



**Off-Base Drinking Water Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, Data Validation Report,
and the Sample Location Figure, SDG J17278-1**

*Naval Air Station Oceana
Virginia Beach, Virginia*

July 2019

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

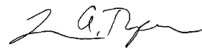
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-17219-1
TestAmerica SDG: CTO WE7G PFC Sampling
Client Project/Site: CTO WE7G PFC Sampling

For:
CH2M Hill, Inc.
5701 Cleveland Street
Suite 200
Virginia Beach, Virginia 23462

Attn: Laurie George



Authorized for release by:
2/28/2016 11:31:41 AM

Laura Turpen, Project Manager I
(916)374-4414
laura.turpen@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

2

3

4

5

6

7

8



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Certification Summary	4
Sample Summary	5
Subcontract Data	6
Chain of Custody	14
Receipt Checklists	16

Case Narrative

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Job ID: 320-17219-1

Laboratory: TestAmerica Sacramento

Narrative

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17184-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica West Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica West Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 02/04/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.7° C.

Subcontract Work

PFC: This method was subcontracted to Maxxam Analytics Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report. Any analytical or quality issues are noted in the subcontract portion of the report. DL/LOD/LOQ limits for Maxxam are included under "General Comments" in the subcontract report.

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Oregon	NELAP	10	CA200005	01-29-17

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17219-1	OF-FB47-0216	Water	02/08/16 16:10	02/09/16 09:45
320-17219-2	OF-RW47-0216	Water	02/08/16 16:15	02/09/16 09:45
320-17219-3	OF-FB47A-0216	Water	02/08/16 16:35	02/09/16 09:45
320-17219-4	OF-RW47A-0216	Water	02/08/16 16:40	02/09/16 09:45
320-17219-5	OF-FB48-0216	Water	02/08/16 17:40	02/09/16 09:45
320-17219-6	OF-RW48-0216	Water	02/08/16 17:48	02/09/16 09:45



Your Project #: 320-17219
Your C.O.C. #: 283621

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/02/26
Report #: R3910255
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630794
Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 6

Analyses	Date		Laboratory Method	Reference
	Quantity Extracted	Date Analyzed		
Low level PFOS and PFOA in water	6	2016/02/21	2016/02/23 CAM SOP-00894	EPA 537 m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

U = Undetected at the limit of quantitation.

J = Estimated concentration between the EDL & RDL.

B = Blank Contamination.

Q = One or more quality control criteria failed.

E = Analyte concentration exceeds the maximum concentration level.

K = Estimated maximum possible concentration due to ion abundance ratio failure.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Melissa DiGrazia, Project Manager - ATUT

Email: MDiGrazia@maxxam.ca

Phone# (905) 332-8788

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation is a NELAP accredited laboratory. Certificates #04012 and #4079-001. This certificate shall not be reproduced except in full, without the written approval of Maxxam.



Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX806	BVX807	BVX808	BVX809	BVX810			
Sampling Date		2016/02/08 16:10	2016/02/08 16:15	2016/02/08 16:35	2016/02/08 16:40	2016/02/08 17:40			
COC Number		283621	283621	283621	283621	283621			
	UNITS	OF-FB47-0216	OF-RW47-0216	OF-FB47A-0216	OF-RW47A-0216	OF-FB48-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.57 J	0.27 U	0.52 J	0.27 U	0.27	4389346	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39	4389346	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40	4389346	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39	4389346	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33	4389346	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30	4389346	2.0
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	86	40 (1)	80	57	75	N/A	4389346	N/A
13C4-Perfluorooctanesulfonate	%	84	41 (1)	78	59	84	N/A	4389346	N/A
13C4-Perfluorooctanoic acid	%	91	43 (1)	81	60	79	N/A	4389346	N/A
13C5-Perfluorononanoic acid	%	87	38 (1)	76	55	80	N/A	4389346	N/A
18O2-Perfluorohexanesulfonate	%	80	44 (1)	84	60	77	N/A	4389346	N/A
QC Batch = Quality Control Batch									
N/A = Not Applicable									
(1) Surrogate recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the surrogate. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low surrogate recovery.									



RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX811			
Sampling Date		2016/02/08 17:48			
COC Number		283621			
	UNITS	OF-RW48-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27	4389346	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39	4389346	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40	4389346	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39	4389346	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33	4389346	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30	4389346	2.0
Surrogate Recovery (%)					
13C4-Perfluoroheptanoic acid	%	53	N/A	4389346	N/A
13C4-Perfluorooctanesulfonate	%	58	N/A	4389346	N/A
13C4-Perfluorooctanoic acid	%	59	N/A	4389346	N/A
13C5-Perfluorononanoic acid	%	54	N/A	4389346	N/A
18O2-Perfluorohexanesulfonate	%	56	N/A	4389346	N/A
QC Batch = Quality Control Batch N/A = Not Applicable					



Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

TEST SUMMARY

Maxxam ID: BVX806
Sample ID: OF-FB47-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX807
Sample ID: OF-RW47-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX808
Sample ID: OF-FB47A-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX809
Sample ID: OF-RW47A-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX810
Sample ID: OF-FB48-0216
Matrix: Water

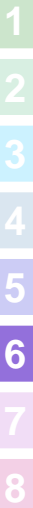
Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX811
Sample ID: OF-RW48-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara



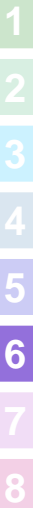
Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

GENERAL COMMENTS

Perfluoroheptanoic acid (PFHpA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorooctanoic acid (PFOA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorononanoic acid (PFNA) MDL = 0.33, LOD = 1.0, LOQ = 2.0
Perfluorobutane sulfonate (PFBS) MDL = 0.27, LOD = 1.0, LOQ = 2.0
Perfluorohexane sulfonate (PFHxA) MDL = 0.40, LOD = 1.0, LOQ = 2.0
Perfluorooctane sulfonate (PFOS) MDL = 0.30, LOD = 1.0, LOQ = 2.0
All Units are in ng/L

Results relate only to the items tested.



Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits		
4389346	CM5	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/23		60	%	50 - 130			
			13C4-Perfluorooctanesulfonate	2016/02/23		65	%	50 - 130			
			13C4-Perfluorooctanoic acid	2016/02/23		72	%	50 - 130			
			13C5-Perfluorononanoic acid	2016/02/23		63	%	50 - 130			
			18O2-Perfluorohexanesulfonate	2016/02/23		69	%	50 - 130			
			Perfluorobutane Sulfonate (PFBS)	2016/02/23		136 (1)	%	70 - 130			
			Perfluoroheptanoic Acid (PFHpA)	2016/02/23		142 (1)	%	70 - 130			
			Perfluorohexane Sulfonate (PFHxS)	2016/02/23		141 (1)	%	70 - 130			
			Perfluorononanoic Acid (PFNA)	2016/02/23		130	%	70 - 130			
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23		128	%	70 - 130			
			Perfluorooctane Sulfonate (PFOS)	2016/02/23		120	%	70 - 130			
			4389346	CM5	Matrix Spike DUP	13C4-Perfluoroheptanoic acid	2016/02/23		56	%	50 - 130
						13C4-Perfluorooctanesulfonate	2016/02/23		63	%	50 - 130
						13C4-Perfluorooctanoic acid	2016/02/23		61	%	50 - 130
						13C5-Perfluorononanoic acid	2016/02/23		55	%	50 - 130
						18O2-Perfluorohexanesulfonate	2016/02/23		64	%	50 - 130
						Perfluorobutane Sulfonate (PFBS)	2016/02/23		132 (1)	%	70 - 130
Perfluoroheptanoic Acid (PFHpA)	2016/02/23					126	%	70 - 130			
Perfluorohexane Sulfonate (PFHxS)	2016/02/23					144 (1)	%	70 - 130			
Perfluorononanoic Acid (PFNA)	2016/02/23					136 (1)	%	70 - 130			
Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23					138 (1)	%	70 - 130			
Perfluorooctane Sulfonate (PFOS)	2016/02/23					118	%	70 - 130			
4389346	CM5	MS/MSD RPD				Perfluorobutane Sulfonate (PFBS)	2016/02/23	2.7		%	30
						Perfluoroheptanoic Acid (PFHpA)	2016/02/23	12		%	30
						Perfluorohexane Sulfonate (PFHxS)	2016/02/23	2.3		%	30
						Perfluorononanoic Acid (PFNA)	2016/02/23	4.1		%	30
						Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23	7.2		%	30
						Perfluorooctane Sulfonate (PFOS)	2016/02/23	2.2		%	30
4389346	CM5	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/23		102	%	50 - 130			
			13C4-Perfluorooctanesulfonate	2016/02/23		106	%	50 - 130			
			13C4-Perfluorooctanoic acid	2016/02/23		100	%	50 - 130			
			13C5-Perfluorononanoic acid	2016/02/23		94	%	50 - 130			
			18O2-Perfluorohexanesulfonate	2016/02/23		100	%	50 - 130			
			Perfluorobutane Sulfonate (PFBS)	2016/02/23		114	%	70 - 130			
			Perfluoroheptanoic Acid (PFHpA)	2016/02/23		113	%	70 - 130			
			Perfluorohexane Sulfonate (PFHxS)	2016/02/23		118	%	70 - 130			
			Perfluorononanoic Acid (PFNA)	2016/02/23		128	%	70 - 130			
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23		124	%	70 - 130			
			Perfluorooctane Sulfonate (PFOS)	2016/02/23		110	%	70 - 130			
			4389346	CM5	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/22		88	%	50 - 130
						13C4-Perfluorooctanesulfonate	2016/02/22		95	%	50 - 130
13C4-Perfluorooctanoic acid	2016/02/22					96	%	50 - 130			
13C5-Perfluorononanoic acid	2016/02/22					86	%	50 - 130			
18O2-Perfluorohexanesulfonate	2016/02/22					87	%	50 - 130			
Perfluorobutane Sulfonate (PFBS)	2016/02/22	0.27 U, MDL=0.27					ng/L				
Perfluoroheptanoic Acid (PFHpA)	2016/02/22	0.39 U, MDL=0.39					ng/L				
Perfluorohexane Sulfonate (PFHxS)	2016/02/22	0.40 U, MDL=0.40					ng/L				
Perfluorononanoic Acid (PFNA)	2016/02/22	0.33 U, MDL=0.33					ng/L				
Perfluoro-n-Octanoic Acid (PFOA)	2016/02/22	0.39 U, MDL=0.39					ng/L				

Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date		%		
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2016/02/22	0.30 U, MDL=0.30		ng/L	
<p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>								



Maxxam Job #: B630794
Report Date: 2016/02/26

TestAmerica
Client Project #: 320-17219

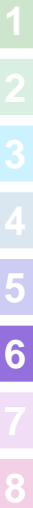
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Sin Chii Chia, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt 1.7

CTD WE 76

Chain of Custody Record

TAL-4124 (1007)

Client: CH2M Hill Project Manager: Bill Friedman Date: 02/08/16 Chain of Custody Number: 283621

Address: 5701 Cleveland St Suite 200 Telephone Number (Area Code)/Fax Number: 757-671-6223 Lab Number: _____

City: Virginia Beach State: VA Zip Code: 23462 Site Contact: _____ Lab Contact: _____

Project Name and Location (State): CTD WE 76 PFC Sampling Carrier/Waybill Number: FedEx

Contract/Purchase Order/Quote No.: PO# 10006-7-104000

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc			
OF-FB47-0216	02/08/16	1610	✓												
OF-RW47-0216		1615													
OF-FB47A-0216		1635													
OF-RW47A-0216		1640													
OF-FB48-0216		1740													
OF-RW48-0216		1748													



320-17219 Chain of Custody

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

1. Relinquished By: [Signature] Date: 02/08/16 Time: 19:30

2. Relinquished By: [Signature] Date: 02/10/16 Time: 9:45

3. Relinquished By: _____ Date: _____ Time: _____

Comments: _____



Chain of Custody Record

Due 2/22

Temperature on Receipt: 107

Drinking Water? Yes No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CTD WE 76

Project Manager: [Redacted] Date: 02/08/16 Chain of Custody Number: 283621
 Telephone Number (Area Code)/Fax Number: [Redacted] Lab Number: [Redacted]
 Site Contact: [Redacted] Lab Contact: [Redacted] Page 1 of 1

Carrier/Waybill Number: FedEx
 Analysis (Attach list if more space is needed)

Sample I.D. No. and Description
 (Containers for each sample may be combined on one line)

Sample I.D. No. and Description	Date	Time	Matrix				Unpres.	Containers & Preservatives				Select PFCs
			Air	Aqueous	Solid	Soil		M2504	MW03	ACT	MeOH	
CF-FB47-0216	02/08/16	1610		X			Y					Z
CF-RW47-0216		1615										Z
CF-FB47A-0216		1635										Z
CF-RW47A-0216		1640										Z
CF-FB48-0216		1740										Z
CF-RW48-0216		1748										Z

13-Feb-16 13:40
 Hongmei Zhao (Grace)

 B630794
 RGN ENV-951



Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown
 Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

1. Relinquished By: [Signature] Date: 02/08/16 Time: 19:30
 2. Relinquished By: [Signature] Date: 2/9/16 Time: 9:45
 3. Relinquished By: [Signature] Date: 2/6/13 Time: 13:40

Comments: REFER TO ACTR

DISTRIBUTION: WHITE - Returned to Client with Report, CANARY - Stays with the Sample, PINK - Field Copy

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-17219-1
SDG Number: CTO WE7G PFC Sampling

Login Number: 17219
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Job Number: 320-17219-1
SDG Number: CTO WE7G PFC Sampling
Job Description: CTO WE7G PFC Sampling

For:
CH2M Hill, Inc.
5701 Cleveland Street
Suite 200
Virginia Beach, VA 23462
Attention: Laurie George



Approved for release.
Laura Turpen
Project Manager I
3/10/2016 9:03 AM

Laura Turpen, Project Manager I
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4414
laura.turpen@testamericainc.com
03/10/2016

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

The Lab Certification ID# is 4025.

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

TestAmerica Laboratories, Inc.

TestAmerica Sacramento 880 Riverside Parkway, West Sacramento, CA 95605
Tel (916) 373-5600 Fax (916) 372-1059 www.testamericainc.com



Table of Contents

Cover Title Page	1
Data Summaries	3
Definitions	3
Case Narrative	4
Detection Summary	5
Certification Summary	6
Method Summary	7
Sample Summary	8
Subcontracted Data	9
Shipping and Receiving Documents	161
Client Chain of Custody	162
Sample Receipt Checklist	164

Definitions/Glossary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Glossary

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

2ASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17184-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica West Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica West Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 02/04/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.7° C.

Subcontract Work

PFC: This method was subcontracted to Maxxam Analytics Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report. Any analytical or quality issues are noted in the subcontract portion of the report.

The DL/LOD/LOQ limits for Maxxam, along with information on the data qualifiers, are included in the narrative (Page 8 of 151 of the subcontract report; page 15 of 162 of the entire report).

Detection Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Client Sample ID: OF-FB47-0216

Lab Sample ID: 320-17219-1

No Detections.

Client Sample ID: OF-RW47-0216

Lab Sample ID: 320-17219-2

No Detections.

Client Sample ID: OF-FB47A-0216

Lab Sample ID: 320-17219-3

No Detections.

Client Sample ID: OF-RW47A-0216

Lab Sample ID: 320-17219-4

No Detections.

Client Sample ID: OF-FB48-0216

Lab Sample ID: 320-17219-5

No Detections.

Client Sample ID: OF-RW48-0216

Lab Sample ID: 320-17219-6

No Detections.

This Detection Summary does not include radiochemical test results.

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Oregon	NELAP	10	CA200005	01-29-17

Method Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Method	Method Description	Protocol	Laboratory
PFOA - PFOA	PFOA	NONE	Maxxam

Protocol References:

NONE = NONE

Laboratory References:

Maxxam = Maxxam Analytics Inc., PO BOX 57437, Postal Station A, Toronto, Ontario M5W 5M5

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17219-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17219-1	OF-FB47-0216	Water	02/08/16 16:10	02/09/16 09:45
320-17219-2	OF-RW47-0216	Water	02/08/16 16:15	02/09/16 09:45
320-17219-3	OF-FB47A-0216	Water	02/08/16 16:35	02/09/16 09:45
320-17219-4	OF-RW47A-0216	Water	02/08/16 16:40	02/09/16 09:45
320-17219-5	OF-FB48-0216	Water	02/08/16 17:40	02/09/16 09:45
320-17219-6	OF-RW48-0216	Water	02/08/16 17:48	02/09/16 09:45



Prepared for: Test America

Project: 320-17219

Analytical Data Package (Level IV)

Analysis: Low level PFOS and PFOA in water (Method 537)

Maxxam Job #: B630794

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com



Table of Contents

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Table of Contents

Certification Page

1. Project Narrative

2. Sample Management Records

2.1 Sample Custody

3. Analytical Results

3.1 Summary Report

3.2 Sample Chromatograms

4. QA/QC Data

5. Initial Calibration

6. Continuing Calibration

Last Page



I hereby certify that to the best of my knowledge all analytical data presented in this report:

- Has been checked for completeness.
- Is accurate, legible and error free.
- Has been conducted in accordance with approved SOP's and that all deviations are clearly listed in the Case Narrative.
- This report has been generated in .pdf format.

Review Performed By:

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Glossary of Terms

- **Detection Limit (DL)** this can also be called **Method Detection Limit (MDL)**: The lowest concentration or amount of the target analyte that can be identified, measured, and reported with confidence that the analyte concentration is not a false positive value. (Clarification): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. At the DL, the false positive rate (Type I error) is 1%.
- **Limit of Detection (LOD)**: An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. (Clarification): The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.
- **Limits of Quantitation (LOQ)** this can also be called **Reporting Detection Limit (RDL)**: The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. (Clarification): The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DoD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard.
- **Acceptance Criteria** are values used by the laboratory to determine that a process is in control.
- **Accuracy** is the degree of agreement of a measured value with the true or expected value.
- **Calibration Standards** are a set of solutions containing the analytes of interest at a specified concentration.
- **Calibration Verification Standard** consists of a calibration standard solution of intermediate concentration (mid-point initial calibration level) used to assess whether the initial calibration is still valid
- **Certified Reference Material** is a stable homogenous material that is certified by repetitive analysis from a supplier who is certified to generate said materials.

- **Internal Standard** a deuterated or ^{13}C -labelled analyte that is added to a sample extract prior to instrumental analysis to compensate for injection variability.
- **Isomer** is a member of a group of compounds that differ from each other only in the locations of a specific number of common substituent atoms or groups of atoms on the parent compound.
- **Method Blank** is a laboratory control sample using reagents that are known to be free of contamination.
- **Precision** is the degree of agreement between the data generated from repetitive measurements under specific conditions.
- **Quality Assurance** is a system of activities whose purpose is to provide the producer or user of a product with the assurance that the product meets a defined standard of quality.
- **Quality Control** is the overall system of activities whose purpose is to control the quality of a product so that it meets the needs of the end user.
- **RSD** is the relative standard deviation.
- **Blank Spike** is a laboratory control sample that has been fortified with native analytes of interest.
- **Window Defining Mixture** is a solution containing only the earliest and latest eluting congeners within each homologous group of target analytes on a specified GC column.
- **RPD** or Relative Percent Difference. A measure used to compare duplicate sample analysis.
- **EMPC/NDR** – Peak detected does not meet ratio criteria and has resulted in a higher detection limit.



1.0 Project Narrative

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Maxxam Job: B630794

Sample Analysis

All samples were analyzed on QC batch 4389346 (2016/02/22). Recoveries of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) were above the upper control limit for Perfluorobutanesulfonate (PFBS), Perfluorohexanesulfonate (PFHxS), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid (PFOA) and Perfluorononanoic acid (PFNA). Laboratory spiked water (LCS) resulted in satisfactory recovery of the compounds of interest. When considered together, these QC data suggest that matrix interferences may be biasing the data high. For results that were U-flagged, this potential bias has no impact.

