	N/A (10.49)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 0.18		
PFUdA	563.0 / 519.0	N/A (10.62)	N/A	13C7_PFUdA	193100	N/A	N/A	N/A	N/A/ 1.00		

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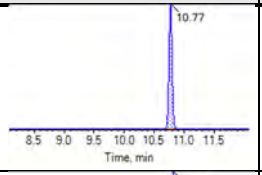
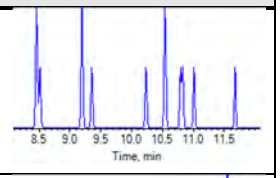
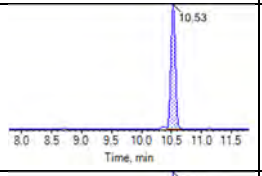
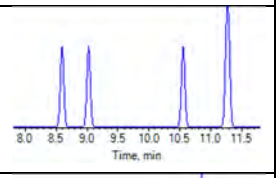
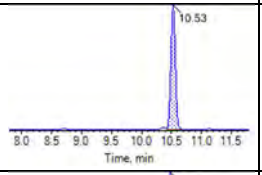
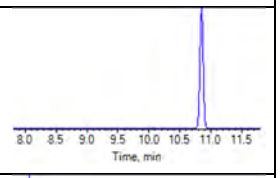
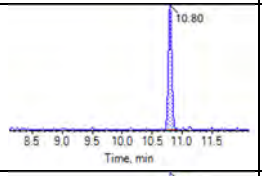
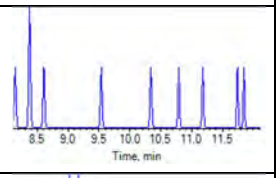
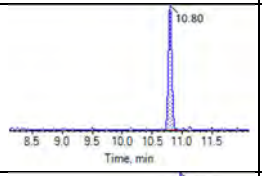
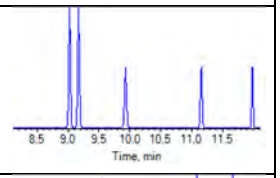
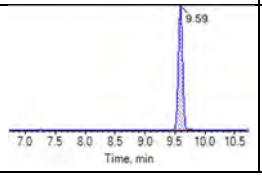
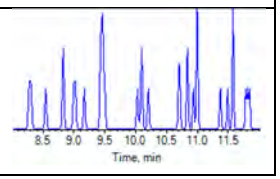
PFUdA_2	563.0 / 169.0	N/A (10.62)	N/A	13C7_PFUdA	193100	N/A	N/A	N/A	N/A/ 0.12		
N-MeFOSAA	570.0 / 419.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46610	N/A	N/A	N/A	N/A/ 1.00		
N-MeFOSAA_2	570.0 / 483.0	N/A (10.37)	N/A	d3-N-MeFOSAA	46610	N/A	N/A	N/A	N/A/ 0.49		
N-EtFOSAA	584.0 / 419.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47390	N/A	N/A	N/A	N/A/ 1.00		
N-EtFOSAA_2	584.0 / 526.0	N/A (10.64)	N/A	d5-N-EtFOSAA	47390	N/A	N/A	N/A	N/A/ 0.48		
PFDS	599.0 / 80.0	N/A (10.93)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 1.00		

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LCMSMS#6

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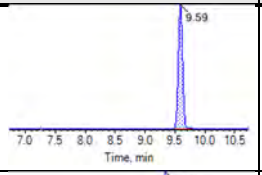
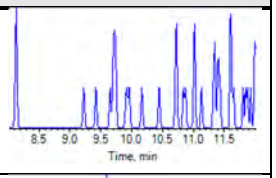
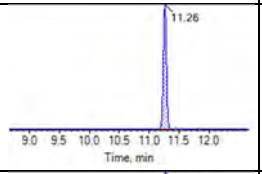
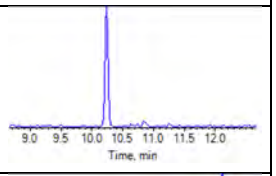
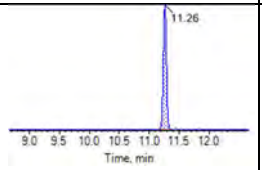
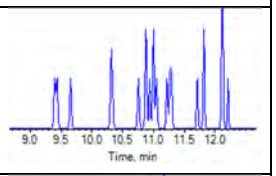
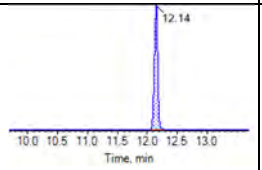
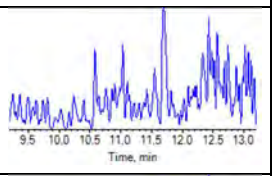
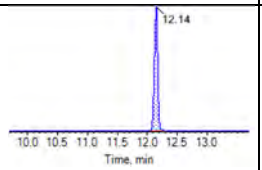
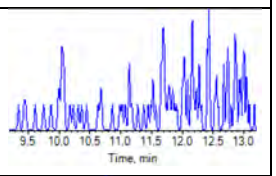
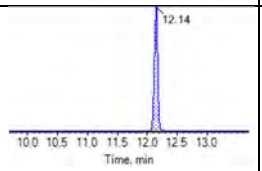
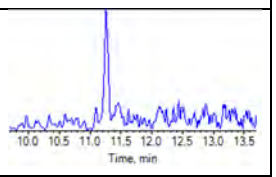
PFDS_2	599.0 / 99.0	N/A (10.93)	N/A	13C8_PFOS	60850	N/A	N/A	N/A	N/A/ 0.27		
PFDoA	613.0 / 569.0	N/A (11.09)	N/A	13C2_PFDoA	179400	N/A	N/A	N/A	N/A/ 1.00		
PFDoA_2	613.0 / 169.0	N/A (11.09)	N/A	13C2_PFDoA	179400	N/A	N/A	N/A	N/A/ 0.16		
PFTrDA	663.0 / 619.0	N/A (11.82)	N/A	13C2_PFTeDA	139900	N/A	N/A	N/A	N/A/ 1.00		
PFTrDA_2	663.0 / 169.0	N/A (11.82)	N/A	13C2_PFTeDA	139900	N/A	N/A	N/A	N/A/ 0.22		
PFTeDA	713.0 / 669.0	N/A (11.91)	N/A	13C2_PFTeDA	139900	N/A	N/A	N/A	N/A/ 1.00		

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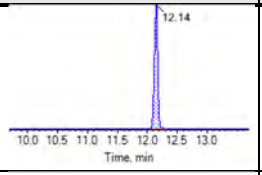
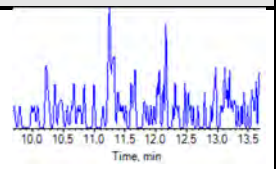
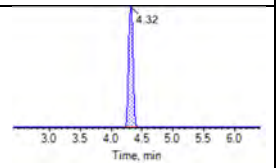
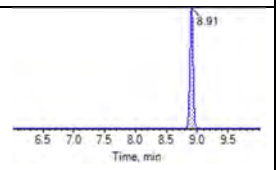
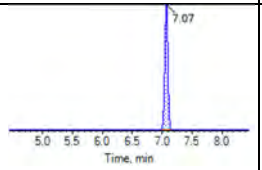
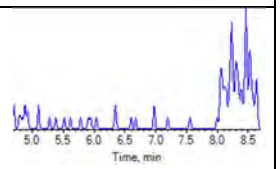
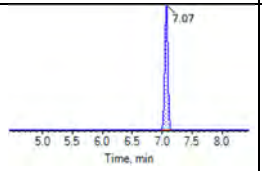
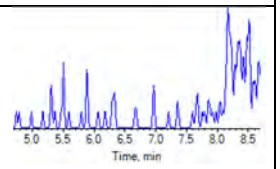
PFTeDA_2	713.0 / 169.0	N/A (11.91)	N/A	13C2_PFTeDA	139900	N/A	N/A	N/A	N/A/ 0.22		
13C3_PFBA	216.0 / 172.0	4.32 (4.60)	1668000	N/A	N/A	N/A	964.3	N/A	N/A/ N/A	No image available	
13C2_PFOA	415.0 / 370.0	8.91 (8.75)	1305000	N/A	N/A	N/A	1060.6	N/A	N/A/ N/A	No image available	
PFPrOPrA	284.9 / 169.0	N/A (7.26)	N/A	13C5_PFHxA	324300	N/A	N/A	N/A	N/A/ 1.00		
PFPrOPrA_2	284.9 / 184.9	N/A (7.26)	N/A	13C5_PFHxA	324300	N/A	N/A	N/A	N/A/ 0.75		