Data Qualifiers

In the Results of Analyses, U-flags are applied to results that are less than the DL (MDL). J-flags are applied to results that are less than the RDL (LOQ) but greater than the DL (MDL). Due to limitations in LIMS, the results cannot be U-flagged to the LOD. The LODs for each analyte are presented in the table below.

Parameter	MDL (ng/L)	LOD (ng/L)	LOQ (ng/L)
Perfluorobutane sulfonate (PFBS)	0.27	1.0	2.0
Perfluorohexane sulfonate (PFHxS)	0.40	1.0	2.0
Perfluoroheptanoic acid (PFHpA)	0.39	1.0	2.0
Perfluorooctanoic acid (PFOA)	0.39	1.0	2.0
Perfluorooctane sulfonate (PFOS)	0.30	1.0	2.0
Perfluorononanoic acid (PFNA)	0.33	1.0	2.0

Sin Chii Chia, B.Sc.

schia@maxxam.ca

Office 905 817 5700

PROJECT NARRATIVE

Maxxam Analytics
Client Project #: 320-17219



Client: TestAmerica
Client Project: 320-17219

I. SAMPLE RECEIPT/ANALYSIS

a) Sample Listing

Maxxam ID	Client Sample ID	Date Sampled	Date Received	Date Prepped	Date Run	Initial Calibration
Low level PFOS and PFOA in water						
BVX806	OF-FB47-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22
BVX807	OF-RW47-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22
BVX808	OF-FB47A-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22
BVX809	OF-RW47A-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22
BVX810	OF-FB48-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22
BVX811	OF-RW48-0216	2016/02/08	2016/02/13	2016/02/21	2016/02/23	2016/02/22

Run Date is defined as the date of injection of the last calibration standard (12 hours or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: Number of containers listed on CoC as 2 per sample. Only one container was received.

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis

a) Hold Times: all within recommended hold times

b) Instrument Calibration: all within control limits

c) Quality Control: All applicable QC meets control criteria, except where otherwise noted.

d) All analytes requiring manual intergration(s) are noted on the sample chromatograms

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for other than the conditions detailed above.

In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

M Di Grazia

2016/03/10

Date



2. Sample Management Records

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com



2.1 Sample Custody

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Chain of Custody Record

Due 2/22

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt? Yes No
 Drinking Water? Yes No

GTO WE76

Project Manager: [Redacted]
 Chain of Custody Number: 283621
 Date: 02/08/16
 Lab Number: [Redacted]

Analysis (Attach list if more space is needed)
 Page: 1 of 1

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	Containers & Preservatives	Special Instructions/ Conditions of Receipt
02-FB47-0216	02/08/16	1610	Soil	None	
02-RW47-0216	02/08/16	1615	Water	None	
02-FB47A-0216	02/08/16	1635	Soil	None	
02-RW47A-0216	02/08/16	1640	Water	None	
02-FB48-0216	02/08/16	1740	Soil	None	
02-RW48-0216	02/08/16	1748	Water	None	

13-Feb-16 13:40
 Hongmei Zhao (Grace)
 B630794

RGN ENV-951



320-17219 Chain of Custody

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Other

Turn Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days

1. Relinquished By: *[Signature]* Date: 02/08/16 Time: 19:50
 2. Relinquished By: *[Signature]* Date: 02/08/16 Time: 19:45
 3. Relinquished By: *[Signature]* Date: 02/08/16 Time: 13:40

Comments: REFER TO ACTR

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy



3. Analytical Results

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com



3.1 Summary Report

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com



Your Project #: 320-17219
Your C.O.C. #: 283621

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/03/09
Report #: R3922729
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630794
Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 6

Analyses	Date		Laboratory Method	Reference
	Quantity Extracted	Date Analyzed		
Low level PFOS and PFOA in water	6	2016/02/21	2016/02/23 CAM SOP-00894	EPA 537 m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Melissa DiGrazia, Project Manager - ATUT
Email: MDiGrazia@maxxam.ca
Phone# (905) 332-8788

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.
Maxxam Analytics International Corporation is a NELAP accredited laboratory. Certificates #04012 and #4079-001. This certificate shall not be reproduced except in full, without the written approval of Maxxam.

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX806	BVX807	BVX808	BVX809	BVX810			
Sampling Date		2016/02/08 16:10	2016/02/08 16:15	2016/02/08 16:35	2016/02/08 16:40	2016/02/08 17:40			
COC Number		283621	283621	283621	283621	283621			
	UNITS	OF-FB47-0216	OF-RW47-0216	OF-FB47A-0216	OF-RW47A-0216	OF-FB48-0216	RDL	MDL	QC Batch

Miscellaneous Parameters									
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.57 J	0.27 U	0.52 J	0.27 U	2.0	0.27	4389346
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	2.0	0.39	4389346
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	2.0	0.40	4389346
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	2.0	0.39	4389346
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	2.0	0.33	4389346
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	2.0	0.30	4389346

Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	86	40 (1)	80	57	75	N/A	N/A	4389346
13C4-Perfluorooctanesulfonate	%	84	41 (1)	78	59	84	N/A	N/A	4389346
13C4-Perfluorooctanoic acid	%	91	43 (1)	81	60	79	N/A	N/A	4389346
13C5-Perfluorononanoic acid	%	87	38 (1)	76	55	80	N/A	N/A	4389346
18O2-Perfluorohexanesulfonate	%	80	44 (1)	84	60	77	N/A	N/A	4389346

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) Surrogate recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the surrogate. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low surrogate recovery.

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX811			
Sampling Date		2016/02/08 17:48			
COC Number		283621			
	UNITS	OF-RW48-0216	RDL	MDL	QC Batch
Miscellaneous Parameters					
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	2.0	0.27	4389346
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	2.0	0.39	4389346
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	2.0	0.40	4389346
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	2.0	0.39	4389346
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	2.0	0.33	4389346
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	2.0	0.30	4389346
Surrogate Recovery (%)					
13C4-Perfluoroheptanoic acid	%	53	N/A	N/A	4389346
13C4-Perfluorooctanesulfonate	%	58	N/A	N/A	4389346
13C4-Perfluorooctanoic acid	%	59	N/A	N/A	4389346
13C5-Perfluorononanoic acid	%	54	N/A	N/A	4389346
18O2-Perfluorohexanesulfonate	%	56	N/A	N/A	4389346
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable					

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

TEST SUMMARY

Maxxam ID: BVX806
Sample ID: OF-FB47-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX807
Sample ID: OF-RW47-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX808
Sample ID: OF-FB47A-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX809
Sample ID: OF-RW47A-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX810
Sample ID: OF-FB48-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam ID: BVX811
Sample ID: OF-RW48-0216
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4389346	2016/02/21	2016/02/23	Colm McNamara

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

GENERAL COMMENTS

Report revised to remove qualifier legend

Perfluoroheptanoic acid (PFHpA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorooctanoic acid (PFOA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorononanoic acid (PFNA) MDL = 0.33, LOD = 1.0, LOQ = 2.0
Perfluorobutane sulfonate (PFBS) MDL = 0.27, LOD = 1.0, LOQ = 2.0
Perfluorohexane sulfonate (PFHxS) MDL = 0.40, LOD = 1.0, LOQ = 2.0
Perfluorooctane sulfonate (PFOS) MDL = 0.30, LOD = 1.0, LOQ = 2.0
All Units are in ng/L

Results relate only to the items tested.

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4389346	CM5	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/23		60	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/23		65	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/23		72	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/23		63	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/23		69	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/23		136 (1)	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/23		142 (1)	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/23		141 (1)	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/23		130	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23		128	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/23		120	%	70 - 130
4389346	CM5	RPD	Perfluorobutane Sulfonate (PFBS)	2016/02/23	2.7		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/23	12		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/23	2.3		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/23	4.1		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23	7.2		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/23	2.2		%	30
4389346	CM5	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/23		102	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/23		106	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/23		100	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/23		94	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/23		100	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/23		114	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/23		113	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/23		118	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/23		128	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/23		124	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/23		110	%	70 - 130
4389346	CM5	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/22		88	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/22		95	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/22		96	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/22		86	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/22		87	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/22	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/22	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/22	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/22	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/22	0.39 U, MDL=0.39		ng/L	

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

QUALITY ASSURANCE REPORT(CONT'D)


QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2016/02/22	0.30 U, MDL=0.30		ng/L	
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>								

Maxxam Job #: B630794
Report Date: 2016/03/09

TestAmerica
Client Project #: 320-17219

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Sin Chii Chia, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



METHOD 537
DETERMINATION OF SELECTED PERFLUORINATED ALKYL
ACIDS IN DRINKING WATER BY SOLID PHASE EXTRACTION
AND LIQUID CHROMATOGRAPHY/TANDEM MASS SPECTROMETRY
(LC/MS/MS)

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com



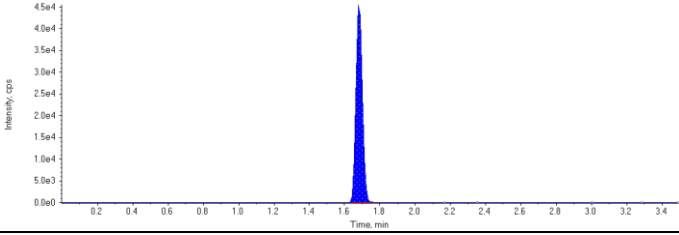
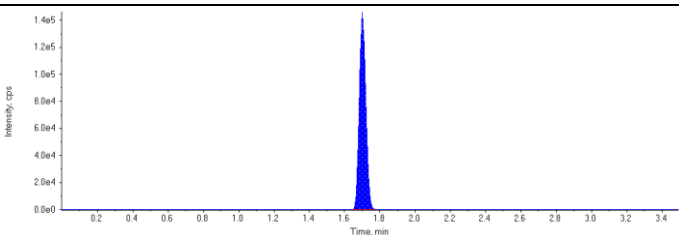
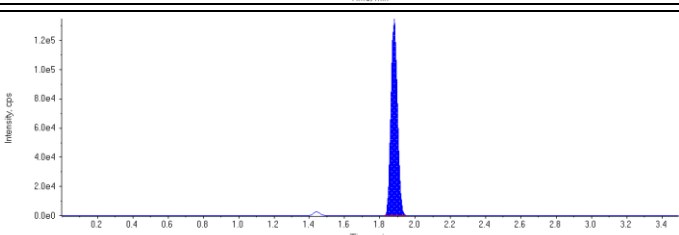
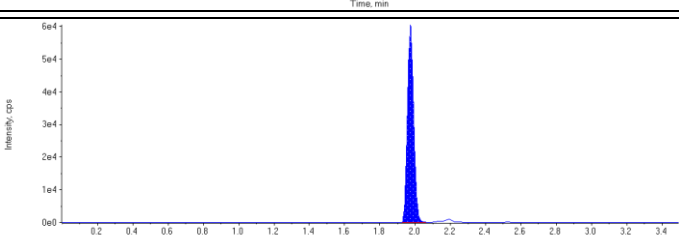
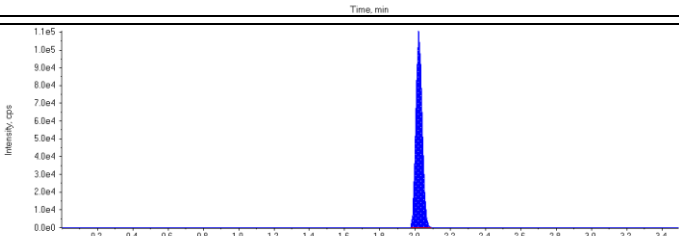
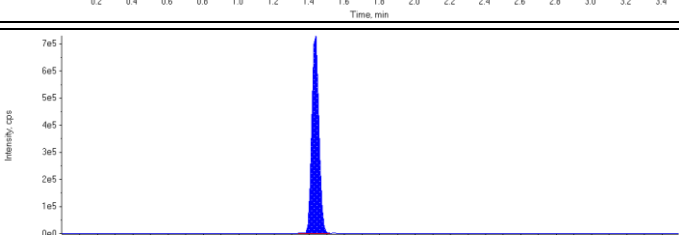
3.2 Sample Chromatograms

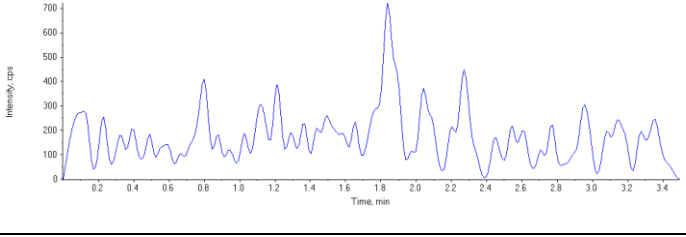
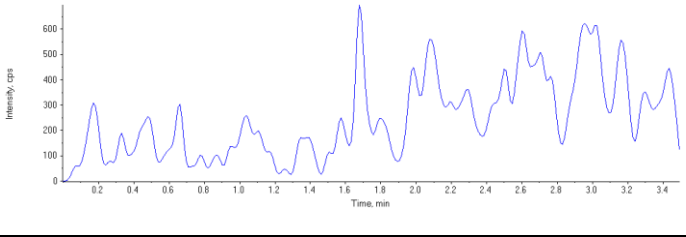
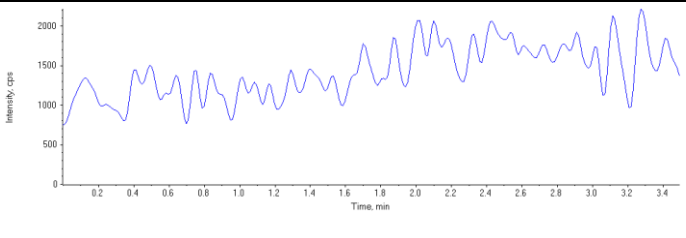
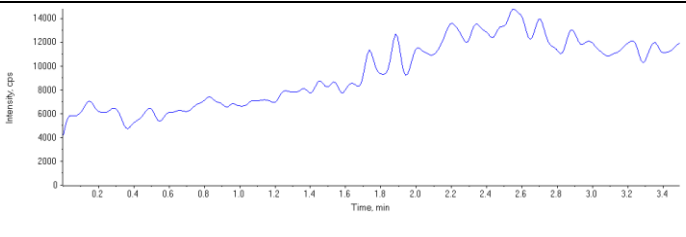
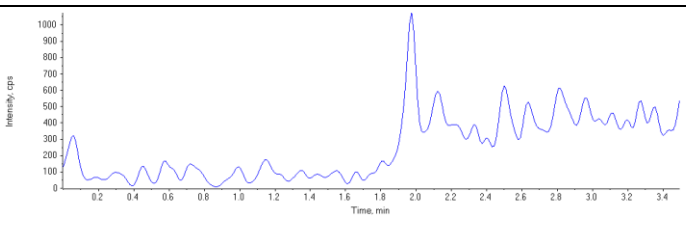
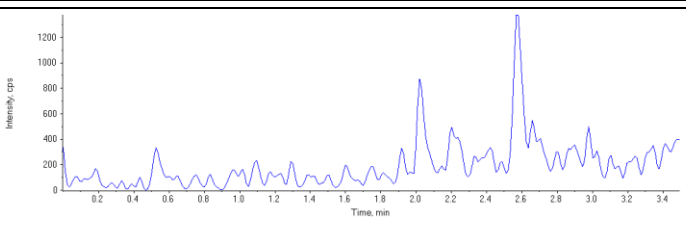
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

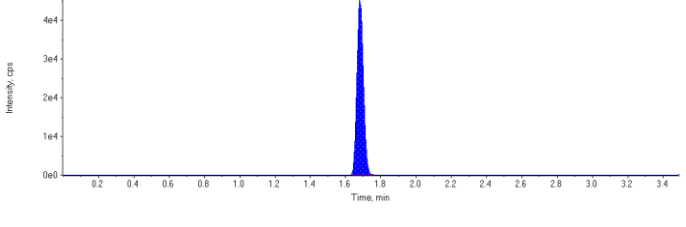
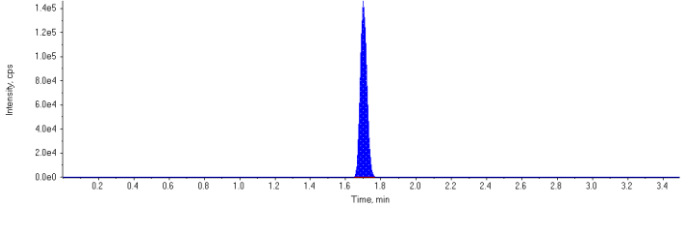
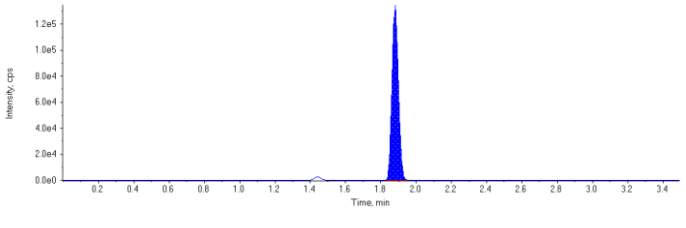
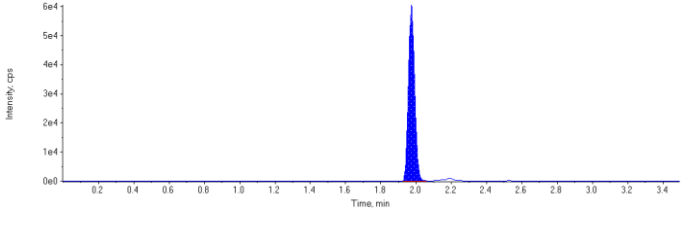
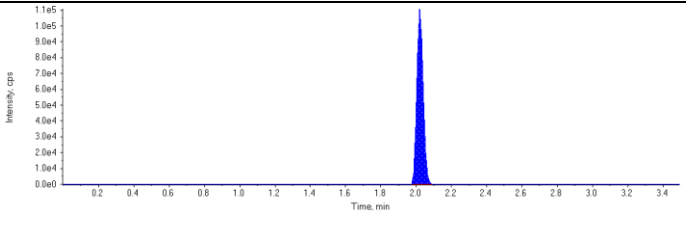
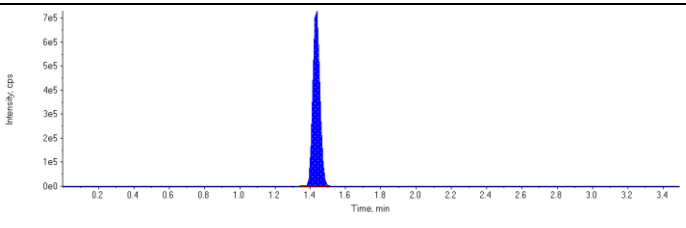
Sample Name	4389346~BVX806-01	Injection Vial	12
Sample ID	4389346~BVX806-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:41:59 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	116000.	1.68	1.00	-
MPFHpA	371000.	1.70	1.00	-
MPFOA	338000.	1.88	1.00	-
MPFOS	147000.	1.97	1.00	-
MPFNA	277000.	2.02	1.00	-
13C6-PFHxA IS	2040000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	116000	1.68	N/A	80.0	N/A
13C4-PFHpA	371000	1.70	N/A	86.4	N/A
13C4-PFOA	338000	1.88	N/A	91.0	N/A
13C4-PFOS	147000	1.97	N/A	84.0	N/A
13C5-PFNA	277000	2.02	N/A	87.4	N/A
13C6-PFHxA	2040000	1.43	N/A	89.0	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

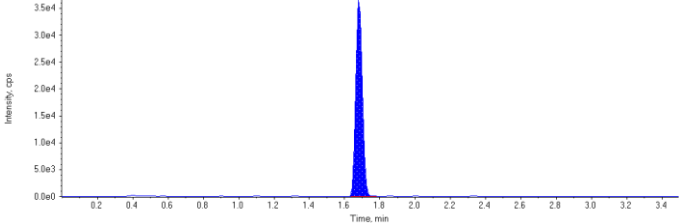
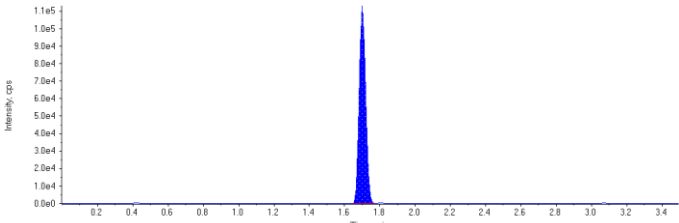
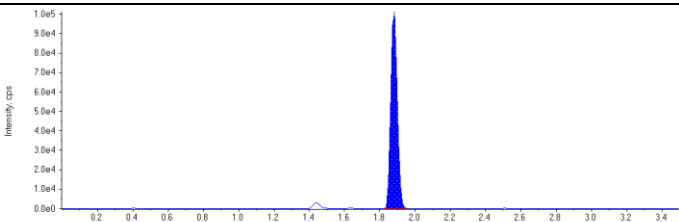
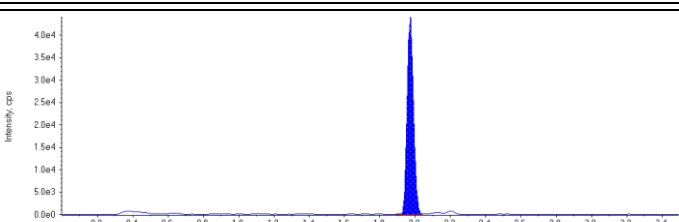
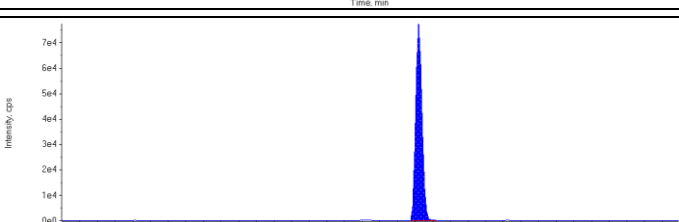
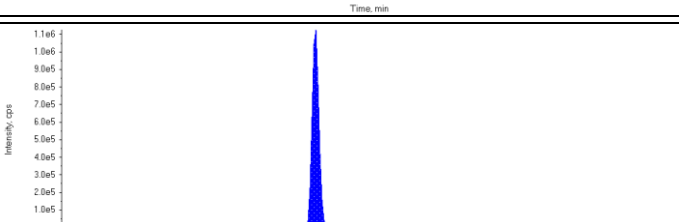
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 80.0 ng/L</p> <p>Area Ratio: 0.0567</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 86.4 ng/L</p> <p>Area Ratio: 0.182</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 91.0 ng/L</p> <p>Area Ratio: 0.166</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 84.0 ng/L</p> <p>Area Ratio: 0.0723</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 87.4 ng/L</p> <p>Area Ratio: 0.136</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 89.0 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

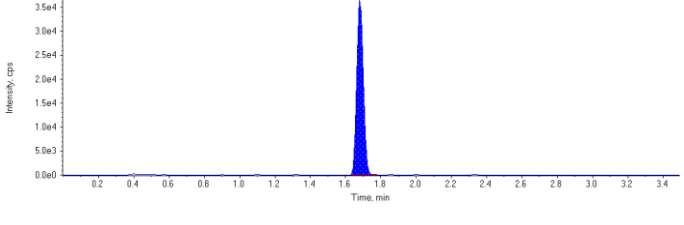
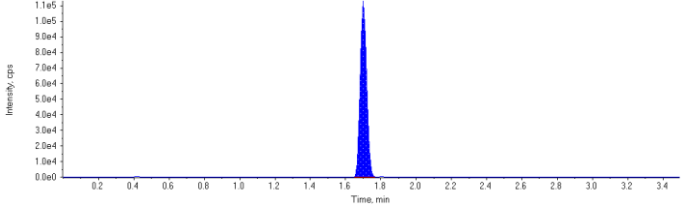
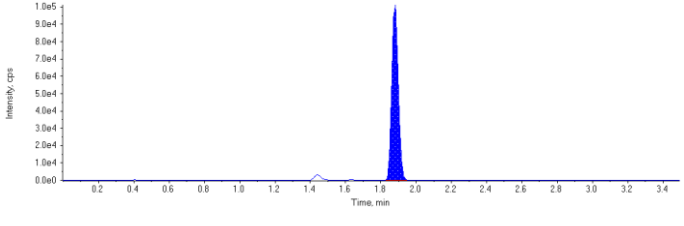
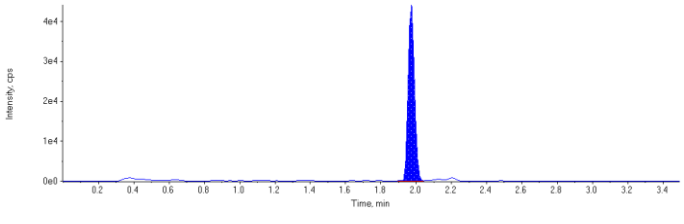
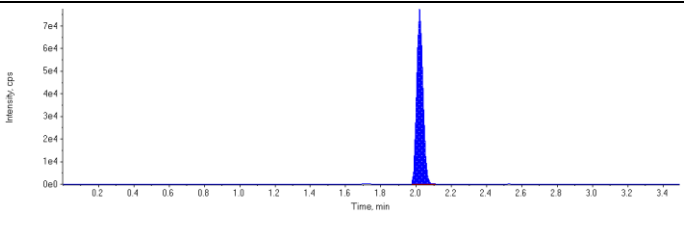
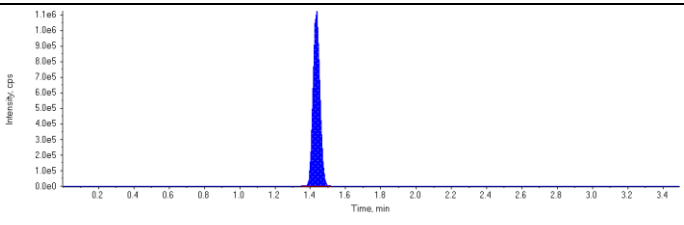
Sample Name	4389346~BVX807-01	Injection Vial	13
Sample ID	4389346~BVX807-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:47:03 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	94800.	1.68	1.00	-
MPFHpA	283000.	1.70	1.00	-
MPFOA	259000.	1.88	1.00	-
MPFOS	110000.	1.97	1.00	-
MPFNA	192000.	2.02	1.00	-
13C6-PFHxA IS	3080000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	94800	1.68	N/A	43.5	N/A
13C4-PFHpA	283000	1.70	N/A	43.7	N/A
13C4-PFOA	259000	1.88	N/A	46.2	N/A
13C4-PFOS	110000	1.97	N/A	41.5	N/A
13C5-PFNA	192000	2.02	N/A	40.3	N/A
13C6-PFHxA	3080000	1.43	N/A	134.	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

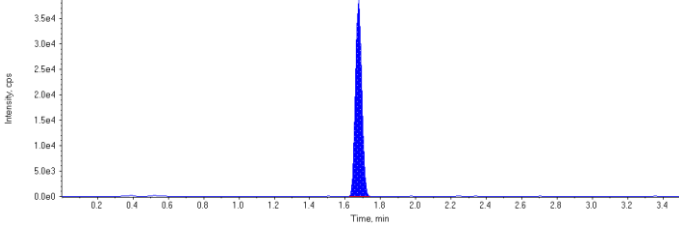
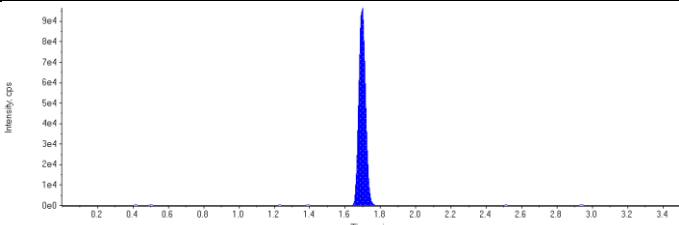
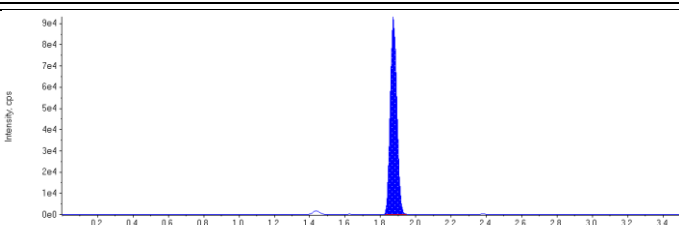
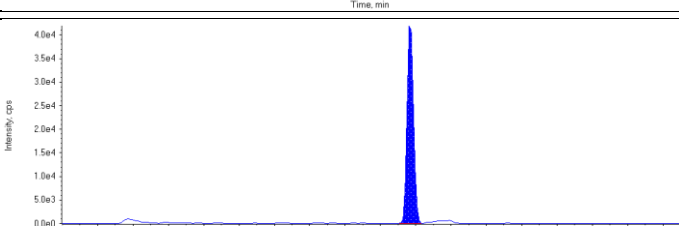
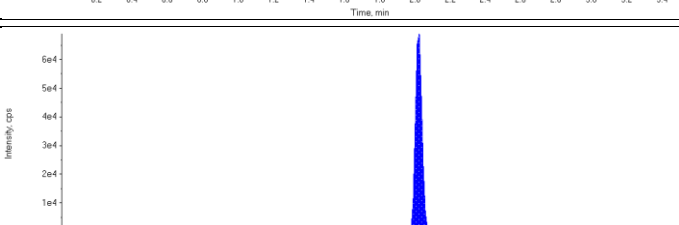
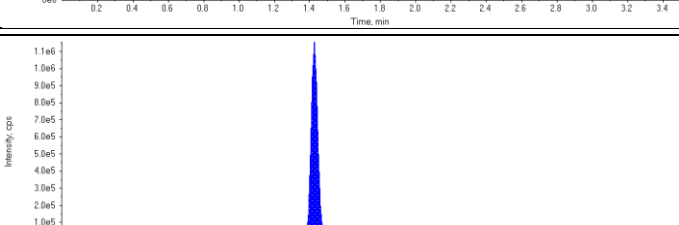
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

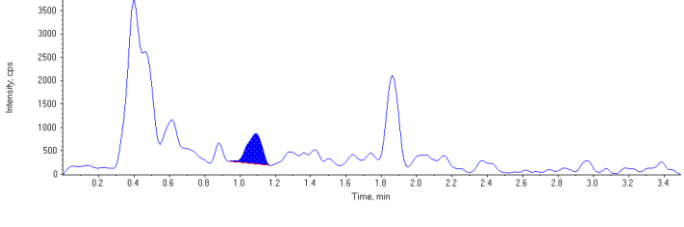
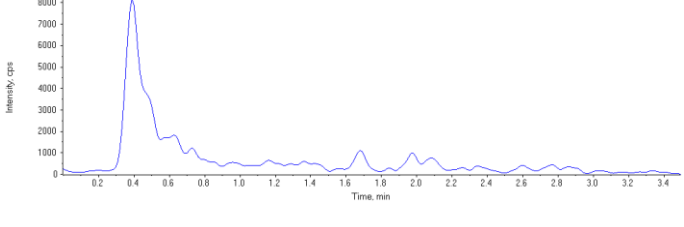
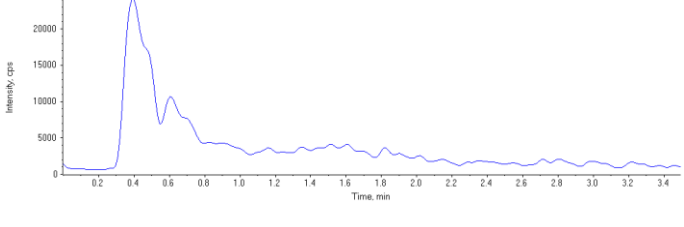
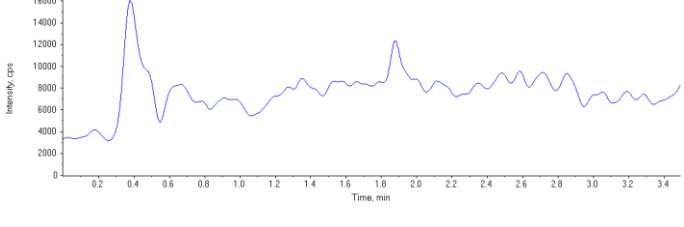
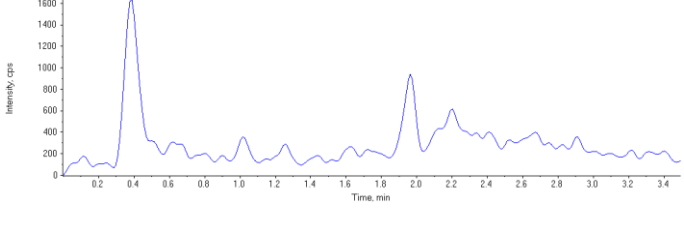
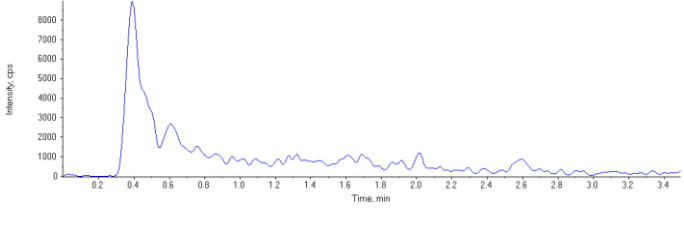
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 43.5 ng/L</p> <p>Area Ratio: 0.0308</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 43.7 ng/L</p> <p>Area Ratio: 0.0920</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 46.2 ng/L</p> <p>Area Ratio: 0.0843</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 41.5 ng/L</p> <p>Area Ratio: 0.0357</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 40.3 ng/L</p> <p>Area Ratio: 0.0625</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 134. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

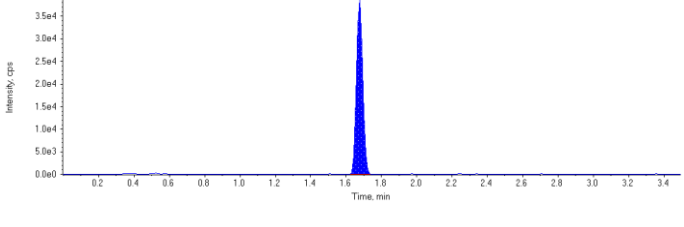
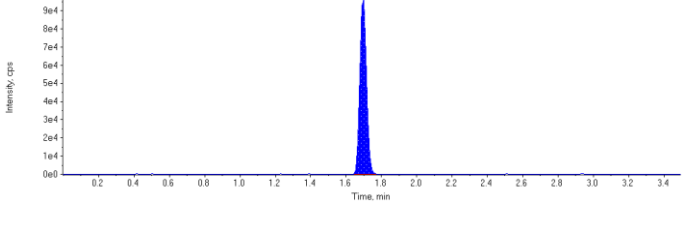
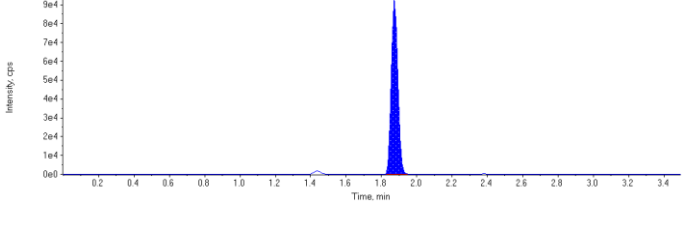
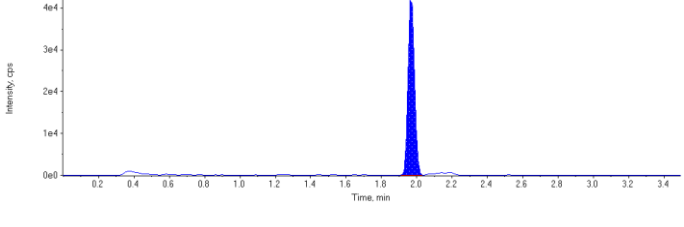
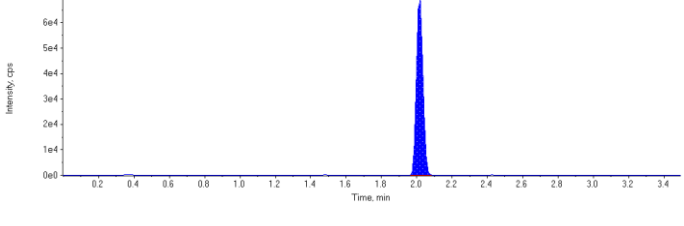
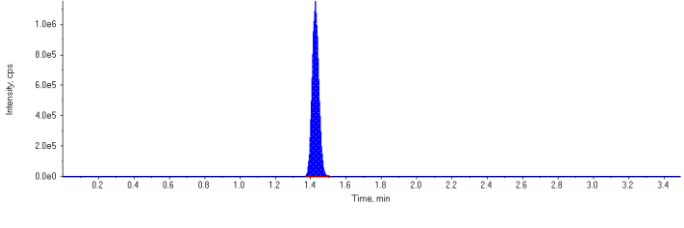
Sample Name	4389346~BVX807-01	Injection Vial	13
Sample ID	4389346~BVX807-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 7:30:05 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	95700.	1.68	1.00	-
MPFHpA	255000.	1.70	1.00	-
MPFOA	238000.	1.87	1.00	-
MPFOS	108000.	1.97	1.00	-
MPFNA	179000.	2.02	1.00	-
13C6-PFHxA IS	3040000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	3780	1.09	N/A	0.569	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	95700	1.68	N/A	44.4	N/A
13C4-PFHpA	255000	1.70	N/A	39.8	N/A
13C4-PFOA	238000	1.87	N/A	43.0	N/A
13C4-PFOS	108000	1.97	N/A	41.2	N/A
13C5-PFNA	179000	2.02	N/A	38.0	N/A
13C6-PFHxA	3040000	1.43	N/A	133.	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