Miscellaneous

Prep Logbook

The Extraction and Analysis of Per and Polyfluroalkyl Substances Using LCMSMS

Batch ID: 1717445 **Verified by:** _____
Analyst: Grace Cappelmann
Method: EPA 537 Modified

Lab SOP: GL-OA-E-076 REV# 4
Instrument: LCMSMS Manual Instrument

Sample ID	Prep Date	Initial Wt (g)	Final Wt (g)	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1203916041 MB	09-NOV-2017 11:00:00	285.77	33.5	252.27	5	0.01982
1203916042 LCS	09-NOV-2017 11:00:00	285.73	33.56	252.17	5	0.01983
1203916043 LCSD	09-NOV-2017 11:00:00	285.06	33.64	251.42	5	0.01989
437288001	09-NOV-2017 11:00:00	257.53	34.06	223.47	5	0.02237
437288002	09-NOV-2017 11:00:00	295.39	33.92	261.47	5	0.01912
437288003	09-NOV-2017 11:00:00	306.46	34.05	272.41	5	0.01835
437288004	09-NOV-2017 11:00:00	265.53	34.17	231.36	5	0.02161
437288005	09-NOV-2017 11:00:00	276.86	34.19	242.67	5	0.0206
437288006	09-NOV-2017 11:00:00	269.21	34.07	235.14	5	0.02126
437288007	09-NOV-2017 11:00:00	292.59	33.84	258.75	5	0.01932
437288008	09-NOV-2017 11:00:00	297.01	34.18	262.83	5	0.01902
437288009	09-NOV-2017 11:00:00	287.62	34.04	253.58	5	0.01972
437370001	09-NOV-2017 11:00:00	282.21	33.95	248.26	5	0.02014

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1203916042	PFAS 20 ug/L 537 Std	IPF171108-06	.25	mL
LCSD	1203916043	PFAS 20 ug/L 537 Std	IPF171108-06	.25	mL
RGNT	All	Water LC/MS Optima	2612865.10	250	mL
SURR	All	MPFAC-24ES 10 ug/L SURR	IPF171109-03	.125	mL
REGNT	All	Methanol HPLC Optima	2585244	4	mL
REGNT	All	0.1% Ammonia in Methanol	2597946	4	mL
REGNT	All	Water LC/MS Optima	2612865.10	1	mL
REGNT	All	Acetate Buffer, pH 4	2618242	4	mL

Comments:

Strata lot #: S322-0018
Envi-Carb lot #: 8632901

GEL ORGANIC RUN LOG

INSTRUMENT ID: lcmsms6

Date:10/31/17

Method: EPA 537 MOD/TABLE B-15

SOP: GL-OA-E-076Rev.2

Extr. Injection Volume: 25uL

Int. Std. IPF171027-03 & IPF171027-06

Sequence Number: 103117

Mobile Phase Lot#: 2612992 MeOH: 2595995

Initial Calibration Date: 10/31/2017

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag	REFMAT
PFC103117001.wiff	PFCIBLK01	JLS	10/31/2017 16:13			1		USE	B	
PFC103117002.wiff	PFCIBLK01	JLS	10/31/2017 16:34			1		USE	B	
PFC103117003.wiff	WPFICAL-01	JLS	10/31/2017 16:55			1		USE	I	WPF171018-01
PFC103117004.wiff	WPFICAL-02	JLS	10/31/2017 17:17			1		USE	I	WPF171018-02
PFC103117005.wiff	WPFICAL-03	JLS	10/31/2017 17:38			1		USE	I	WPF171018-03
PFC103117006.wiff	WPFICAL-04	JLS	10/31/2017 18:00			1		USE	I	WPF171018-04
PFC103117007.wiff	WPFICAL-05	JLS	10/31/2017 18:21			1		USE	I	WPF171018-05
PFC103117008.wiff	WPFICAL-06	JLS	10/31/2017 18:42			1		USE	I	WPF171018-06
PFC103117009.wiff	WPFICAL-07	JLS	10/31/2017 19:04			1		USE	I	WPF171018-07
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PFC103117011.wiff	WPFISC	JLS	10/31/2017 19:47			1		USE	C	WPF171018-11
PFC103117012.wiff	WPFICV	JLS	10/31/2017 20:08			1		USE	C	WPF171018-09
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PFC103117138.wiff	436205001	JLS	11/2/2017 17:43	1714023	436205	5000	LQAO	USE	L	
PFC103117139.wiff	1203907526	JLS	11/2/2017 18:05	1714023	436205	5000	LQAO	USE	L	
PFC103117140.wiff	1203907529	JLS	11/2/2017 18:26	1714023	436205	5000	LQAO	USE	L	
PFC103117141.wiff	436205001	JLS	11/2/2017 18:47	1714023	436205	100	LQAO	USE	L	
PFC103117142.wiff	1203907526	JLS	11/2/2017 19:09	1714023	436205	100	LQAO	USE	L	
PFC103117143.wiff	1203907529	JLS	11/2/2017 19:30	1714023	436205	100	LQAO	USE	L	
PFC103117144.wiff	WPFCCV	JLS	11/2/2017 19:52			1		USE	C	WPF171018-09
PFC103117145.wiff	PFCIBLK15	JLS	11/2/2017 20:13			1		USE	B	
PFC103117146.wiff	1203910649	JLS	11/2/2017 20:34	1715232	436646	1	ARMY	USE	L	
PFC103117147.wiff	1203910650	JLS	11/2/2017 20:56	1715232	436646	1	ARMY	USE	L	
PFC103117148.wiff	436646001	JLS	11/2/2017 21:17	1715232	436646	1	ARMY	USE	L	
PFC103117149.wiff	1203910651	JLS	11/2/2017 21:39	1715232	436646	1	ARMY	USE	L	
PFC103117150.wiff	1203910652	JLS	11/2/2017 22:00	1715232	436646	1	ARMY	USE	L	
PFC103117151.wiff	1203911346	JLS	11/2/2017 22:21	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117152.wiff	Filter Paper MB	JLS	11/2/2017 22:43		VARIOUS	1	VARIOUS	DUSE	S	
PFC103117153.wiff	1203911347	JLS	11/2/2017 23:04	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117154.wiff	1203911348	JLS	11/2/2017 23:25	1715548	VARIOUS	1	VARIOUS	DUSE	S	
PFC103117155.wiff	435984001	JLS	11/2/2017 23:47	1715548	2017LOD_LCMPFC_S	1	QCQA	DUSE	S	
PFC103117156.wiff	436427004	JLS	11/3/2017 00:08	1715548	436427	1	H2GO	DUSE	S	