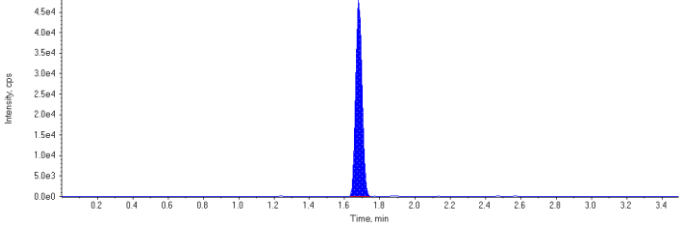
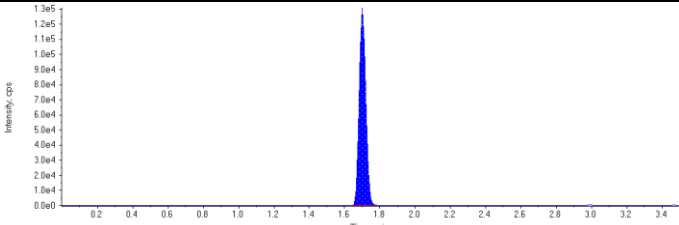
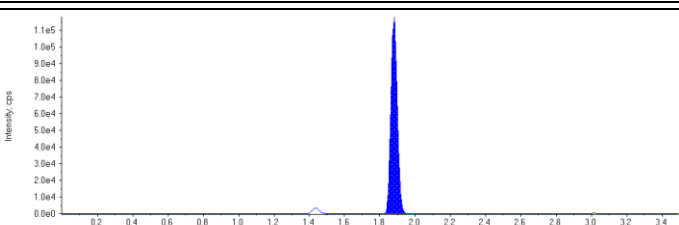
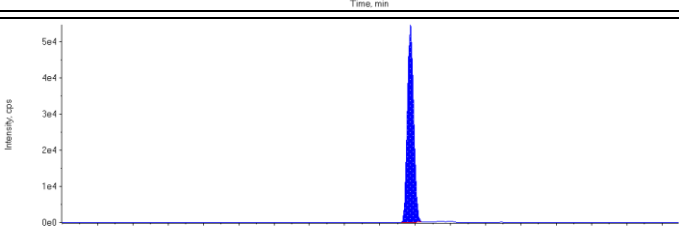
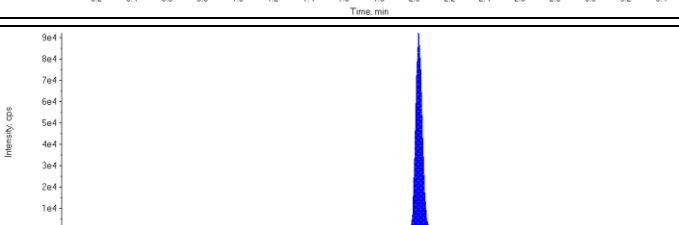
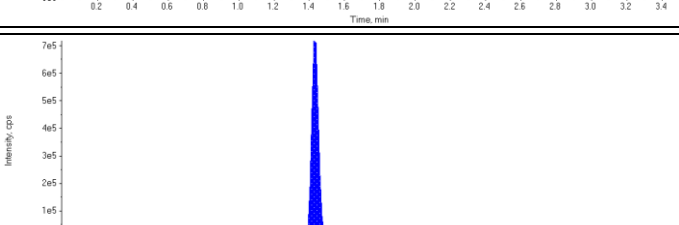
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.09 (1.15) min</p> <p>Calculated Conc: 0.569 ng/L</p> <p>Area Ratio: 0.0395</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFBS 1 (298.900/79.900 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 3500 cps, and the x-axis ranges from 0.2 to 3.4 min. A prominent peak is observed at approximately 0.4 min, and a smaller peak is highlighted at 1.09 min.</p>
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFHxS 1 (398.900/79.900 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 8000 cps, and the x-axis ranges from 0.2 to 3.4 min. A very large peak is observed at approximately 0.4 min.</p>
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFHpA 1 (363.000/319.000 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 20000 cps, and the x-axis ranges from 0.2 to 3.4 min. A very large peak is observed at approximately 0.4 min.</p>
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFOA 1 (413.100/369.000 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 16000 cps, and the x-axis ranges from 0.2 to 3.4 min. A large peak is observed at approximately 0.4 min, and a smaller peak is visible at approximately 1.9 min.</p>
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFOS 1 (498.900/79.900 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 1600 cps, and the x-axis ranges from 0.2 to 3.4 min. A large peak is observed at approximately 0.4 min, and a smaller peak is visible at approximately 1.9 min.</p>
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	 <p>Chromatogram for PFNA 1 (462.900/419.000 Da) showing intensity (cps) vs time (min). The y-axis ranges from 0 to 8000 cps, and the x-axis ranges from 0.2 to 3.4 min. A large peak is observed at approximately 0.4 min.</p>

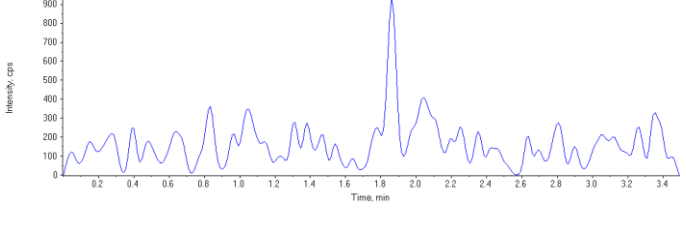
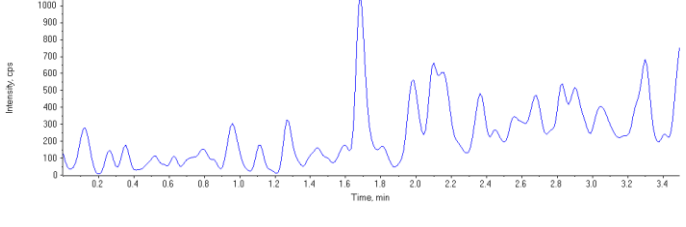
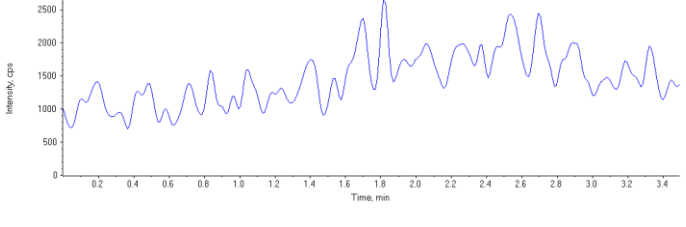
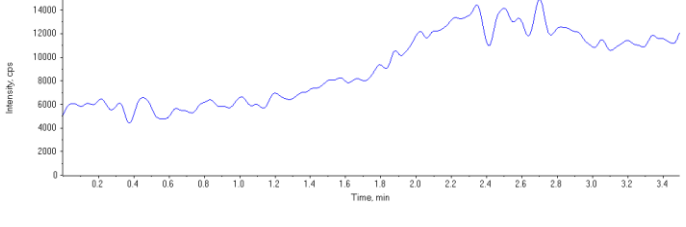
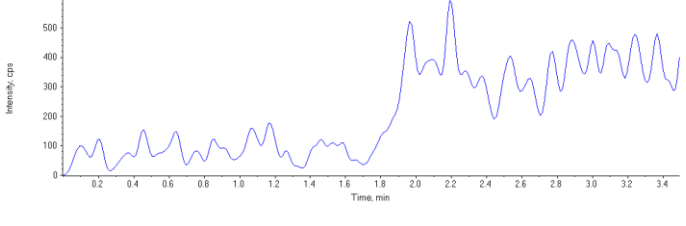
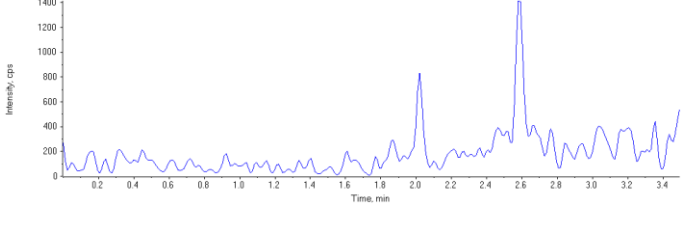
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 44.4 ng/L</p> <p>Area Ratio: 0.0315</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 39.8 ng/L</p> <p>Area Ratio: 0.0837</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.87 (1.88) min</p> <p>Calculated Conc: 43.0 ng/L</p> <p>Area Ratio: 0.0783</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 41.2 ng/L</p> <p>Area Ratio: 0.0354</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 38.0 ng/L</p> <p>Area Ratio: 0.0589</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 133. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

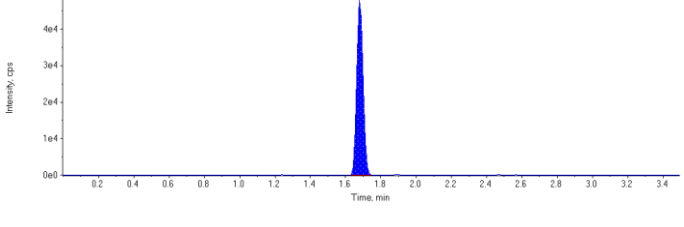
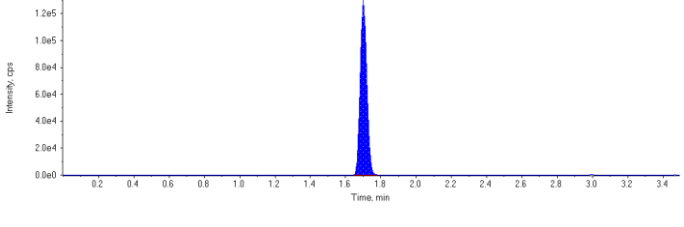
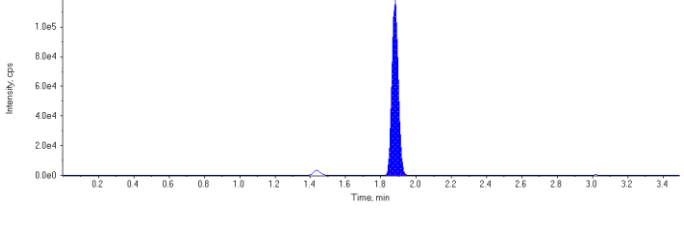
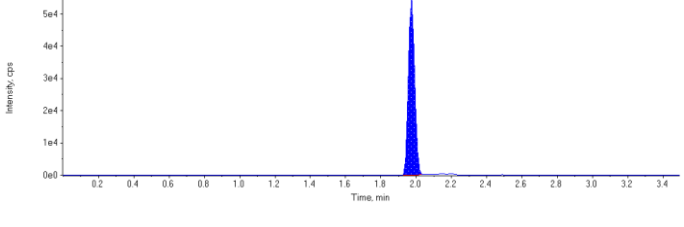
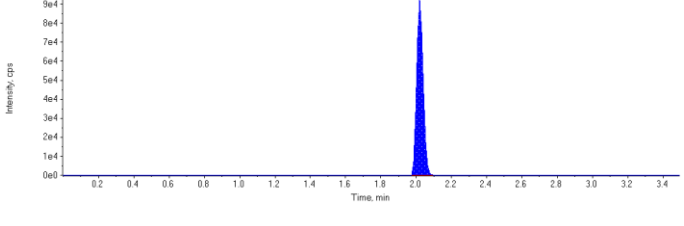
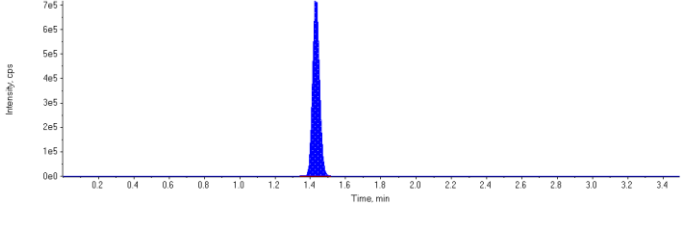
Sample Name	4389346~BVX808-01	Injection Vial	14
Sample ID	4389346~BVX808-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:52:09 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	120000.	1.68	1.00	-
MPFHpA	336000.	1.70	1.00	-
MPFOA	295000.	1.88	1.00	-
MPFOS	135000.	1.97	1.00	-
MPFNA	235000.	2.02	1.00	-
13C6-PFHxA IS	2010000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	120000	1.68	N/A	84.2	N/A
13C4-PFHpA	336000	1.70	N/A	79.5	N/A
13C4-PFOA	295000	1.88	N/A	80.7	N/A
13C4-PFOS	135000	1.97	N/A	78.3	N/A
13C5-PFNA	235000	2.02	N/A	75.6	N/A
13C6-PFHxA	2010000	1.43	N/A	87.5	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

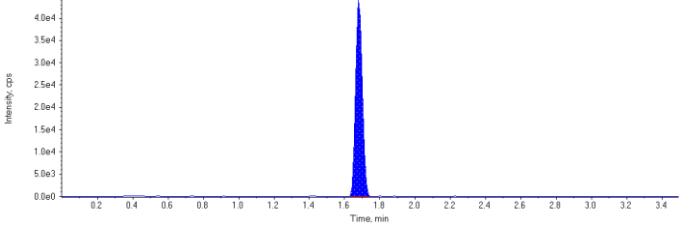
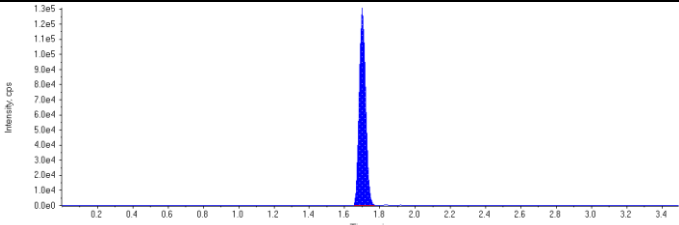
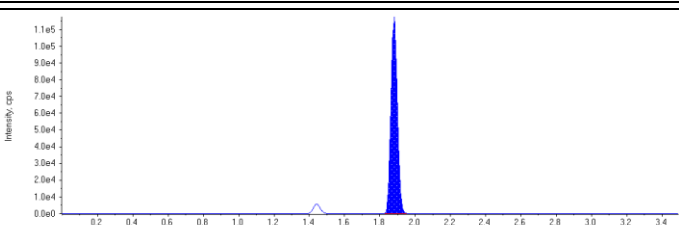
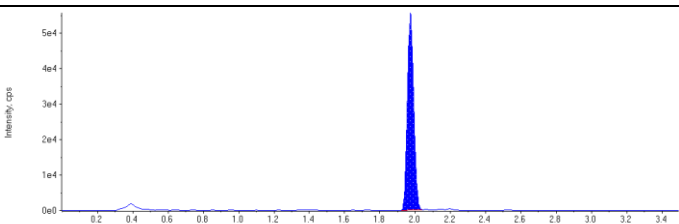
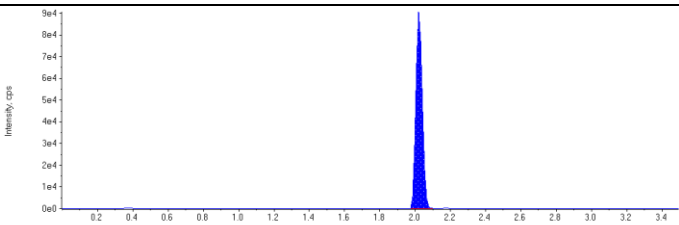
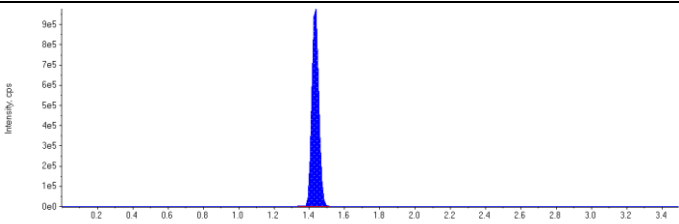
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

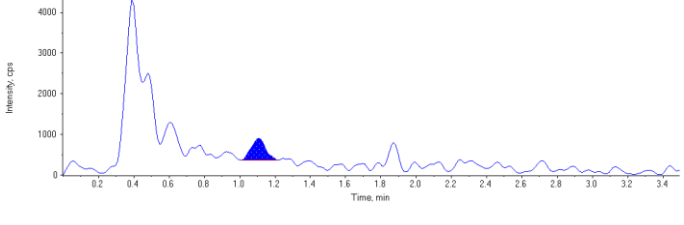
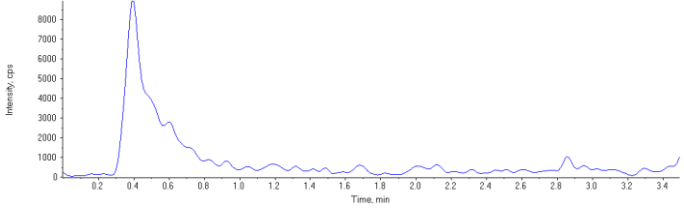
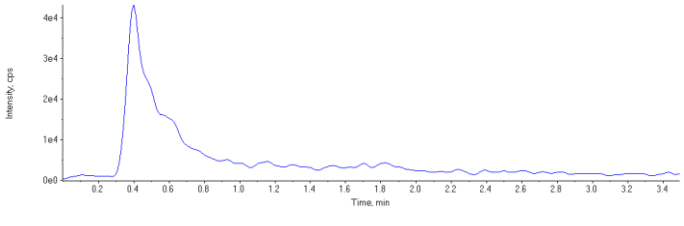
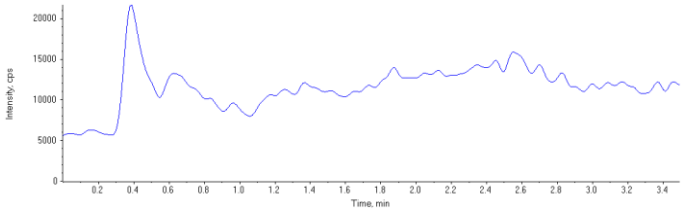
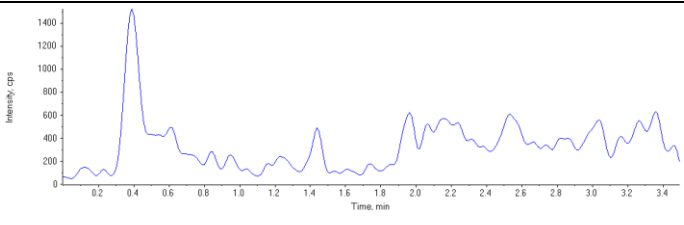
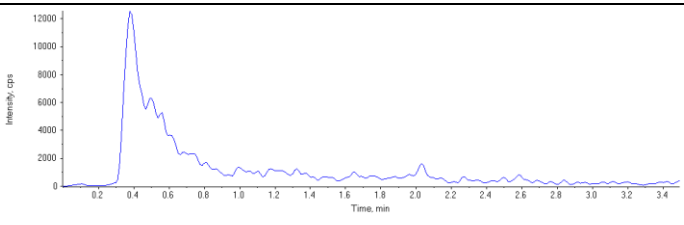
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 84.2 ng/L</p> <p>Area Ratio: 0.0596</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 79.5 ng/L</p> <p>Area Ratio: 0.167</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 80.7 ng/L</p> <p>Area Ratio: 0.147</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 78.3 ng/L</p> <p>Area Ratio: 0.0674</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 75.6 ng/L</p> <p>Area Ratio: 0.117</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 87.5 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