PFC103117157.wiff	WPFCCV	JLS	11/3/2017 00:30			1		USE	C	WPF171018-09
PFC103117158.wiff	PFCIBLK16	JLS	11/3/2017 00:51			1		USE	B	
PFC103117159.wiff	Rinse	JLS	11/3/2017 09:03			1		DUSE	B	
PFC103117160.wiff	PFCIBLK17	JLS	11/3/2017 09:25			1		USE	B	
PFC103117161.wiff	WPFDISC	JLS	11/3/2017 09:46			1		USE	C	WPF171018-08
PFC103117162.wiff	PFCIBLK18	JLS	11/3/2017 10:08			1		USE	B	
PFC103117163.wiff	1203911346	JLS	11/3/2017 10:29	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117164.wiff	Filter Paper MB	JLS	11/3/2017 10:50		VARIOUS	1	VARIOUS	USE	S	
PFC103117165.wiff	1203911347	JLS	11/3/2017 11:12	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117166.wiff	1203911348	JLS	11/3/2017 11:33	1715548	VARIOUS	1	VARIOUS	USE	S	
PFC103117167.wiff	435984001	JLS	11/3/2017 11:55	1715548	2017LOD_LCMPFC_S	1	QCQA	USE	S	
PFC103117168.wiff	436427004	JLS	11/3/2017 12:16	1715548	436427	1	H2GO	USE	S	
PFC103117169.wiff	WPFCCV	JLS	11/3/2017 12:37			1		USE	C	WPF171018-09
PFC103117170.wiff	PFCIBLK19	JLS	11/3/2017 12:59			1		USE	B	
PFC103117171.wiff	1203905293	JLS	11/3/2017 13:20	1713140		1	VARIOUS	USE	L	
PFC103117172.wiff	1203905294	JLS	11/3/2017 13:42	1713140		1	VARIOUS	USE	L	
PFC103117173.wiff	1203905295	JLS	11/3/2017 14:03	1713140		1	VARIOUS	USE	L	
PFC103117174.wiff	435706005	JLS	11/3/2017 14:24	1713140	435706	1	CFPA	USE	L	
PFC103117175.wiff	435983002	JLS	11/3/2017 14:46	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117176.wiff	435983003	JLS	11/3/2017 15:07	1713140	2017LOD_LCMPFC_S	1	QCQA	USE	L	
PFC103117177.wiff	436081001	JLS	11/3/2017 15:29	1713140	436081	500	TNAQ	DUSE	L	
PFC103117178.wiff	436081002	JLS	11/3/2017 15:50	1713140	436081	500	TNAQ	DUSE	L	
PFC103117179.wiff	436081003	JLS	11/3/2017 16:11	1713140	436081	500	TNAQ	DUSE	L	
PFC103117180.wiff	436081005	JLS	11/3/2017 16:33	1713140	436081	1	TNAQ	USE	L	
PFC103117181.wiff	WPFCCV	JLS	11/3/2017 16:54			1		USE	C	WPF171018-09
PFC103117182.wiff	PFCIBLK20	JLS	11/3/2017 17:16			1		USE	B	
PFC103117183.wiff	436081006	JLS	11/3/2017 17:37	1713140	436081	1	TNAQ	USE	L	
PFC103117184.wiff	436081001	JLS	11/3/2017 17:58	1713140	436081	100	TNAQ	DUSE	L	
PFC103117185.wiff	436081002	JLS	11/3/2017 18:20	1713140	436081	100	TNAQ	DUSE	L	
PFC103117186.wiff	436081003	JLS	11/3/2017 18:41	1713140	436081	100	TNAQ	DUSE	L	
PFC103117187.wiff	436081001	JLS	11/3/2017 19:03	1713140	436081	1	TNAQ	DUSE	L	
PFC103117188.wiff	436081002	JLS	11/3/2017 19:24	1713140	436081	1	TNAQ	DUSE	L	
PFC103117189.wiff	436081003	JLS	11/3/2017 19:45	1713140	436081	1	TNAQ	DUSE	L	
PFC103117190.wiff	BLANK	JLS	11/3/2017 20:07			1		USE	B	
PFC103117191.wiff	BLANK	JLS	11/3/2017 20:28			1		USE	B	
PFC103117192.wiff	436518002	JLS	11/3/2017 20:50	1714407	DRM102617	10	ESAF	USE	L	
PFC103117193.wiff	BLANK	JLS	11/3/2017 21:11			1		USE	B	
PFC103117194.wiff	WPFCCV	JLS	11/3/2017 21:32			1		USE	C	WPF171018-09
PFC103117195.wiff	PFCIBLK21	JLS	11/3/2017 21:54			1		USE	B	
PFC103117196.wiff	436205001	JLS	11/3/2017 22:15	1714023	436205	10000	LQAO	USE	L	
PFC103117197.wiff	1203907526	JLS	11/3/2017 22:36	1714023	436205	10000	LQAO	USE	L	

PFC103117198.wiff	1203907529	JLS	11/3/2017 22:58	1714023	436205	10000	LQAO	USE	L	
PFC103117199.wiff	436205002	JLS	11/3/2017 23:19	1714023	436205	10000	LQAO	USE	L	
PFC103117200.wiff	1203907527	JLS	11/3/2017 23:41	1714023	436205	10000	LQAO	USE	L	
PFC103117201.wiff	1203907530	JLS	11/4/2017 00:02	1714023	436205	10000	LQAO	USE	L	
PFC103117202.wiff	436205003	JLS	11/4/2017 00:23	1714023	436205	10000	LQAO	USE	L	
PFC103117203.wiff	1203907525	JLS	11/4/2017 00:45	1714023	436205	10000	LQAO	USE	L	
PFC103117204.wiff	1203907528	JLS	11/4/2017 01:06	1714023	436205	10000	LQAO	USE	L	
PFC103117205.wiff	WPFCCV	JLS	11/4/2017 01:28			1		USE	C	WPF171018-09
PFC103117206.wiff	PFCIBLK22	JLS	11/4/2017 01:49			1		USE	B	
PFC103117207.wiff	PFCIBLK23	JLS	11/9/2017 20:00			1		USE	B	
PFC103117208.wiff	WPFDISC	JLS	11/9/2017 20:21			1		USE	C	WPF171018-08
PFC103117209.wiff	PFCIBLK24	JLS	11/9/2017 20:43			1		USE	B	
PFC103117210.wiff	1203916041	JLS	11/9/2017 21:04	1717446	VARIOUS	1		USE	L	
PFC103117211.wiff	1203916042	JLS	11/9/2017 21:26	1717446	VARIOUS	1		USE	L	
PFC103117212.wiff	1203916043	JLS	11/9/2017 21:47	1717446	VARIOUS	1		USE	L	
PFC103117213.wiff	437370001	JLS	11/9/2017 22:08	1717446	437370	1	ESAF	USE	L	
PFC103117214.wiff	437288009	JLS	11/9/2017 22:30	1717446	437288	1	CFPA	USE	L	
PFC103117215.wiff	437288001	JLS	11/9/2017 22:51	1717446	437288	1	CFPA	USE	L	
PFC103117216.wiff	437288002	JLS	11/9/2017 23:13	1717446	437288	1	CFPA	USE	L	
PFC103117217.wiff	437288003	JLS	11/9/2017 23:34	1717446	437288	1	CFPA	USE	L	
PFC103117218.wiff	437288004	JLS	11/9/2017 23:55	1717446	437288	1	CFPA	USE	L	
PFC103117219.wiff	437288005	JLS	11/10/2017 00:17	1717446	437288	1	CFPA	USE	L	
PFC103117220.wiff	WPFCCV	JLS	11/10/2017 00:38			1		USE	C	WPF171108-09
PFC103117221.wiff	PFCIBLK25	JLS	11/10/2017 01:00			1		USE	B	
PFC103117222.wiff	437288006	JLS	11/10/2017 01:21	1717446	437288	1	CFPA	USE	L	
PFC103117223.wiff	437288007	JLS	11/10/2017 01:42	1717446	437288	1	CFPA	USE	L	
PFC103117224.wiff	437288008	JLS	11/10/2017 02:04	1717446	437288	1	CFPA	USE	L	
PFC103117225.wiff	WPFCCV	JLS	11/10/2017 02:25			1		USE	C	WPF171108-09
PFC103117226.wiff	PFCIBLK26	JLS	11/10/2017 02:47			1		USE	B	
PFC103117227.wiff	PFCIBLK27	JLS	11/10/2017 10:45			1		USE	B	
PFC103117228.wiff	PFCIBLK28	JLS	11/10/2017 11:07			1		USE	B	
PFC103117229.wiff	WPFDISC	JLS	11/10/2017 11:28			1		USE	C	WPF171018-08
PFC103117230.wiff	PFCIBLK29	JLS	11/10/2017 11:49			1		USE	B	
PFC103117231.wiff	437288001	JLS	11/10/2017 12:11	1717446	437288	5	CFPA	USE	L	
PFC103117232.wiff	437288002	JLS	11/10/2017 12:32	1717446	437288	5	CFPA	USE	L	
PFC103117233.wiff	437288003	JLS	11/10/2017 12:54	1717446	437288	5	CFPA	USE	L	
PFC103117234.wiff	437288004	JLS	11/10/2017 13:15	1717446	437288	5	CFPA	USE	L	
PFC103117235.wiff	437288005	JLS	11/10/2017 13:36	1717446	437288	5	CFPA	USE	L	
PFC103117236.wiff	437288006	JLS	11/10/2017 13:58	1717446	437288	5	CFPA	USE	L	
PFC103117237.wiff	437288007	JLS	11/10/2017 14:19	1717446	437288	5	CFPA	USE	L	
PFC103117238.wiff	437288008	JLS	11/10/2017 14:41	1717446	437288	5	CFPA	USE	L	

PFC103117239.wiff	WPFCCV	JLS	11/10/2017 15:40	1	USE	C	WPF171108-09
PFC103117240.wiff	PFCIBLK30	JLS	11/10/2017 16:02	1	USE	B	

#sys_sample_code	lab_ani_method_name	analysis_date	analysis_time	total_or_dissolved	column_number	test_type	cas_rn	chemical_name	result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers	organic_yn	method_detection_limit	reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time	result_comment	qc_original_conc	qc_spike_added	qc_spike_measured	qc_spike_recovery	qc_dup_original_conc	qc_dup_spike_added	qc_dup_spike_measured	qc_dup_spike_recovery	qc_rpd	qc_spike_lcl	qc_spike_ucl	qc_rpd_ucl	qc_spike_status	qc_dup_spike_status	qc_rpd_status	uncertainty	minimum_detectable_conc	counting_error	critical_value
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0266		TRG	Yes	Y		Y	0.000624	0.00189	0.00189	UG_L	UG_L																					
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000624	0.00189	0.00189	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00125	0.00378	0.00378	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00125	0.00378	0.00378	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.00266		TRG	Yes	Y		Y	0.000624	0.00189	0.00189	UG_L	UG_L																					
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000624	0.00189	0.00189	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0106		TRG	Yes	Y		Y	0.000662	0.00189	0.00189	UG_L	UG_L																					
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000737	0.00189	0.00189	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.00307		TRG	Yes	Y		Y	0.000624	0.00172	0.00172	UG_L	UG_L																					
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.000801		TRG	Yes	Y	J	Y	0.000624	0.00168	0.00168	UG_L	UG_L		Result .801 > MDL .624 but < RDL 1.68																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.0025		TRG	Yes	Y		Y	0.000624	0.00189	0.00189	UG_L	UG_L																					
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.00112		TRG	Yes	Y	J	Y	0.000624	0.00189	0.00189	UG_L	UG_L		Result 1.12 > MDL .624 but < RDL 1.89																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000624	0.00189	0.00189	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017	537_MOD	11/02/17	02:23	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000624	0.00189	0.00189	UG_L	UG_L		Result not detected above the detection limit																		
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0466		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.0266	0.0188	0.0466	107									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)	0.0173		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00	0.0188	0.0173	92									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0153		SC	Yes	Y		Y	0.00124	0.00375	0.00375	UG_L	UG_L			0.000537	0.0188	0.0153	78									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0196		SC	Yes	Y		Y	0.00124	0.00375	0.00375	UG_L	UG_L			0.000479	0.0188	0.0196	102									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0217		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00266	0.0188	0.0217	101									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)	0.0185		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00	0.0188	0.0185	99									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0287		SC	Yes	Y		Y	0.000657	0.00188	0.00188	UG_L	UG_L			0.0106	0.0188	0.0287	97									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)	0.0178		SC	Yes	Y		Y	0.000732	0.00188	0.00188	UG_L	UG_L			0.000295	0.0188	0.0178	93									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.0213		SC	Yes	Y		Y	0.00062	0.00171	0.00171	UG_L	UG_L			0.00307	0.0171	0.0213	107									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.0166		SC	Yes	Y		Y	0.00062	0.00167	0.00167	UG_L	UG_L			0.000801	0.0166	0.0166	95									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.0205		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.0025	0.0188	0.0205	96									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.0191		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00112	0.0188	0.0191	86									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.0169		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00	0.0188	0.0169	90									70	130						
16MW06_1017MS	537_MOD	11/02/17	02:45	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.0168		SC	Yes	Y		Y	0.00062	0.00188	0.00188	UG_L	UG_L			0.00	0.0188	0.0168	89									70	130						
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0458		SC	Yes	Y		Y	0.00601	0.00182	0.00182	UG_L	UG_L							0.0266	0.00182	0.0458	106	2	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)	0.0195		SC	Yes	Y		Y	0.00601	0.00182	0.00182	UG_L	UG_L							0.00	0.00182	0.0195	107	12	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0151		SC	Yes	Y		Y	0.0012	0.00364	0.00364	UG_L	UG_L							0.000537	0.00182	0.0151	80	1	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0156		SC	Yes	Y		Y	0.0012	0.00364	0.00364	UG_L	UG_L							0.000479	0.00182	0.0156	83	23	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0194		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.00266	0.00182	0.0194	92	11	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)	0.0202		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.00	0.00182	0.0202	111	9	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0251		SC	Yes	Y		Y	0.000637	0.00182	0.00182	UG_L	UG_L							0.0106	0.00182	0.0251	80	14	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)	0.0171		SC	Yes	Y		Y	0.00071	0.00182	0.00182	UG_L	UG_L							0.000295	0.00182	0.0171	93	4	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.0172		SC	Yes	Y		Y	0.000607	0.00166	0.00166	UG_L	UG_L							0.00307	0.00166	0.0172	85	21	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.0151		SC	Yes	Y		Y	0.000601	0.00162	0.00162	UG_L	UG_L							0.000801	0.0161	0.0151	89	9	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.018		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.0023	0.00182	0.018	85	13	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.0184		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.00112	0.00182	0.0184	95	4	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.0169		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.00	0.00182	0.0169	93	0	70	130	30							
16MW06_1017MSD	537_MOD	11/02/17	03:06	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.0171		SC	Yes	Y		Y	0.000601	0.00182	0.00182	UG_L	UG_L							0.00	0.00182	0.0171	94	2	70	130	30							
16MW11_1017	537_MOD	04:10	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)				TRG	Yes	N	U	Y	0.000591	0.00179	0.00179	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00118	0.00358	0.00358	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00118	0.00358	0.00358	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0113		TRG	Yes	Y		Y	0.000591	0.00179	0.00179	UG_L	UG_L																					
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000591	0.00179	0.00179	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0144		TRG	Yes	Y		Y	0.000627	0.00179	0.00179	UG_L	UG_L																					
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000699	0.00179	0.00179	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.00497		TRG	Yes	Y		Y	0.000591	0.00159	0.00159	UG_L	UG_L																					
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.00525		TRG	Yes	Y		Y	0.000591	0.00179	0.00179	UG_L	UG_L																					
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.000926		TRG	Yes	Y	J	Y	0.000591	0.00179	0.00179	UG_L	UG_L		Result .926 > MDL .591 but < RDL 1.79																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000591	0.00179	0.00179	UG_L	UG_L		Result not detected above the detection limit																		
16MW11_1017	537_MOD	11/02/17	04:10	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000591	0.00179	0.00179	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	14:09	N	NA	DL1	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.185		TRG	Yes	Y		Y	0.00591	0.0179	0.0179	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	14:09	N	NA	DL1	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.0457		TRG	Yes	Y		Y	0.00591	0.0163	0.0163	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000586	0.00178	0.00178	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00117	0.00355	0.00355	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00117	0.00355	0.00355	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0195		TRG	Yes	Y		Y	0.000586	0.00178	0.00178	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000586	0.00178	0.00178	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0217		TRG	Yes	Y		Y	0.000622	0.00178	0.00178	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000693	0.00178	0.00178	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.0113		TRG	Yes	Y		Y	0.000586	0.00158	0.00158	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.0112		TRG	Yes	Y		Y	0.000586	0.00178	0.00178	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.00177		TRG	Yes	Y	J	Y	0.000586	0.00178	0.00178	UG_L	UG_L		Result 1.77 > MDL .586 but < RDL 1.78																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000586	0.00178	0.00178	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	04:32	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000586	0.00178	0.00178	UG_L	UG_L		Result not detected above the detection limit																		
16MW15_1017	537_MOD	11/02/17	14:31	N	NA	DL1	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.291		TRG	Yes	Y		Y	0.00586	0.0178	0.0178	UG_L	UG_L																					
16MW15_1017	537_MOD	11/02/17	14:31	N	NA	DL1	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.121		TRG	Yes	Y		Y	0.00586	0.0162	0.0162	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000607	0.00184	0.00184	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00121	0.00368	0.00368	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00121	0.00368	0.00368	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0115		TRG	Yes	Y		Y	0.000607	0.00184	0.00184	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000607	0.00184	0.00184	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0179		TRG	Yes	Y		Y	0.000644	0.00184	0.00184	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000718	0.00184	0.00184	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.00288		TRG	Yes	Y		Y	0.000607	0.00164	0.00164	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.00405		TRG	Yes	Y		Y	0.000607	0.00184	0.00184	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.00209		TRG	Yes	Y		Y	0.000607	0.00184	0.00184	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000607	0.00184	0.00184	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	04:53	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000607	0.00184	0.00184	UG_L	UG_L		Result not detected above the detection limit																		
16MW24_1017	537_MOD	11/02/17	14:52	N	NA	DL1	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0485		TRG	Yes	Y		Y	0.00304	0.0092	0.0092	UG_L	UG_L																					
16MW24_1017	537_MOD	11/02/17	14:52	N	NA	DL1	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.0572		TRG	Yes	Y		Y	0.00304	0.00837	0.00837	UG_L	UG_L																					
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00119	0.00361	0.00361	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00119	0.00361	0.00361	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	307-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)			TRG	Yes	N	U	Y	0.000633	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000705	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)			TRG	Yes	N	U	Y	0.000596	0.00164	0.00164	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)			TRG	Yes	N	U	Y	0.000596	0.00161	0.00161	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000596	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																		
16MW36_1017	537_MOD	11/02/17	05:15	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)			TRG	Yes	N	U	Y