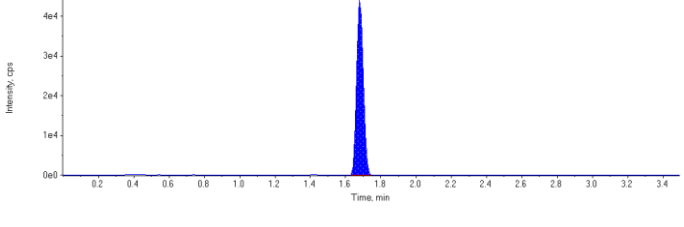
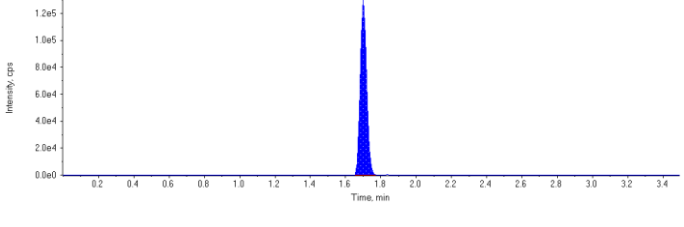
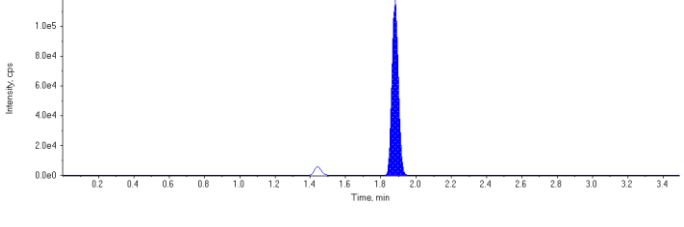
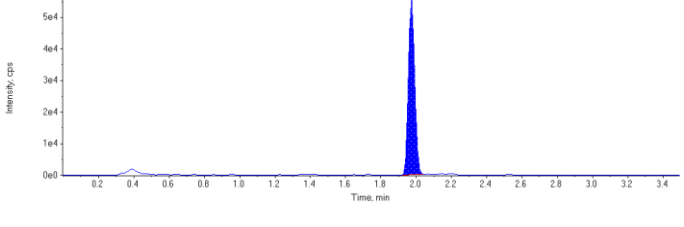
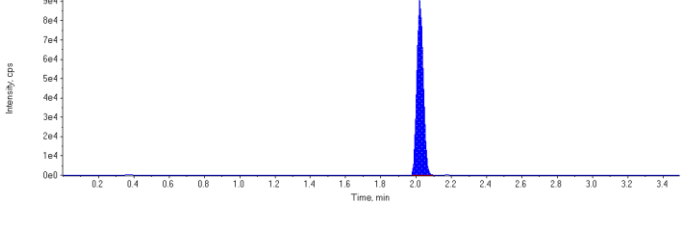
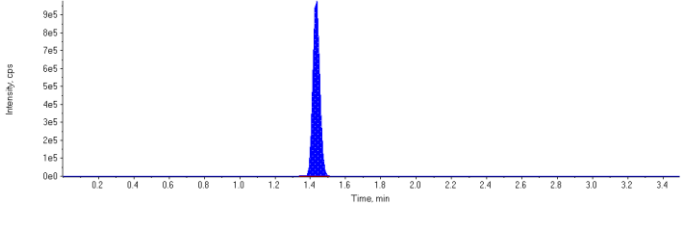
Sample Name	4389346~BVX809-01	Injection Vial	15
Sample ID	4389346~BVX809-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:57:15 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	116000.	1.68	1.00	-
MPFHpA	323000.	1.70	1.00	-
MPFOA	295000.	1.88	1.00	-
MPFOS	137000.	1.97	1.00	-
MPFNA	230000.	2.02	1.00	-
13C6-PFHxA IS	2710000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	3050	1.11	N/A	0.524	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	116000	1.68	N/A	60.3	N/A
13C4-PFHpA	323000	1.70	N/A	56.6	N/A
13C4-PFOA	295000	1.88	N/A	59.7	N/A
13C4-PFOS	137000	1.97	N/A	58.9	N/A
13C5-PFNA	230000	2.02	N/A	54.7	N/A
13C6-PFHxA	2710000	1.43	N/A	118.	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

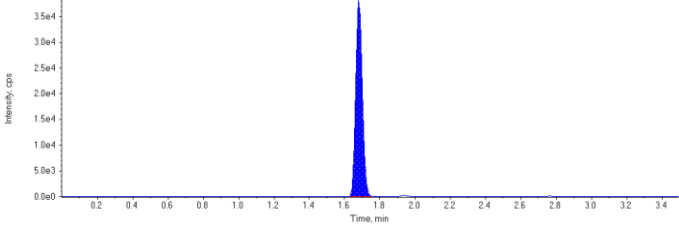
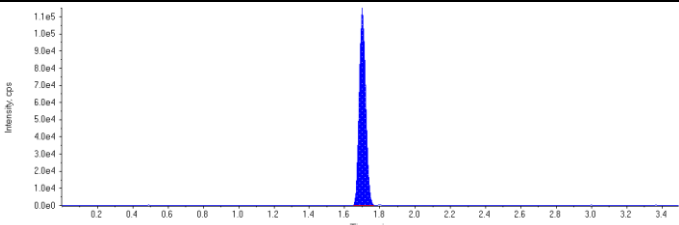
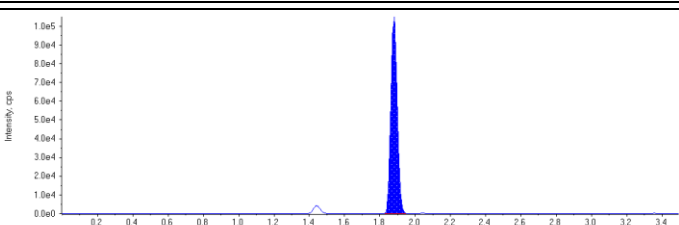
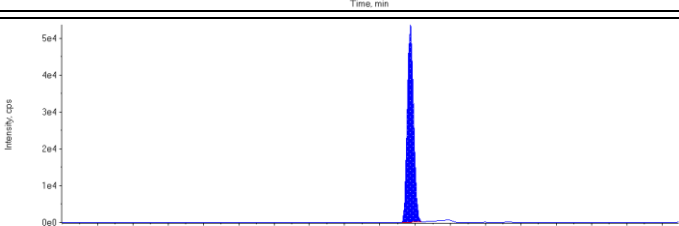
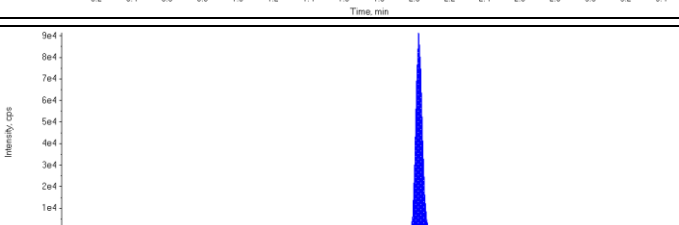
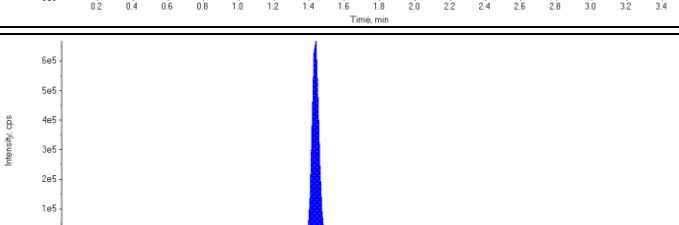
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 0.524 ng/L</p> <p>Area Ratio: 0.0263</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

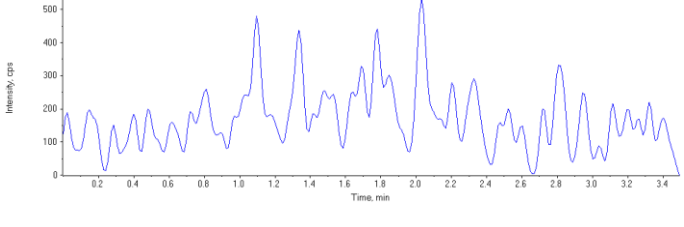
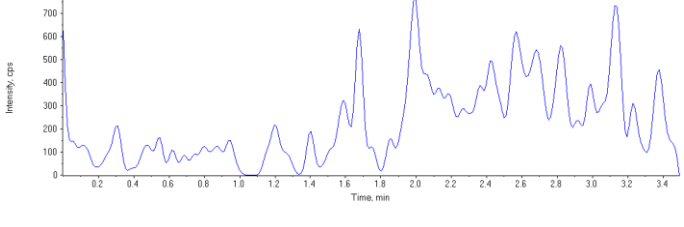
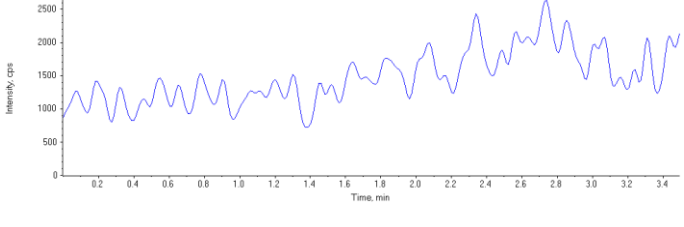
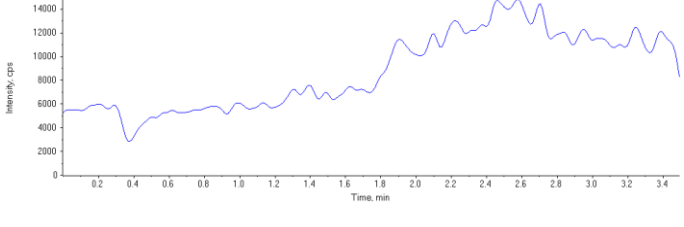
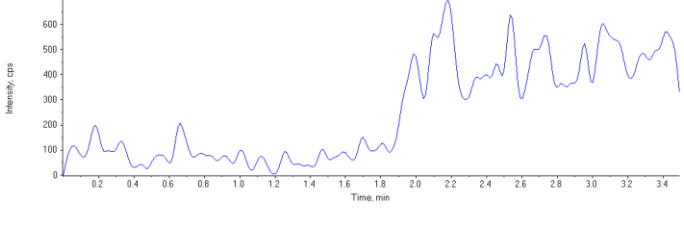
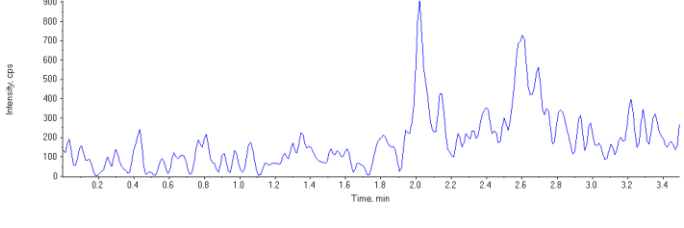
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 60.3 ng/L</p> <p>Area Ratio: 0.0427</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 56.6 ng/L</p> <p>Area Ratio: 0.119</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 59.7 ng/L</p> <p>Area Ratio: 0.109</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 58.9 ng/L</p> <p>Area Ratio: 0.0507</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 54.7 ng/L</p> <p>Area Ratio: 0.0849</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 118. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

Sample Name	4389346~BVX810-01	Injection Vial	16
Sample ID	4389346~BVX810-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 1:02:21 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	99300.	1.68	1.00	-
MPFHpA	287000.	1.70	1.00	-
MPFOA	265000.	1.88	1.00	-
MPFOS	132000.	1.97	1.00	-
MPFNA	227000.	2.02	1.00	-
13C6-PFHxA IS	1830000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	99300	1.68	N/A	76.7	N/A
13C4-PFHpA	287000	1.70	N/A	74.5	N/A
13C4-PFOA	265000	1.88	N/A	79.4	N/A
13C4-PFOS	132000	1.97	N/A	84.0	N/A
13C5-PFNA	227000	2.02	N/A	80.1	N/A
13C6-PFHxA	1830000	1.43	N/A	79.7	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

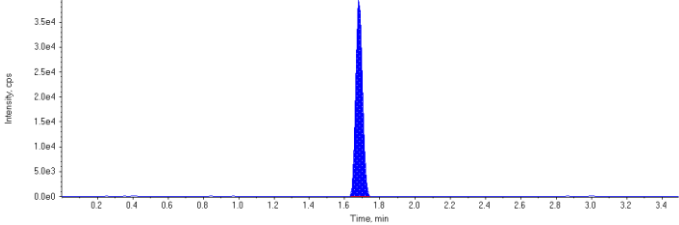
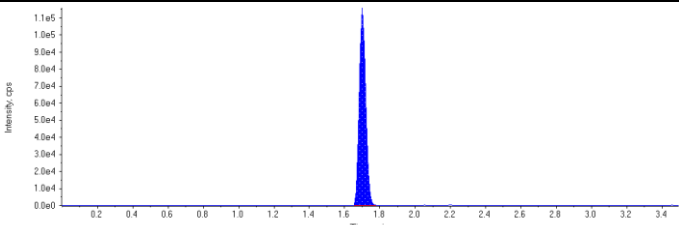
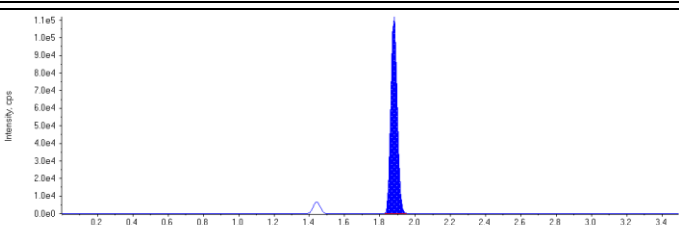
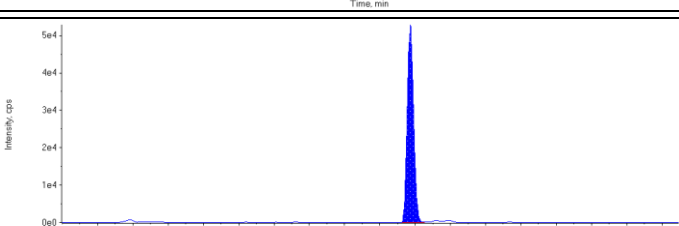
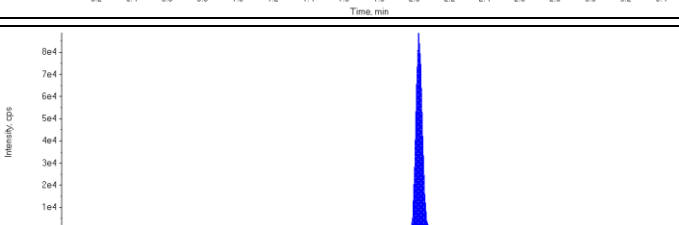
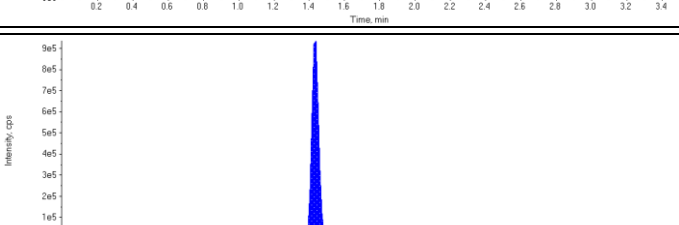
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

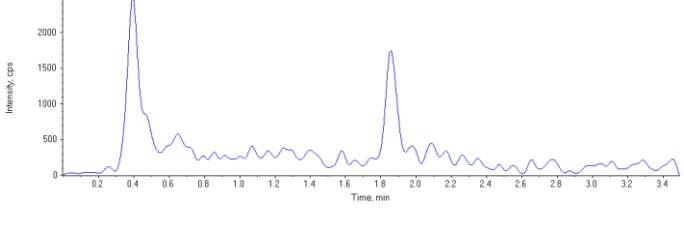
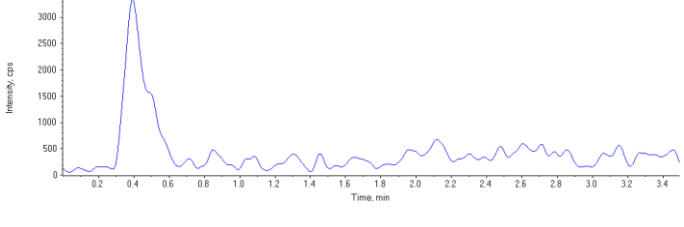
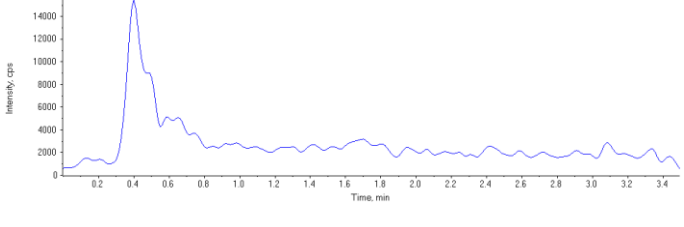
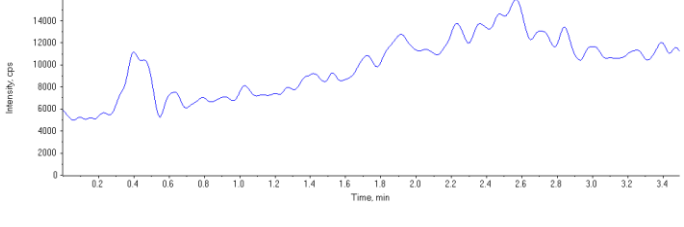
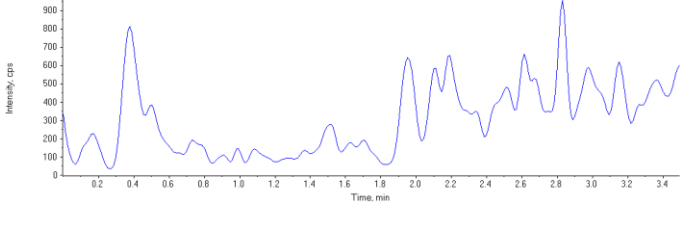
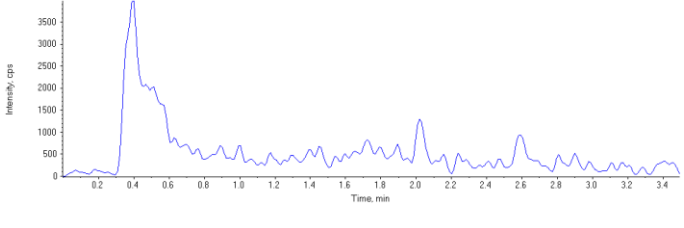
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 76.7 ng/L</p> <p>Area Ratio: 0.0543</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 74.5 ng/L</p> <p>Area Ratio: 0.157</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 79.4 ng/L</p> <p>Area Ratio: 0.145</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 84.0 ng/L</p> <p>Area Ratio: 0.0723</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 80.1 ng/L</p> <p>Area Ratio: 0.124</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 79.7 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

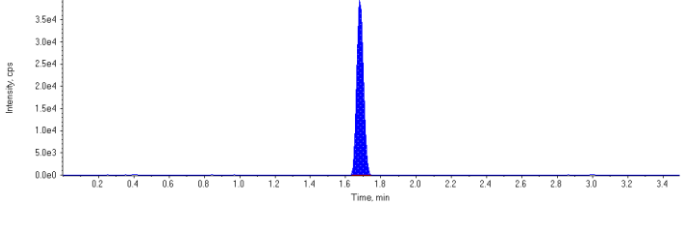
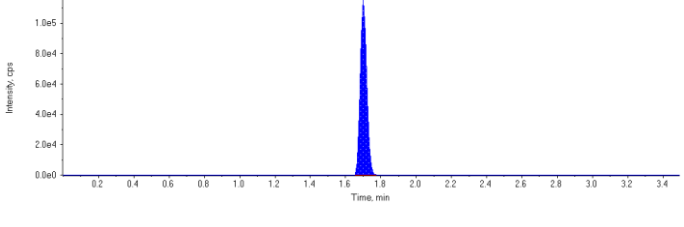
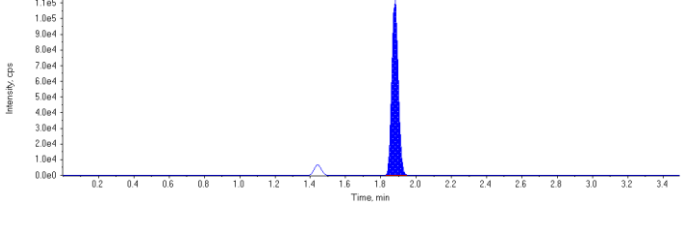
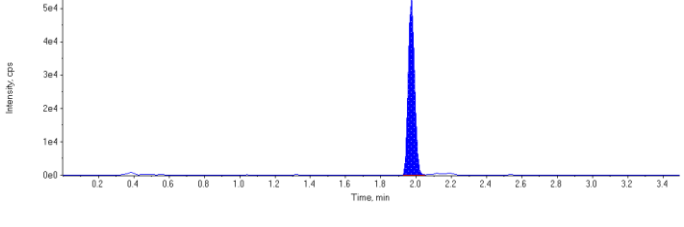
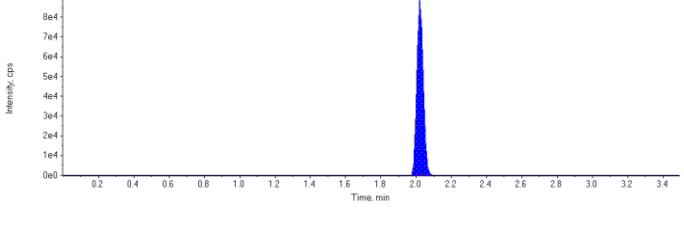
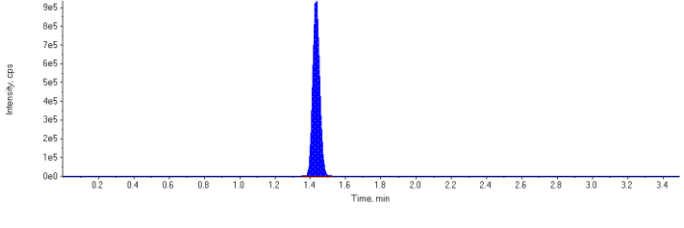
Sample Name	4389346~BVX811-01	Injection Vial	17
Sample ID	4389346~BVX811-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 1:07:27 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	105000.	1.68	1.00	-
MPFHpA	293000.	1.70	1.00	-
MPFOA	284000.	1.88	1.00	-
MPFOS	131000.	1.97	1.00	-
MPFNA	222000.	2.02	1.00	-
13C6-PFHxA IS	2630000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	105000	1.68	N/A	56.4	N/A
13C4-PFHpA	293000	1.70	N/A	52.8	N/A
13C4-PFOA	284000	1.88	N/A	59.2	N/A
13C4-PFOS	131000	1.97	N/A	57.9	N/A
13C5-PFNA	222000	2.02	N/A	54.4	N/A
13C6-PFHxA	2630000	1.43	N/A	115.	N/A