#sys_sample_code	lab_anl_method_name	analysis_date	analysis_time	total_or_dissolved	column_number	test_type	cas_rn	chemical_name	result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers	organic_yn	method_detection_limit	reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time	result_comment	qc_original_conc	qc_spike_added	qc_spike_measured	qc_spike_recovery	qc_dup_original_conc	qc_dup_spike_added	qc_dup_spike_measured	qc_dup_spike_recovery	qc_rpd	qc_spike_lcl	qc_spike_ucl	qc_rpd_ucl	qc_spike_status	qc_dup_spike_status	qc_rpd_status	uncertainty	minimum_detectable_conc	counting_error	critical_value
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00121	0.00367	0.00367	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00121	0.00367	0.00367	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)			TRG	Yes	N	U	Y	0.000642	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000716	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)			TRG	Yes	N	U	Y	0.000605	0.00167	0.00167	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)			TRG	Yes	N	U	Y	0.000605	0.00163	0.00163	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000605	0.00183	0.00183	UG_L	UG_L		Result not detected above the detection limit																				
16MW25_1017	537_MOD	11/02/17	07:23	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000621	0.00188	0.00188	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00124	0.00376	0.00376	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00124	0.00376	0.00376	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.00938		TRG	Yes			Y	0.000621	0.00188	0.00188	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000621	0.00188	0.00188	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0223		TRG	Yes			Y	0.000658	0.00188	0.00188	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000734	0.00188	0.00188	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.031		TRG	Yes	Y		Y	0.000621	0.00171	0.00171	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.00637		TRG	Yes	Y		Y	0.000621	0.00167	0.00167	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.00633		TRG	Yes	Y		Y	0.000621	0.00188	0.00188	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.00238		TRG	Yes	Y		Y	0.000621	0.00188	0.00188	UG_L	UG_L																								
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000621	0.00188	0.00188	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	06:19	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000621	0.00188	0.00188	UG_L	UG_L		Result not detected above the detection limit																				
29MW01_1017	537_MOD	11/02/17	15:33	N	NA	DL1	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.112		TRG	Yes	Y		Y	0.00621	0.0188	0.0188	UG_L	UG_L																								
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)	0.00206		TRG	Yes	Y	J	Y	0.00088	0.00267	0.00267	UG_L	UG_L		Result 2.06 > MDL .88 but < RDL 2.67																				
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00176	0.00533	0.00533	UG_L	UG_L		Result not detected above the detection limit																				
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00176	0.00533	0.00533	UG_L	UG_L		Result not detected above the detection limit																				
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.00088	0.00267	0.00267	UG_L	UG_L		Result not detected above the detection limit																				
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)	0.00585		TRG	Yes	Y		Y	0.00104	0.00267	0.00267	UG_L	UG_L																								
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.0409		TRG	Yes	Y		Y	0.00088	0.00243	0.00243	UG_L	UG_L																								
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.005		TRG	Yes	Y		Y	0.00088	0.00237	0.00237	UG_L	UG_L																								
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.00088	0.00267	0.00267	UG_L	UG_L		Result not detected above the detection limit																				
29MW02_1017	537_MOD	11/02/17	06:40	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.00088	0.00267	0.00267	UG_L	UG_L		Result not detected above the detection limit																				
29MW02_1017	537_MOD	11/02/17	15:35	N	NA	DL1	307-24-4	Perfluorohexanoic acid (PFHxA)	1.87		TRG	Yes	Y		Y	0.088	0.267	0.267	UG_L	UG_L																								
29MW02_1017	537_MOD	11/02/17	15:35	N	NA	DL1	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.575		TRG	Yes	Y		Y	0.088	0.267	0.267	UG_L	UG_L																								
29MW02_1017	537_MOD	11/03/17	20:50	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0825		TRG	Yes	Y		Y	0.0088	0.0267	0.0267	UG_L	UG_L																								
29MW02_1017	537_MOD	11/03/17	20:50	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.421		TRG	Yes	Y		Y	0.00933	0.0267	0.0267	UG_L	UG_L																								
29MW02_1017	537_MOD	11/03/17	20:50	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.069		TRG	Yes	Y		Y	0.0088	0.0267	0.0267	UG_L	UG_L																								
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.000966		TRG	Yes	Y	J	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result .966 > MDL .613 but < RDL 1.86																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00123	0.00371	0.00371	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00123	0.00371	0.00371	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)			TRG	Yes	N	U	Y	0.00065	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000724	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)			TRG	Yes	N	U	Y	0.000613	0.00169	0.00169	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)			TRG	Yes	N	U	Y	0.000613	0.00165	0.00165	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
EBGW102717	537_MOD	11/02/17	08:48	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000613	0.00186	0.00186	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00124	0.00374	0.00374	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00124	0.00374	0.00374	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)			TRG	Yes	N	U	Y	0.000653	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.00073	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)			TRG	Yes	N	U	Y	0.000618	0.0017	0.0017	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)			TRG	Yes	N	U	Y	0.000618	0.00167	0.00167	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
GW-102717FB	537_MOD	11/02/17	08:27	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000618	0.00187	0.00187	UG_L	UG_L		Result not detected above the detection limit																				
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)	0.0175		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0175	88									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)	0.0173		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0173	87									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid	0.0185		SC	Yes	Y		Y	0.00131	0.00398	0.00398	UG_L	UG_L					0	0.0199	0.0185	93									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid	0.0165		SC	Yes	Y		Y	0.00131	0.00398	0.00398	UG_L	UG_L					0	0.0199	0.0165	83									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)	0.0192		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0192	96									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)	0.0207		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0207	104									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)	0.0173		SC	Yes	Y		Y	0.000696	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0173	87									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)	0.0172		SC	Yes	Y		Y	0.000776	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0172	87									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)	0.015		SC	Yes	Y		Y	0.000656	0.00181	0.00181	UG_L	UG_L					0	0.0181	0.015	82									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)	0.0171		SC	Yes	Y		Y	0.000656	0.00177	0.00177	UG_L	UG_L					0	0.0176	0.0171	97									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)	0.0169		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0169	85									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)	0.0195		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0195	98									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.0178		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0178	89									70	130								
LCS_1203908642	537_MOD	11/02/17	00:15	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.0173		SC	Yes	Y		Y	0.000656	0.00199	0.00199	UG_L	UG_L					0	0.0199	0.0173	87									70	130								
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00131	0.00397	0.00397	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00131	0.00397	0.00397	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	307-24-4	Perfluorohexanoic acid (PFHxA)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	807-55-1	Perfluorododecanoic acid (PFDoA)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	335-67-1	Perfluorooctanoic acid (PFOA)			TRG	Yes	N	U	Y	0.000774	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	335-76-2	Perfluorodecanoic acid (PFDA)			TRG	Yes	N	U	Y	0.000774	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	355-46-4	Perfluorohexanesulfonate (PFHxS)			TRG	Yes	N	U	Y	0.000655	0.00181	0.00181	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	375-73-5	Perfluorobutanesulfonate (PFBS)			TRG	Yes	N	U	Y	0.000655	0.00177	0.00177	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	375-85-9	Perfluoroheptanoic acid (PFHpA)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	375-95-1	Perfluorononanoic acid (PFNA)			TRG	Yes	N	U	Y	0.000655	0.00199	0.00199	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	376-06-7	Perfluorotetradecanoic acid (PFTeDA)			TRG	Yes	N	U	Y	0.000655	0.00201	0.00201	UG_L	UG_L		Result not detected above the detection limit																				
MB_1203908641	537_MOD	11/01/17	23:54	N	NA	000	72629-94-8	Perfluorotridecanoic acid (PFTrDA)			TRG	Yes	N	U	Y	0.000655	0.00201	0.00201	UG_L	UG_L		Result not detected above the detection limit																				
Trip Blank	537_MOD	11/09/17	22:08	N	NA	000	1763-23-1	Perfluorooctanesulfonate (PFOS)			TRG	Yes	N	U	Y	0.000665	0.00201	0.00201	UG_L	UG_L		Result not detected above the detection limit																				
Trip Blank	537_MOD	11/09/17	22:08	N	NA	000	2058-94-8	Perfluoroundecanoic acid (PFUdA)			TRG	Yes	N	U	Y	0.000665	0.00201	0.00201	UG_L	UG_L		Result not detected above the detection limit																				
Trip Blank	537_MOD	11/09/17	22:08	N	NA	000	2355-31-9	N-methylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0.00133	0.00403	0.00403	UG_L	UG_L		Result not detected above the detection limit																				
Trip Blank	537_MOD	11/09/17	22:08	N	NA	000	2991-50-6	N-ethylperfluoro-1-octanesulfonamidoacetic acid			TRG	Yes	N	U	Y	0