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)</p>	<p style="text-align: center;">This image is not available</p>

<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	

<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 56.4 ng/L</p> <p>Area Ratio: 0.0400</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 52.8 ng/L</p> <p>Area Ratio: 0.111</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 59.2 ng/L</p> <p>Area Ratio: 0.108</p> <p>Sample Type: (Unknown)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 57.9 ng/L</p> <p>Area Ratio: 0.0498</p> <p>Sample Type: (Unknown)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 54.4 ng/L</p> <p>Area Ratio: 0.0845</p> <p>Sample Type: (Unknown)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 115. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Unknown)</p>	



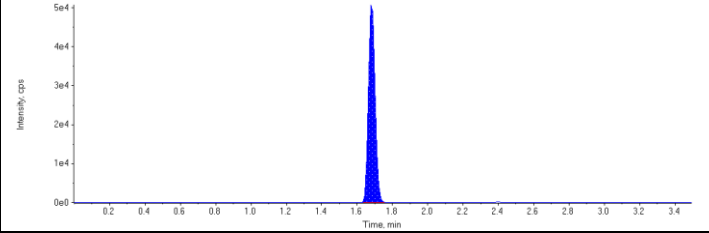
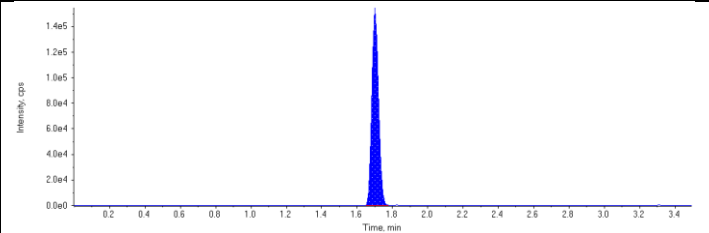
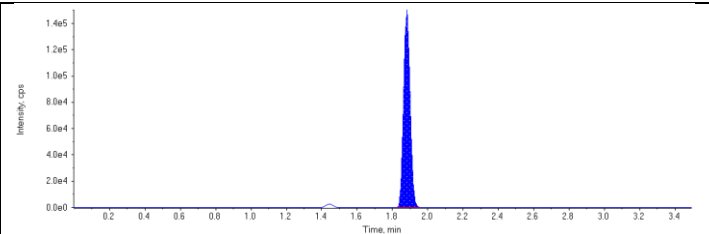
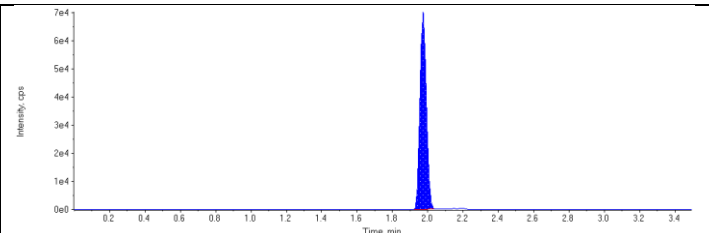
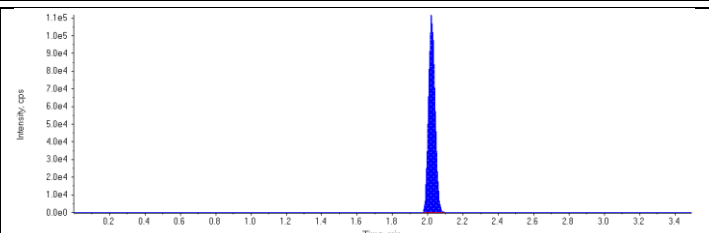
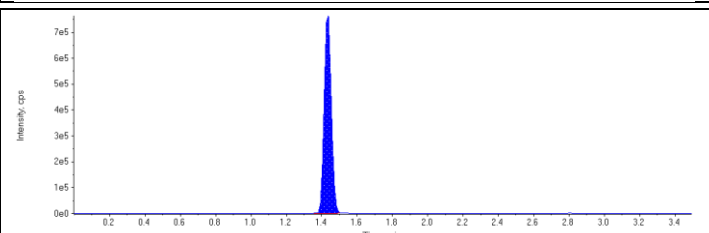
4. QA/QC Data

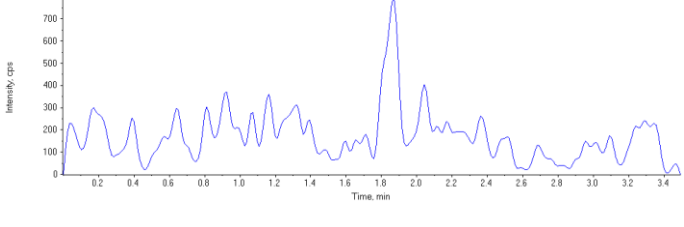
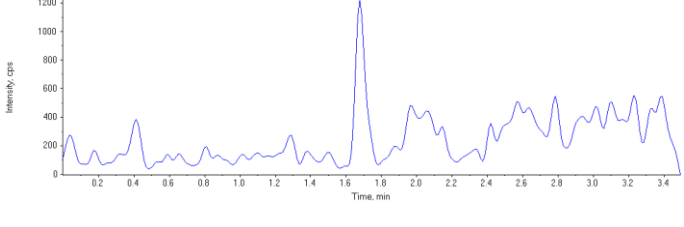
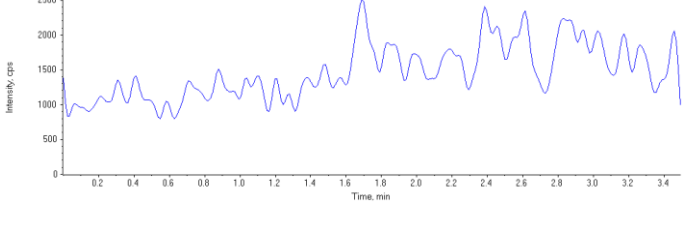
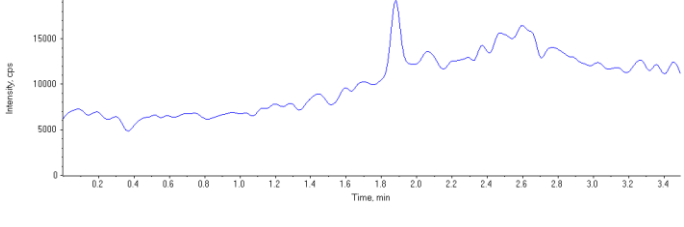
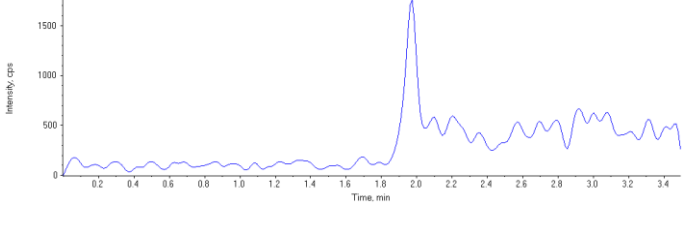
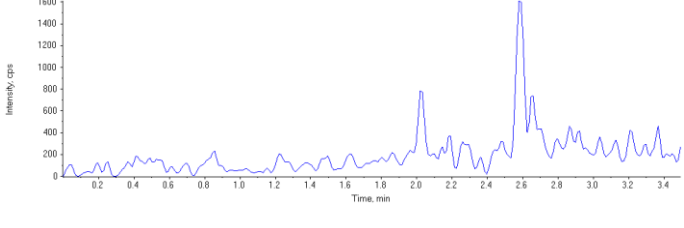
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Sample Name	4389346~BLANK	Injection Vial	1
Sample ID	4389346~BLANK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/22 11:40:54 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	133000.	1.68	1.00	-
MPFHpA	399000.	1.70	1.00	-
MPFOA	379000.	1.88	1.00	-
MPFOS	177000.	1.97	1.00	-
MPFNA	287000.	2.02	1.00	-
13C6-PFHxA IS	2160000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	0.00	N/A	0.0
PFHxS 1	0	0.00	0.00	N/A	0.0
PFHpA 1	0	0.00	0.00	N/A	0.0
PFOA 1	0	0.00	0.00	N/A	0.0
PFOS 1	0	0.00	0.00	N/A	0.0
PFNA 1	0	0.00	0.00	N/A	0.0
18O2-PFHxS	133000	1.68	100.	87.1	87.1
13C4-PFHpA	399000	1.70	100.	87.7	87.7
13C4-PFOA	379000	1.88	100.	96.3	96.3
13C4-PFOS	177000	1.97	100.	95.1	95.1
13C5-PFNA	287000	2.02	100.	85.5	85.5
13C6-PFHxA	2160000	1.43	100.	94.2	94.2

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

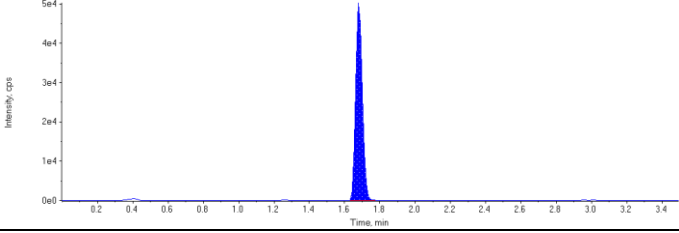
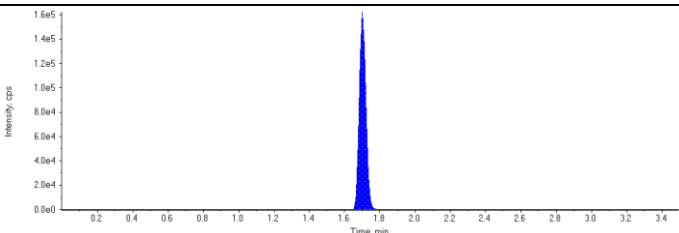
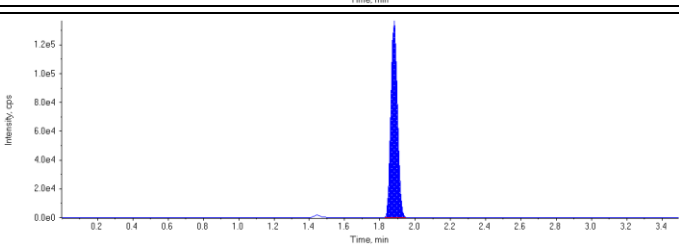
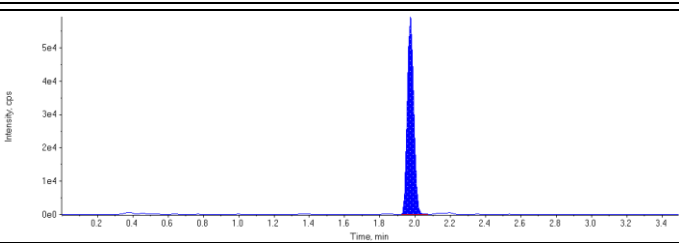
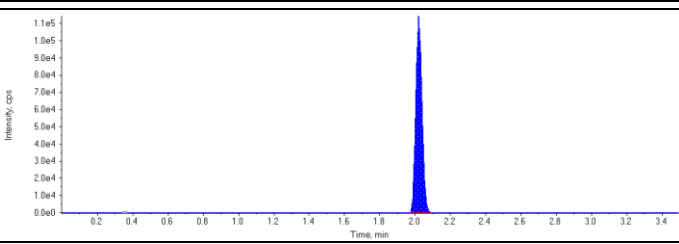
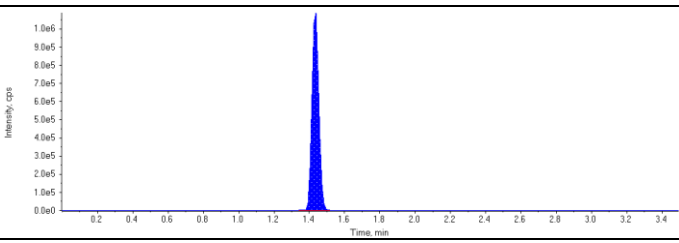
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.15) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.68) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.75) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 0.00 (1.92) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 0.00 (1.97) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 0.00 (2.02) min</p> <p>Calculated Conc: N/A ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

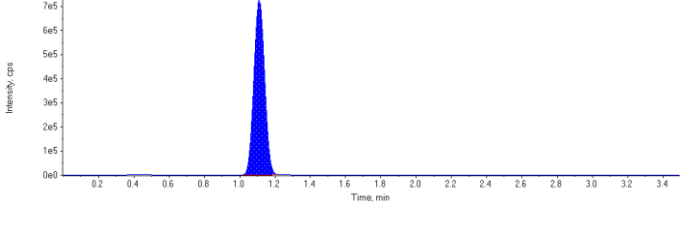
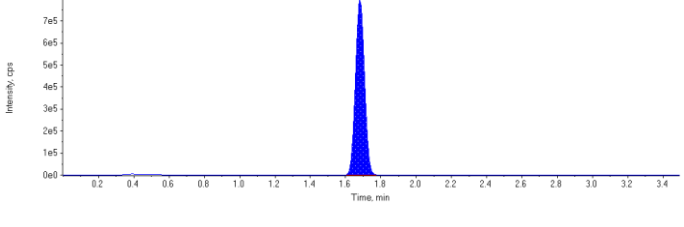
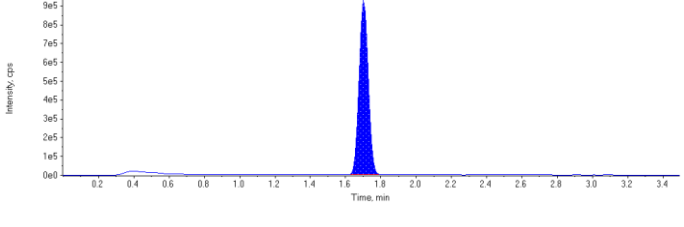
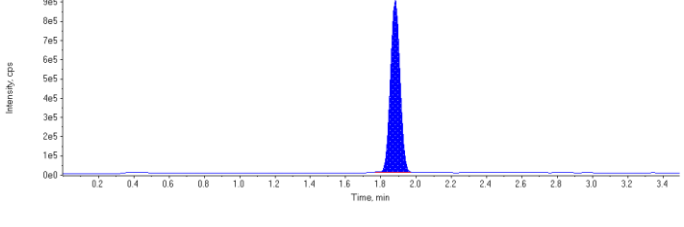
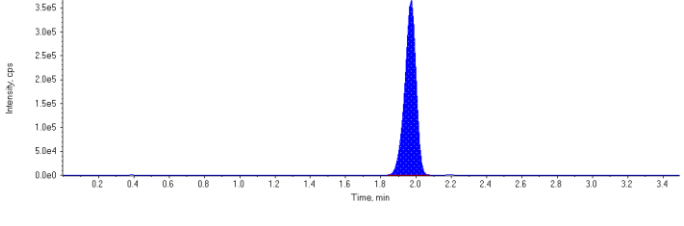
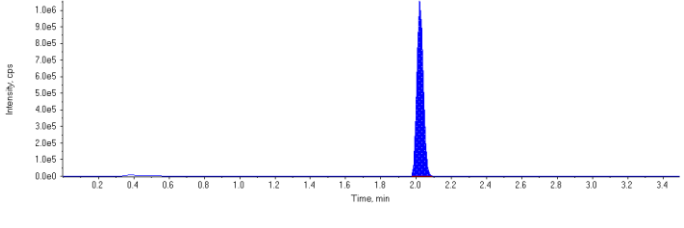
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 87.1 ng/L</p> <p>Area Ratio: 0.0617</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 87.7 ng/L</p> <p>Area Ratio: 0.185</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 96.3 ng/L</p> <p>Area Ratio: 0.175</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 95.1 ng/L</p> <p>Area Ratio: 0.0818</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 85.5 ng/L</p> <p>Area Ratio: 0.133</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 94.2 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