Naval Installation Restoration Information Solution (NIRIS)
Environmental Restoration Program (ERP) Records
Transmittal Form

Purpose

Complete one copy of this form to accompany the paper and electronic versions of Environmental Restoration Program (ERP) records submitted for inclusion to NIRIS.

Submitted By:

Name: Jennifer O'Keefe

Organization: Resolution Consultants

Email: jokeefe@ensafe.com **Phone:** 609-610-2721

Record Information:

Installation: NWS Earle

Program: (●) ERN ( ) BRAC **Supporting:** [ ] MRP [ ] LUC [ ] RAD [ ] POL

Document Title: Data Validation Report

AOC, SITE, SWMU, UST, UXO: Building C-63

Sample Delivery Groups (SDGs): 436488,436518,437370

Document Date: October 2017 **Number of Pages:** 7

Contract Number: N62470-11-D-8013 **CTO/DO Number:** WE09

Author/Affiliation: Jennifer O'Keefe/Resolution Consultants

Distribution/Availability Statement: [■] A [ ] B [ ] C [ ] D [ ] E [ ] F

Sensitive Content ( ) Yes (●) No **Cite Pages:**

Recommended File Type: ( ) Administrative Record ( ) Post Decision (●) Site File

Notes:

DATA VALIDATION REPORT

Site Name: Naval Weapons Station Earle, Colts Neck, New Jersey, Building C-63
Sample Dates: 26 and 27 October June 2017
Laboratories: GEL Laboratories LLC, Charleston, South Carolina
Sample Delivery Groups: 436488, 436518, and 437370
Matrix: Groundwater
Validation Level: Stage 4, Electronic and Manual

Table 1
Sample and Analysis Summary

Sample Delivery Group	Lab Identification	Location	Sample Identification	Sample Date	Sample Type	537 MOD
436488	436488001	16MW006	16MW06_1017	10/26/2017	Groundwater	X
436488	436488002	16MW011	16MW11_1017	10/26/2017	Groundwater	X
436488	436488003	16MW015	16MW15_1017	10/26/2017	Groundwater	X
436488	436488004	16MW024	16MW24_1017	10/26/2017	Groundwater	X
436488	436488005	16MW036	16MW36_1017	10/26/2017	Groundwater	X
436488	436488006	16MW006	DUP1GW1017	10/26/2017	Duplicate of 16MW06_1017	X
436488	436488007	—	GW-102617FB	10/26/2017	Field Blank	X
436518	436518001	29GW01	29MW01_1017	10/27/2017	Groundwater	X
436518	436518002	29GW02	29MW02_1017	10/27/2017	Groundwater	X
436518	436518003	16MW009	16MW09_1017	10/27/2017	Groundwater	X
436518	436518004	16MW025	16MW25_1017	10/27/2017	Groundwater	X
436518	436518005	—	GW-102717FB	10/27/2017	Field Blank	X
436518	436518006	—	EBGW102717	10/27/2017	Equipment Blank	X
437370	437370001	—	TRIP BLANK	10/27/2017	Trip Blank	X

Notes:
537 Mod = Per- and Polyfluoroalkyl Substances via U.S. Environmental Protection Agency Method 537, modified for groundwater

VALIDATION RESULTS

The analytical methods define the quality assurance/quality control (QA/QC) criteria that the laboratory must meet; however, these methods do not address data evaluation and data usability from a user's perspective. The data evaluation was conducted by a Resolution Consultants chemist using the following guidance documents:

- *Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories*, Version 5.1. (January 2017), Table B-15.

- *National Functional Guidelines for Organic Superfund Methods Data Review*, EPA-540-R-2017-002. (U.S. Environmental Protection [U.S. EPA] January 2017).

Validation was performed on groundwater and quality control (QC) samples summarized in Table 1. Samples discussed in this validation report were analyzed and reported as definitive data. A full deliverable data packages, QC summaries and raw data, were submitted for data review.

The data were evaluated based on the following review elements:

* Data completeness Sample receipt, preservation, and preparation	* Internal standards * Ion transitions
* Holding times	* Organic surrogates
* Instrument tuning	* Laboratory control samples
* Initial calibration	* Blank contamination
* Initial calibration verification	* Matrix spike/matrix spike duplicates (MS/MSDs)
* Continuing calibration verification	* Field duplicate precision

Acceptable data parameters for which all criteria were met or not qualified, as indicated above with an asterisk (*), are not discussed further.

Sample receipt, Preservation, and Preparation

Sample 29MW02_1017 had a large quantity of solid material present in the container and the laboratory decanted the liquid portion, then filtered the aqueous fraction prior to sample extraction; the solid portion was not analyzed. The results for this sample were qualified as estimated "J" due to the sample preparation deviation.

Samples 16MW06_1017, DUP1GW1017, and 16MW24_1017 were filtered prior to sample extraction; therefore, results were qualified as estimated "J" to the sample preparation deviation.

Overall Assessment

The per- and Polyfluoroalkyl Substances data from Building C-63 at Naval Weapons Station Earle, Colts Neck, New Jersey were reviewed independently from the laboratory to assess data quality. All analytes detected at concentrations less than the limit of quantitation but greater than the method detection limit were qualified by the laboratory as estimated "J" and this qualifier was retained during data validation. Any sample that was analyzed at a dilution because of high concentrations of target analytes was checked to confirm that the results and/or sample-specific limit of quantitation and limit of detections were adjusted accordingly by the laboratory. No results were rejected and data not qualified during data review are considered usable by the project. The remaining results qualified as estimated may be biased high or low, but the data are usable for their intended purpose, according to U.S. EPA and Department of Defense guidelines. Table 2 provides the final results after data review.

Table 2
Final Results after Data Review

		Sample Delivery Group		436488			436488			436488		
		Lab Identification		436488001			436488002			436488003		
		Sample Identification		16MW06_1017			16MW11_1017			16MW15_1017		
		Sample Date		10/26/2017			10/26/2017			10/26/2017		
		Sample Type		Groundwater			Groundwater			Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
537_MOD	N-ethyl perfluorooctanesulfonamidoacetic acid (ETFOSAA)	2991-50-6	µg/L	0.00378	UJ	sp	0.00358	U		0.00355	U	
537_MOD	N-methyl perfluorooctanesulfonamidoacetic acid (MEFOSAA)	2355-31-9	µg/L	0.00378	UJ	sp	0.00358	U		0.00355	U	
537_MOD	Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/L	0.000801	J	sp	0.00497			0.0113		
537_MOD	Perfluorodecanoic acid (PFDA)	335-76-2	µg/L	0.00189	UJ	sp	0.00179	U		0.00178	U	
537_MOD	Perfluorododecanoic acid (PFDOA)	307-55-1	µg/L	0.00189	UJ	sp	0.00179	U		0.00178	U	
537_MOD	Perfluoroheptanoic acid (PFHPA)	375-85-9	µg/L	0.0025	J	sp	0.00525			0.0112		
537_MOD	Perfluorohexanesulfonic acid (PFHXS)	355-46-4	µg/L	0.00307	J	sp	0.0457			0.121		
537_MOD	Perfluorohexanoic acid (PFHXA)	307-24-4	µg/L	0.00266	J	sp	0.0113			0.0195		
537_MOD	Perfluorononanoic acid (PFNA)	375-95-1	µg/L	0.00112	J	sp	0.000926	J		0.00177	J	
537_MOD	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	µg/L	0.0266	J	sp	0.185			0.291		
537_MOD	Perfluorooctanoic acid (PFOA)	335-67-1	µg/L	0.0106	J	sp	0.0144			0.0217		
537_MOD	Perfluorotetradecanoic acid (PFTEDA)	376-06-7	µg/L	0.00189	UJ	sp	0.00179	U		0.00178	U	
537_MOD	Perfluorotridecanoic acid (PFTRA)	72629-94-8	µg/L	0.00189	UJ	sp	0.00179	U		0.00178	U	
537_MOD	Perfluoroundecanoic acid (PFUNA)	2058-94-8	µg/L	0.00189	UJ	sp	0.00179	U		0.00178	U	

Table 2
Final Results after Data Review

		Sample Delivery Group		436488			436488			436488		
		Lab Identification		436488004			436488005			436488006		
		Sample Identification		16MW24_1017			16MW36_1017			DUP1GW1017		
		Sample Date		10/26/2017			10/26/2017			10/26/2017		
		Sample Type		Groundwater			Groundwater			Duplicate		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
537_MOD	N-ethyl perfluorooctanesulfonamidoacetic acid (ETFOSAA)	2991-50-6	µg/L	0.00368	UJ	sp	0.00361	U		0.00374	UJ	sp
537_MOD	N-methyl perfluorooctanesulfonamidoacetic acid (MEFOSAA)	2355-31-9	µg/L	0.00368	UJ	sp	0.00361	U		0.00374	UJ	sp
537_MOD	Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/L	0.00288	J	sp	0.00161	U		0.000801	J	sp
537_MOD	Perfluorodecanoic acid (PFDA)	335-76-2	µg/L	0.00184	UJ	sp	0.00181	U		0.00187	UJ	sp
537_MOD	Perfluorododecanoic acid (PFDOA)	307-55-1	µg/L	0.00184	UJ	sp	0.00181	U		0.00187	UJ	sp
537_MOD	Perfluoroheptanoic acid (PFHPA)	375-85-9	µg/L	0.00405	J	sp	0.00181	U		0.0027	J	sp
537_MOD	Perfluorohexanesulfonic acid (PFHXS)	355-46-4	µg/L	0.0572	J	sp	0.00164	U		0.00346	J	sp
537_MOD	Perfluorohexanoic acid (PFHXA)	307-24-4	µg/L	0.0115	J	sp	0.00181	U		0.00314	J	sp
537_MOD	Perfluorononanoic acid (PFNA)	375-95-1	µg/L	0.00209	J	sp	0.00181	U		0.00127	J	sp
537_MOD	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	µg/L	0.0485	J	sp	0.00181	U		0.0265	J	sp
537_MOD	Perfluorooctanoic acid (PFOA)	335-67-1	µg/L	0.0179	J	sp	0.00181	U		0.0108	J	sp
537_MOD	Perfluorotetradecanoic acid (PFTEDA)	376-06-7	µg/L	0.00184	UJ	sp	0.00181	U		0.00187	UJ	sp
537_MOD	Perfluorotridecanoic acid (PFTRA)	72629-94-8	µg/L	0.00184	UJ	sp	0.00181	U		0.00187	UJ	sp
537_MOD	Perfluoroundecanoic acid (PFUNA)	2058-94-8	µg/L	0.00184	UJ	sp	0.00181	U		0.00187	UJ	sp