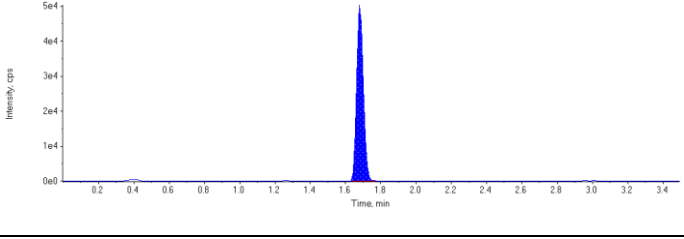
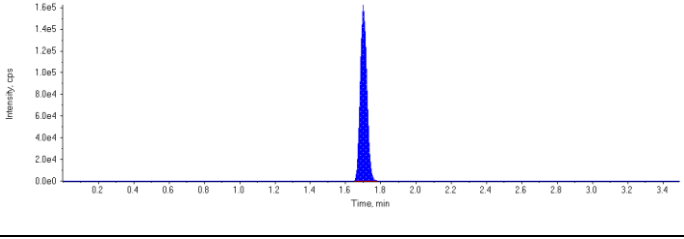
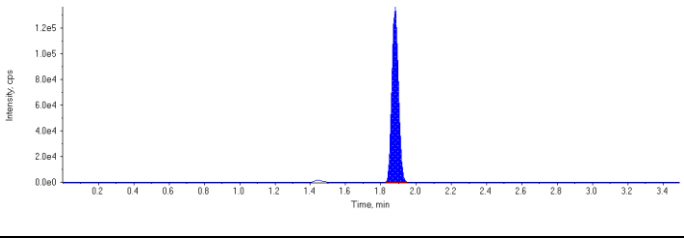
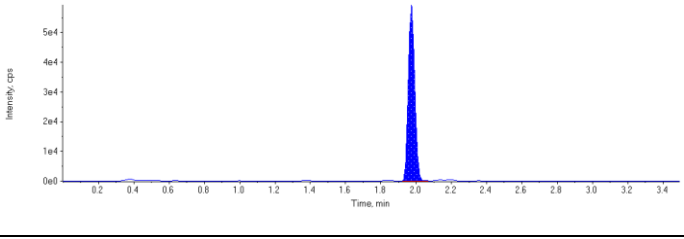
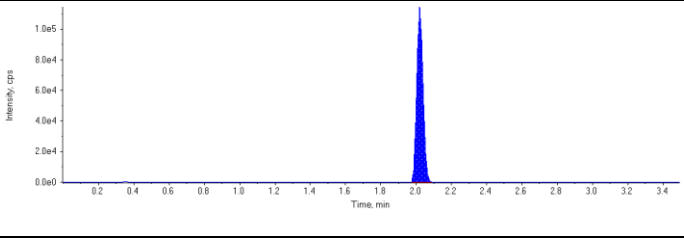
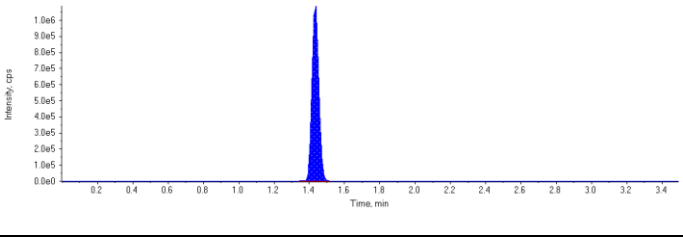
Sample Name	4389346~MTRX SPK	Injection Vial	9
Sample ID	4389346~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:26:43 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	132000.	1.68	1.00	-
MPFHpA	412000.	1.70	1.00	-
MPFOA	351000.	1.88	1.00	-
MPFOS	150000.	1.97	1.00	-
MPFNA	284000.	2.02	1.00	-
13C6-PFHxA IS	2990000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	3080000	1.11	50.0	79.4	159.0
PFHxS 1	2840000	1.68	50.0	71.7	143.0
PFHpA 1	3310000	1.70	50.0	63.1	126.0
PFOA 1	3370000	1.88	50.0	64.3	129.0
PFOS 1	1620000	1.97	50.0	62.2	124.0
PFNA 1	2650000	2.02	50.0	65.7	131.0
18O2-PFHxS	132000	1.68	100.	62.4	62.4
13C4-PFHpA	412000	1.70	100.	65.5	65.5
13C4-PFOA	351000	1.88	100.	64.4	64.4
13C4-PFOS	150000	1.97	100.	58.3	58.3
13C5-PFNA	284000	2.02	100.	61.3	61.3
13C6-PFHxA	2990000	1.43	100.	130.	130.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

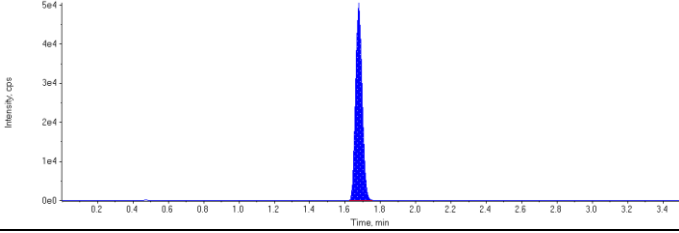
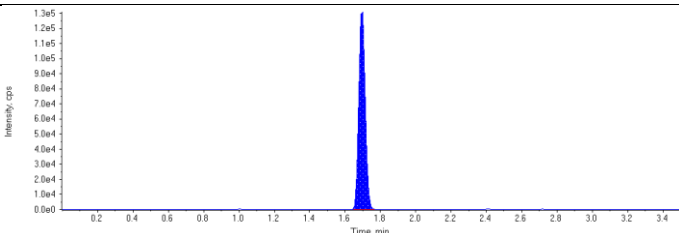
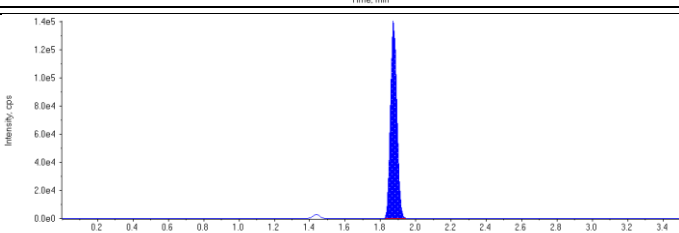
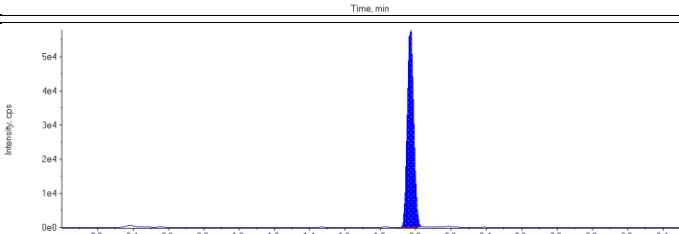
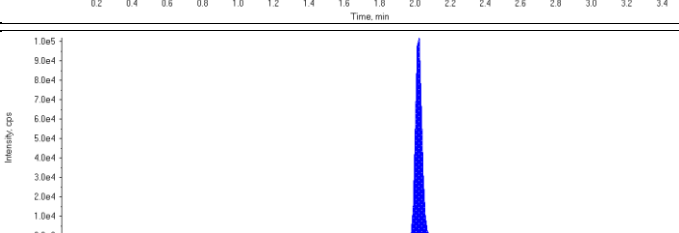
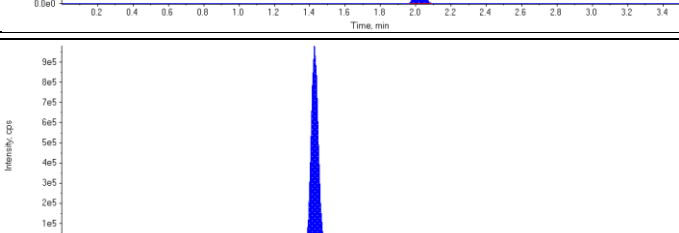
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 79.4 ng/L</p> <p>Area Ratio: 23.3</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 71.7 ng/L</p> <p>Area Ratio: 21.5</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 63.1 ng/L</p> <p>Area Ratio: 8.04</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 64.3 ng/L</p> <p>Area Ratio: 9.60</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 62.2 ng/L</p> <p>Area Ratio: 10.8</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 65.7 ng/L</p> <p>Area Ratio: 9.32</p> <p>Sample Type: (Quality Control)</p>	

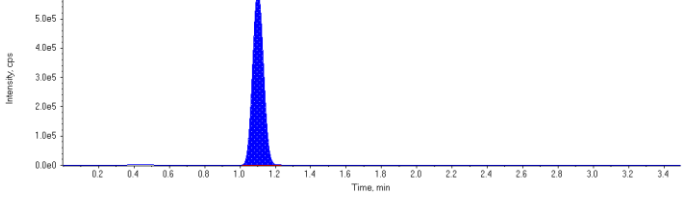
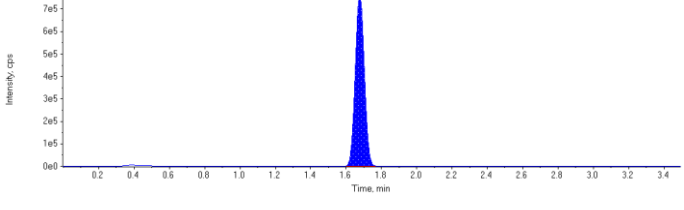
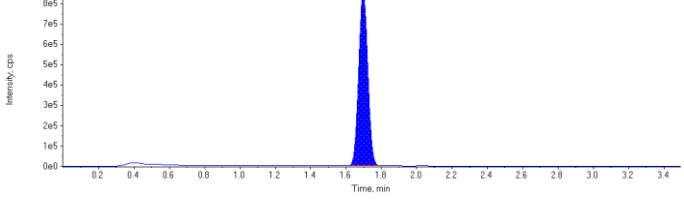
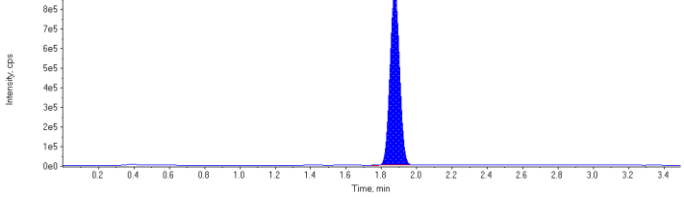
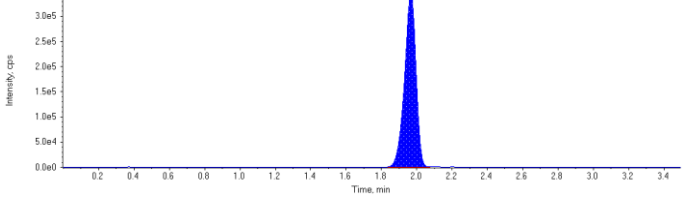
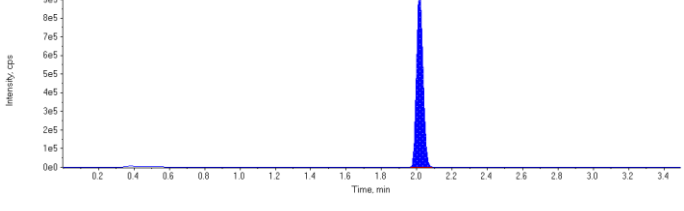
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 62.4 ng/L</p> <p>Area Ratio: 0.0442</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 65.5 ng/L</p> <p>Area Ratio: 0.138</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 64.4 ng/L</p> <p>Area Ratio: 0.117</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 58.3 ng/L</p> <p>Area Ratio: 0.0501</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 61.3 ng/L</p> <p>Area Ratio: 0.0951</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 130. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

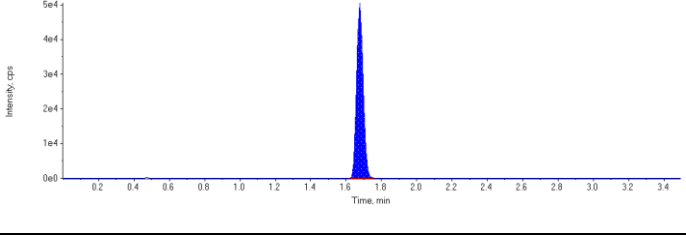
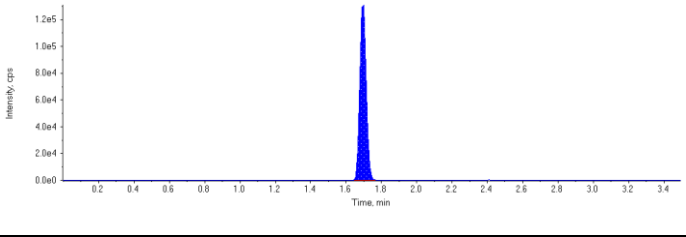
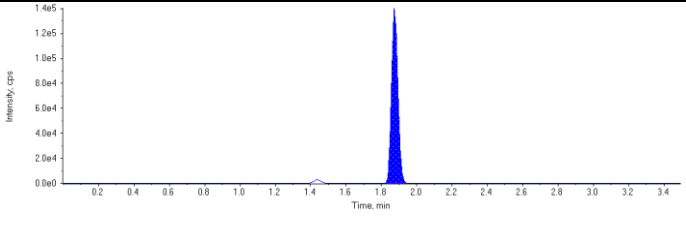
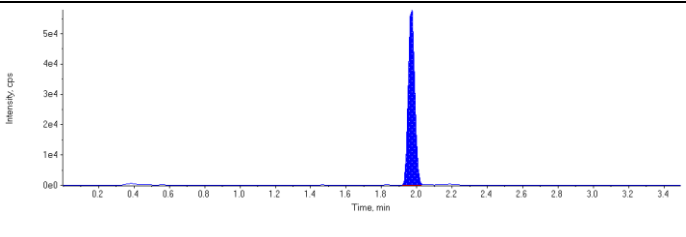
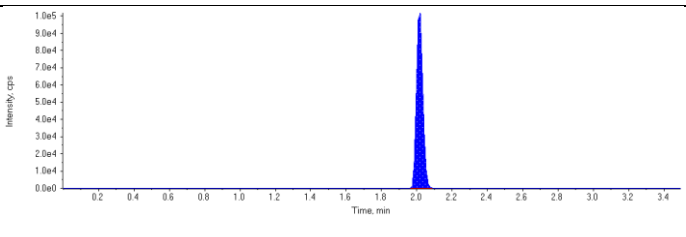
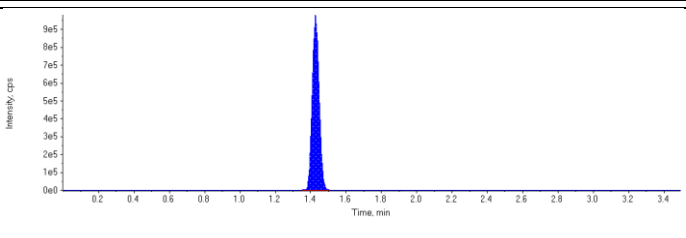
Sample Name	4389346~MTRX SPK	Injection Vial	9
Sample ID	4389346~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 7:19:54 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	129000.	1.68	1.00	-
MPFHpA	336000.	1.70	1.00	-
MPFOA	349000.	1.87	1.00	-
MPFOS	148000.	1.97	1.00	-
MPFNA	260000.	2.02	1.00	-
13C6-PFHxA IS	2660000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2560000	1.10	50.0	67.8	136.0
PFHxS 1	2720000	1.68	50.0	70.3	141.0
PFHpA 1	3030000	1.70	50.0	70.8	142.0
PFOA 1	3330000	1.88	50.0	64.0	128.0
PFOS 1	1560000	1.97	50.0	60.1	120.0
PFNA 1	2400000	2.02	50.0	65.1	130.0
18O2-PFHxS	129000	1.68	100.	68.5	68.5
13C4-PFHpA	336000	1.70	100.	60.1	60.1
13C4-PFOA	349000	1.87	100.	72.1	72.1
13C4-PFOS	148000	1.97	100.	65.0	65.0
13C5-PFNA	260000	2.02	100.	63.1	63.1
13C6-PFHxA	2660000	1.43	100.	116.	116.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

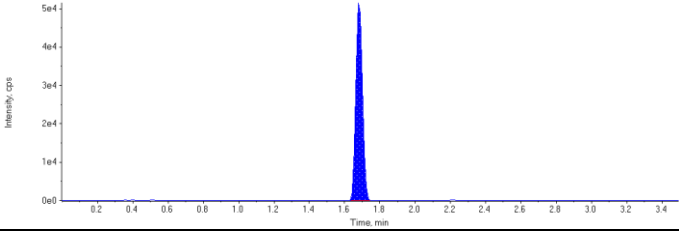
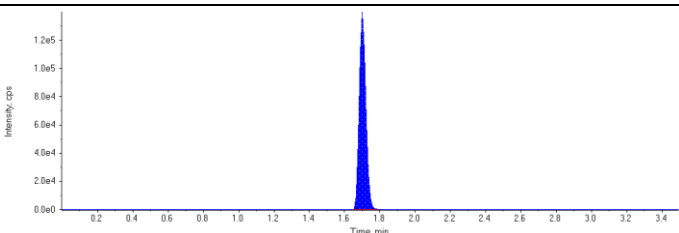
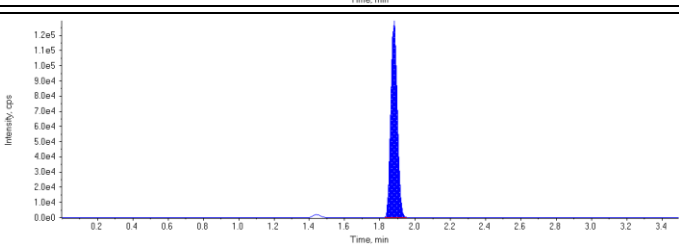
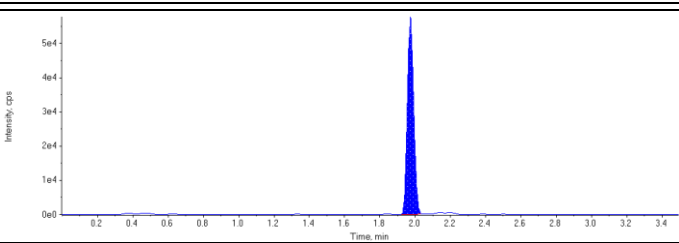
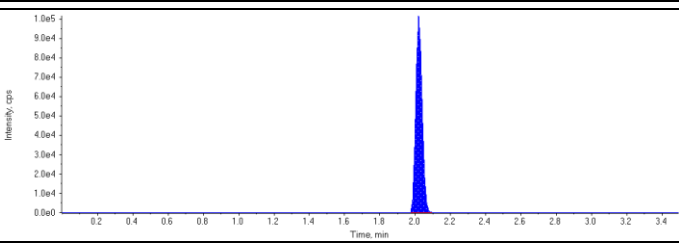
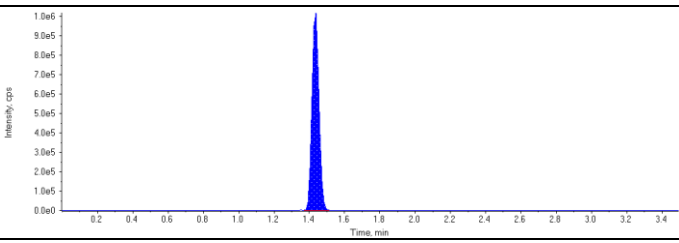
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.10 (1.15) min</p> <p>Calculated Conc: 67.8 ng/L</p> <p>Area Ratio: 19.9</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 70.3 ng/L</p> <p>Area Ratio: 21.1</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 70.8 ng/L</p> <p>Area Ratio: 9.02</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 64.0 ng/L</p> <p>Area Ratio: 9.54</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 60.1 ng/L</p> <p>Area Ratio: 10.5</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 65.1 ng/L</p> <p>Area Ratio: 9.23</p> <p>Sample Type: (Quality Control)</p>	