Table 2
Final Results after Data Review

		Sample Delivery Group		436488			436518			436518		
		Lab Identification		436488007			436518001			436518002		
		Sample Identification		GW-102617FB			29MW01_1017			29MW02_1017		
		Sample Date		10/26/2017			10/27/2017			10/27/2017		
		Sample Type		Field Blank			Groundwater			Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
537_MOD	N-ethyl perfluorooctanesulfonamidoacetic acid (ETFOSAA)	2991-50-6	µg/L	0.00363	U		0.00376	U		0.00533	UJ	sp
537_MOD	N-methyl perfluorooctanesulfonamidoacetic acid (MEFOSAA)	2355-31-9	µg/L	0.00363	U		0.00376	U		0.00533	UJ	sp
537_MOD	Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/L	0.00161	U		0.00637			0.005	J	sp
537_MOD	Perfluorodecanoic acid (PFDA)	335-76-2	µg/L	0.00181	U		0.00188	U		0.00585	J	sp
537_MOD	Perfluorododecanoic acid (PFDOA)	307-55-1	µg/L	0.00181	U		0.00188	U		0.00267	UJ	sp
537_MOD	Perfluoroheptanoic acid (PFHPA)	375-85-9	µg/L	0.00181	U		0.00633			0.575	J	sp
537_MOD	Perfluorohexanesulfonic acid (PFHXS)	355-46-4	µg/L	0.00165	U		0.031			0.0409	J	sp
537_MOD	Perfluorohexanoic acid (PFHXA)	307-24-4	µg/L	0.00181	U		0.00938			1.87	J	sp
537_MOD	Perfluorononanoic acid (PFNA)	375-95-1	µg/L	0.00181	U		0.00238			0.069	J	sp
537_MOD	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	µg/L	0.00181	U		0.112			0.0825	J	sp
537_MOD	Perfluorooctanoic acid (PFOA)	335-67-1	µg/L	0.00181	U		0.0223			0.421	J	sp
537_MOD	Perfluorotetradecanoic acid (PFTEDA)	376-06-7	µg/L	0.00181	U		0.00188	U		0.00267	UJ	sp
537_MOD	Perfluorotridecanoic acid (PFTRA)	72629-94-8	µg/L	0.00181	U		0.00188	U		0.00267	UJ	sp
537_MOD	Perfluoroundecanoic acid (PFUNA)	2058-94-8	µg/L	0.00181	U		0.00188	U		0.00206	J	sp

Table 2
Final Results after Data Review

		Sample Delivery Group		436518			436518			436518		
		Lab Identification		436518003			436518004			436518005		
		Sample Identification		16MW09_1017			16MW25_1017			GW-102717FB		
		Sample Date		10/27/2017			10/27/2017			10/27/2017		
		Sample Type		Groundwater			Groundwater			Field Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
537_MOD	N-ethyl perfluorooctanesulfonamidoacetic acid (ETFOSAA)	2991-50-6	µg/L	0.00372	U		0.00367	U		0.00374	U	
537_MOD	N-methyl perfluorooctanesulfonamidoacetic acid (MEFOSAA)	2355-31-9	µg/L	0.00372	U		0.00367	U		0.00374	U	
537_MOD	Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/L	0.00301			0.00163	U		0.00167	U	
537_MOD	Perfluorodecanoic acid (PFDA)	335-76-2	µg/L	0.00186	U		0.00183	U		0.00187	U	
537_MOD	Perfluorododecanoic acid (PFDOA)	307-55-1	µg/L	0.00186	U		0.00183	U		0.00187	U	
537_MOD	Perfluoroheptanoic acid (PFHPA)	375-85-9	µg/L	0.00603			0.00183	U		0.00187	U	
537_MOD	Perfluorohexanesulfonic acid (PFHXS)	355-46-4	µg/L	0.0254			0.00167	U		0.0017	U	
537_MOD	Perfluorohexanoic acid (PFHXA)	307-24-4	µg/L	0.0094			0.00183	U		0.00187	U	
537_MOD	Perfluorononanoic acid (PFNA)	375-95-1	µg/L	0.00153	J		0.00183	U		0.00187	U	
537_MOD	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	µg/L	0.0591			0.00183	U		0.00187	U	
537_MOD	Perfluorooctanoic acid (PFOA)	335-67-1	µg/L	0.0165			0.00183	U		0.00187	U	
537_MOD	Perfluorotetradecanoic acid (PFTEDA)	376-06-7	µg/L	0.00186	U		0.00183	U		0.00187	U	
537_MOD	Perfluorotridecanoic acid (PFTRA)	72629-94-8	µg/L	0.00186	U		0.00183	U		0.00187	U	
537_MOD	Perfluoroundecanoic acid (PFUNA)	2058-94-8	µg/L	0.00186	U		0.00183	U		0.00187	U	

Table 2
Final Results after Data Review

		Sample Delivery Group		436518			437370		
		Lab Identification		436518006			437370001		
		Sample Identification		EBGW102717			TRIP BLANK		
		Sample Date		10/27/2017			10/27/2017		
		Sample Type		Equipment Blank			Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC	Result	Qual	RC
537_MOD	N-ethyl perfluorooctanesulfonamidoacetic acid (ETFOSAA)	2991-50-6	µg/L	0.00371	U		0.00403	U	
537_MOD	N-methyl perfluorooctanesulfonamidoacetic acid (MEFOSAA)	2355-31-9	µg/L	0.00371	U		0.00403	U	
537_MOD	Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/L	0.00165	U		0.00179	U	
537_MOD	Perfluorodecanoic acid (PFDA)	335-76-2	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorododecanoic acid (PFDOA)	307-55-1	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluoroheptanoic acid (PFHPA)	375-85-9	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorohexanesulfonic acid (PFHXS)	355-46-4	µg/L	0.00169	U		0.00183	U	
537_MOD	Perfluorohexanoic acid (PFHXA)	307-24-4	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorononanoic acid (PFNA)	375-95-1	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	µg/L	0.000966	J		0.00201	U	
537_MOD	Perfluorooctanoic acid (PFOA)	335-67-1	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorotetradecanoic acid (PFTEDA)	376-06-7	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluorotridecanoic acid (PFTRA)	72629-94-8	µg/L	0.00186	U		0.00201	U	
537_MOD	Perfluoroundecanoic acid (PFUNA)	2058-94-8	µg/L	0.00186	U		0.00201	U	

Notes:
µg/L = Micrograms per liter
Qual = Final qualifier
RC = Data qualification reason code
NA = Not analyzed
U = ***Undetected*** — The parameter was analyzed but undetected at the listed limit of detection.
J = ***Estimated Value*** — One or more quality control parameters were outside control limits or the analyte concentration was less than the limit of quantitation.
Qualification Reason Codes
sp = Result qualified as estimated due to a sample preparation deviation.

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW024	WLM	Monitoring well	587747.87	525044.39	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW24_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW015	WLM	Monitoring well	588173.13	524783.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW15_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW011	WLM	Monitoring well	588102.24	524393.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW11_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW06_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102617FB	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW006	WLM	Monitoring well	588231.35	523755.06	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	DUP1GW1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	EARLE_NWS	436488	SITE 00016	SITE 00016	16MW036	WL	Well	587618.4	525199.22	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW36_1017	WG	Ground water	26-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	GW-102717FB	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW02	WLM	Monitoring well	588031.52	524076.78	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW02_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00029	SITE 00029	29GW01	WLM	Monitoring well	587837.64	524059.89	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	29MW01_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	EBGW102717	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW025	WLM	Monitoring well	588124.84	525376.79	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW25_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	436518	SITE 00016	SITE 00016	16MW009	WLM	Monitoring well	588212.33	523881.45	N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	16MW09_1017	WG	Ground water	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds
MID_ATLANTIC	EARLE_NWS	437370								N62470-11-D-8013	WE09	RESOLUTION CONSULTANTS	TRIP BLANK	WQ	Water for QC samples	27-Oct-17	Perfluoroalkyl Compounds