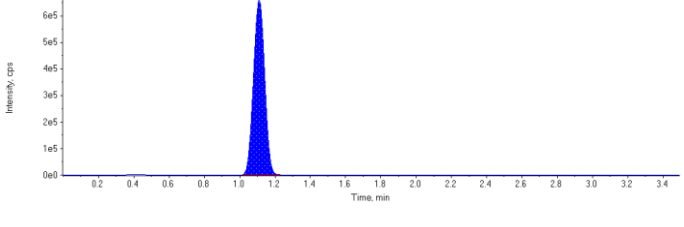
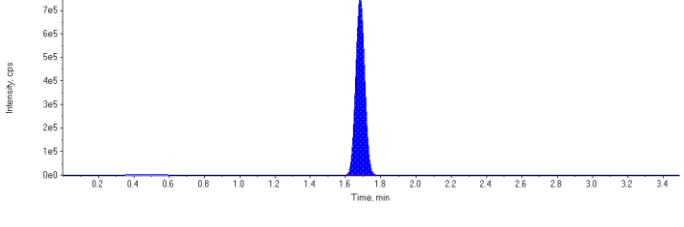
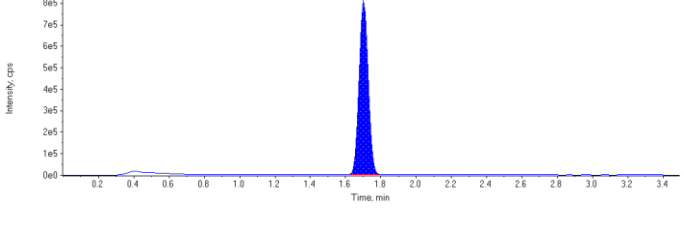
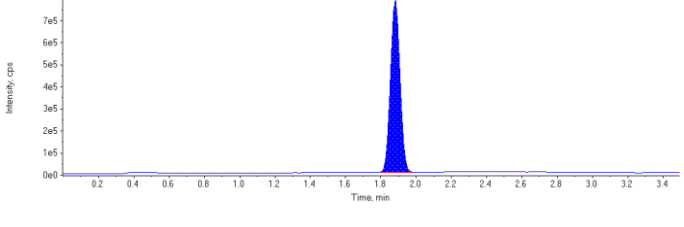
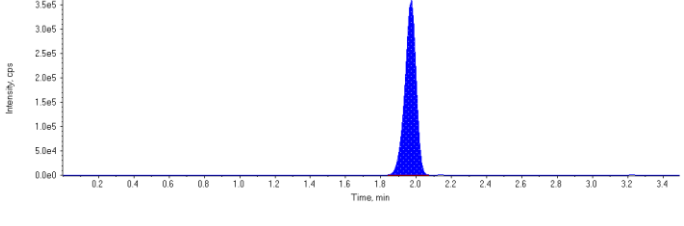
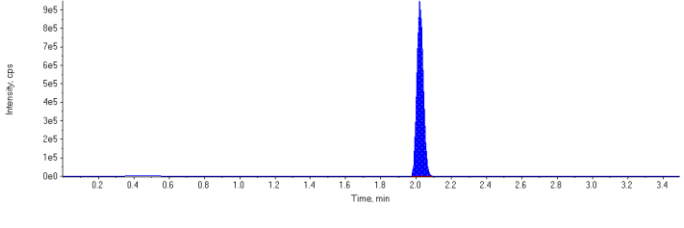
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 68.5 ng/L</p> <p>Area Ratio: 0.0485</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 60.1 ng/L</p> <p>Area Ratio: 0.127</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.87 (1.88) min</p> <p>Calculated Conc: 72.1 ng/L</p> <p>Area Ratio: 0.131</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 65.0 ng/L</p> <p>Area Ratio: 0.0559</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 63.1 ng/L</p> <p>Area Ratio: 0.0979</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 116. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

Sample Name	4389346~MTRX SPK:D1	Injection Vial	10
Sample ID	4389346~MTRX SPK:D1	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:31:48 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	135000.	1.68	1.00	-
MPFHpA	357000.	1.70	1.00	-
MPFOA	329000.	1.88	1.00	-
MPFOS	143000.	1.97	1.00	-
MPFNA	254000.	2.02	1.00	-
13C6-PFHxA IS	2820000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2920000	1.11	50.0	73.6	147.0
PFHxS 1	2680000	1.68	50.0	66.3	133.0
PFHpA 1	2880000	1.70	50.0	63.4	127.0
PFOA 1	2930000	1.88	50.0	59.8	120.0
PFOS 1	1580000	1.97	50.0	63.0	126.0
PFNA 1	2380000	2.02	50.0	66.0	132.0
18O2-PFHxS	135000	1.68	100.	67.5	67.5
13C4-PFHpA	357000	1.70	100.	60.0	60.0
13C4-PFOA	329000	1.88	100.	64.0	64.0
13C4-PFOS	143000	1.97	100.	59.1	59.1
13C5-PFNA	254000	2.02	100.	58.0	58.0
13C6-PFHxA	2820000	1.43	100.	123.	123.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

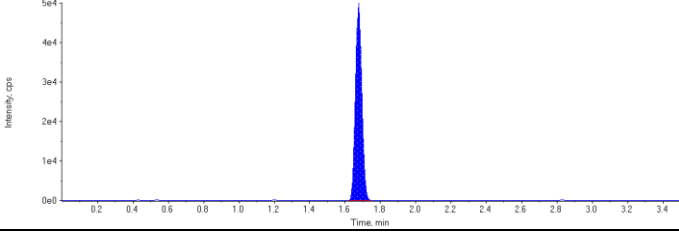
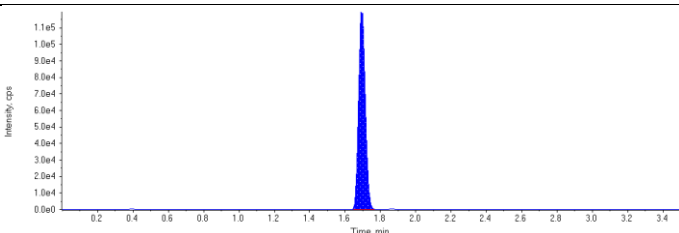
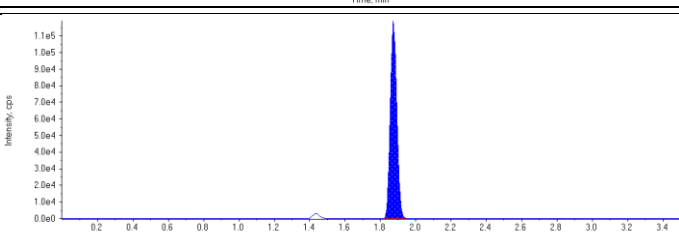
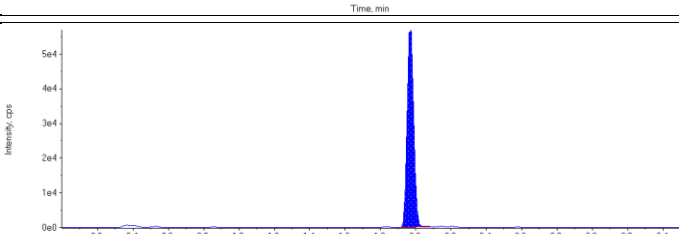
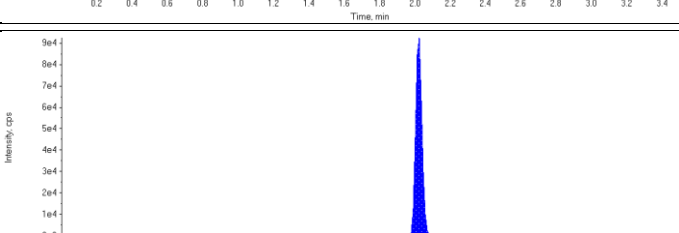
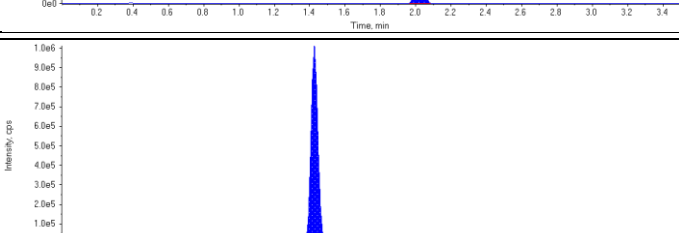
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 73.6 ng/L</p> <p>Area Ratio: 21.6</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 66.3 ng/L</p> <p>Area Ratio: 19.9</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 63.4 ng/L</p> <p>Area Ratio: 8.08</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 59.8 ng/L</p> <p>Area Ratio: 8.91</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 63.0 ng/L</p> <p>Area Ratio: 11.0</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 66.0 ng/L</p> <p>Area Ratio: 9.36</p> <p>Sample Type: (Quality Control)</p>	

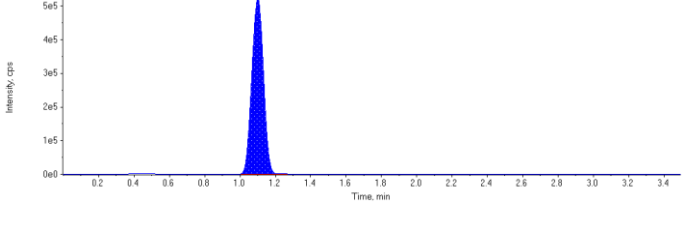
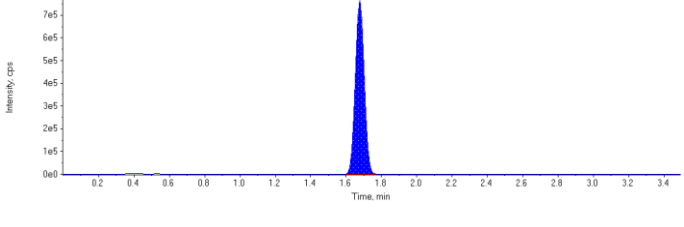
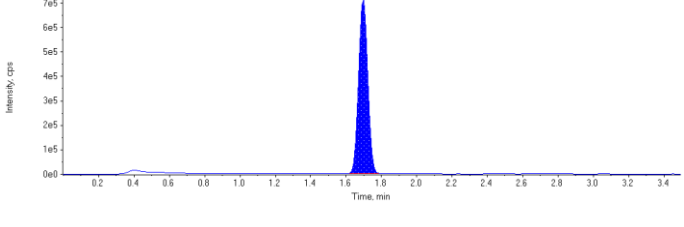
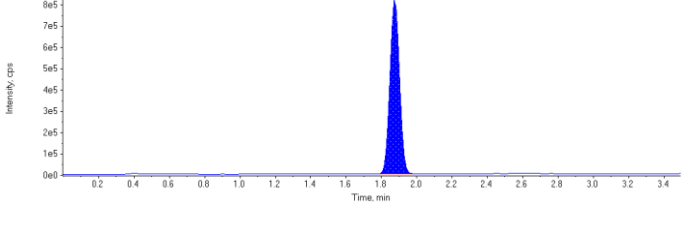
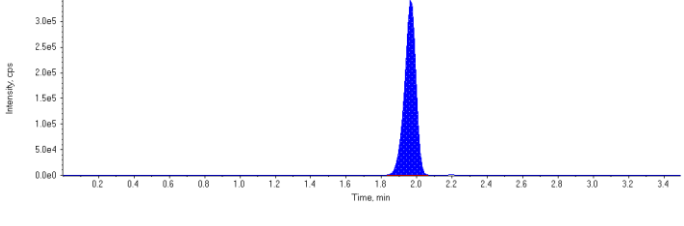
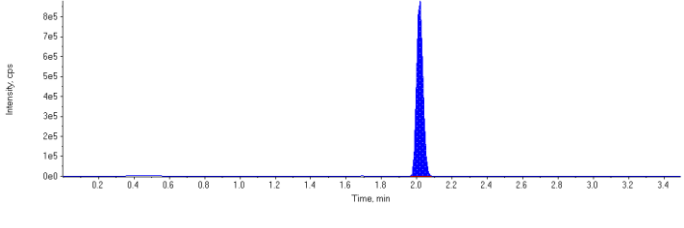
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 67.5 ng/L</p> <p>Area Ratio: 0.0478</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 60.0 ng/L</p> <p>Area Ratio: 0.126</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 64.0 ng/L</p> <p>Area Ratio: 0.117</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 59.1 ng/L</p> <p>Area Ratio: 0.0508</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 58.0 ng/L</p> <p>Area Ratio: 0.0901</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 123. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

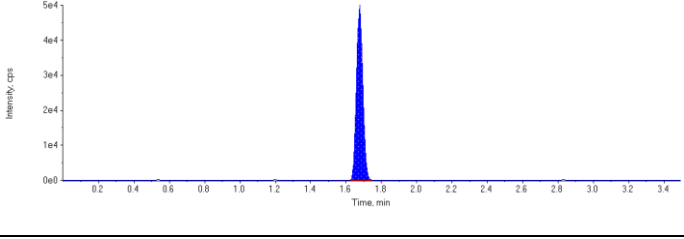
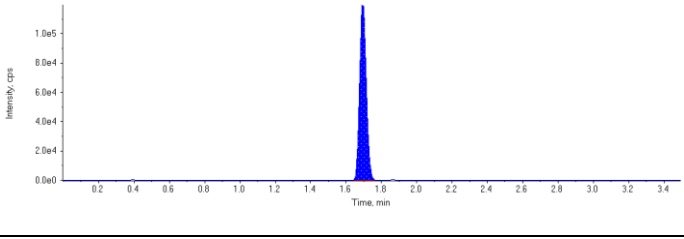
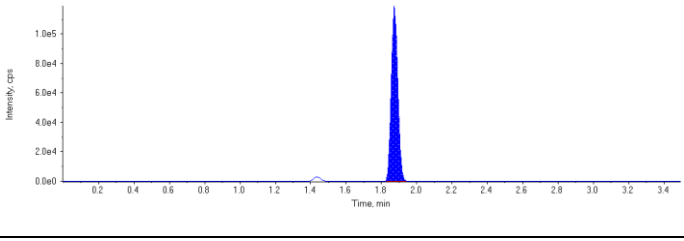
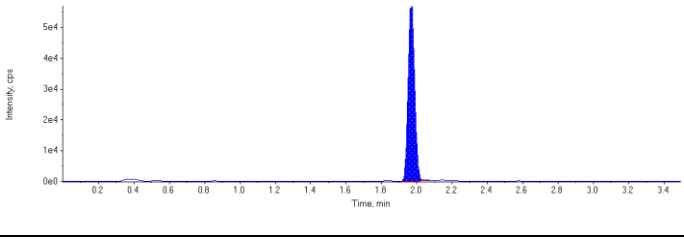
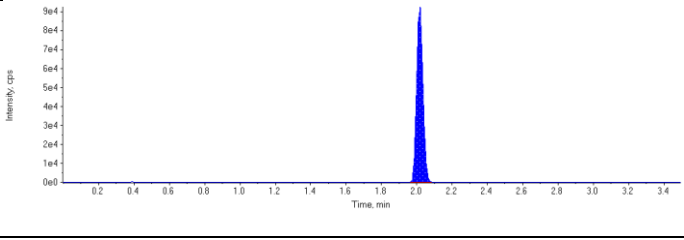
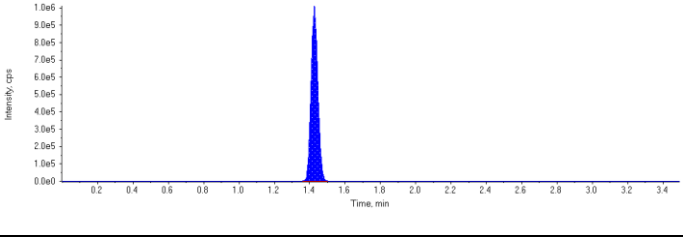
Sample Name	4389346~MTRX SPK:D1	Injection Vial	10
Sample ID	4389346~MTRX SPK:D1	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 7:24:59 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	124000.	1.68	1.00	-
MPFHpA	319000.	1.69	1.00	-
MPFOA	299000.	1.87	1.00	-
MPFOS	148000.	1.97	1.00	-
MPFNA	233000.	2.02	1.00	-
13C6-PFHxA IS	2720000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2400000	1.10	50.0	66.0	132.0
PFHxS 1	2680000	1.68	50.0	71.9	144.0
PFHpA 1	2560000	1.70	50.0	62.9	126.0
PFOA 1	3070000	1.88	50.0	68.8	138.0
PFOS 1	1520000	1.97	50.0	58.8	118.0
PFNA 1	2240000	2.02	50.0	67.8	136.0
18O2-PFHxS	124000	1.68	100.	64.4	64.4
13C4-PFHpA	319000	1.69	100.	55.7	55.7
13C4-PFOA	299000	1.87	100.	60.5	60.5
13C4-PFOS	148000	1.97	100.	63.3	63.3
13C5-PFNA	233000	2.02	100.	55.2	55.2
13C6-PFHxA	2720000	1.43	100.	119.	119.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.69(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

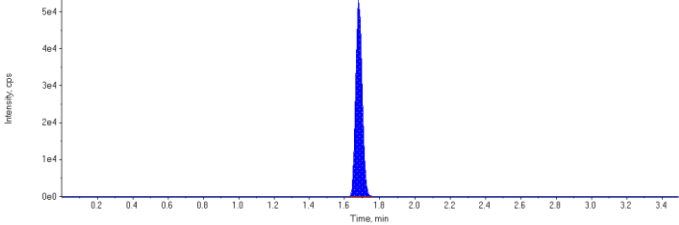
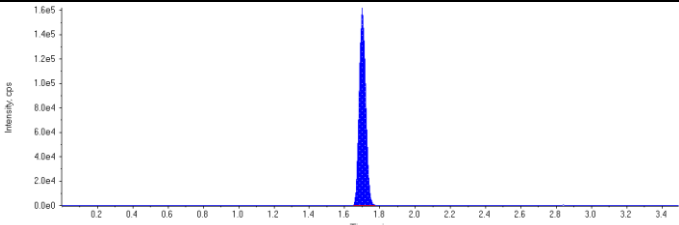
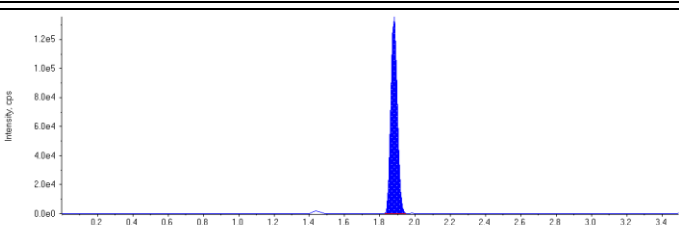
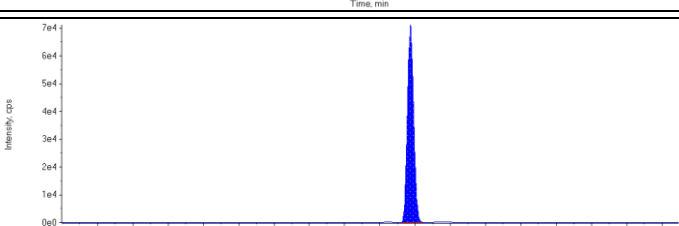
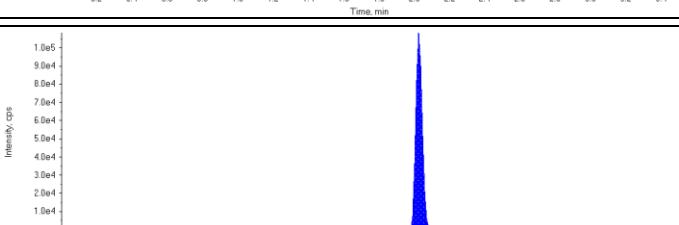
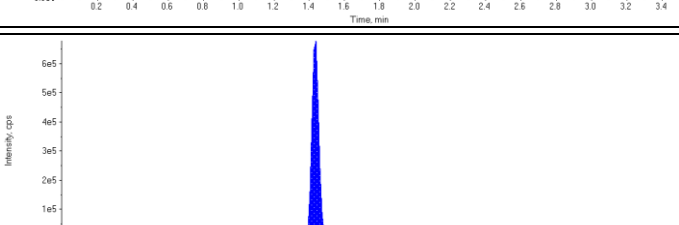
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.10 (1.15) min</p> <p>Calculated Conc: 66.0 ng/L</p> <p>Area Ratio: 19.4</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 71.9 ng/L</p> <p>Area Ratio: 21.6</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 62.9 ng/L</p> <p>Area Ratio: 8.02</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 68.8 ng/L</p> <p>Area Ratio: 10.3</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 58.8 ng/L</p> <p>Area Ratio: 10.3</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 67.8 ng/L</p> <p>Area Ratio: 9.62</p> <p>Sample Type: (Quality Control)</p>	

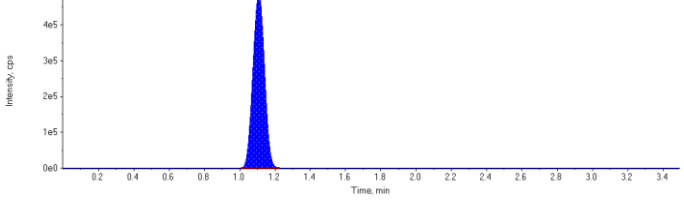
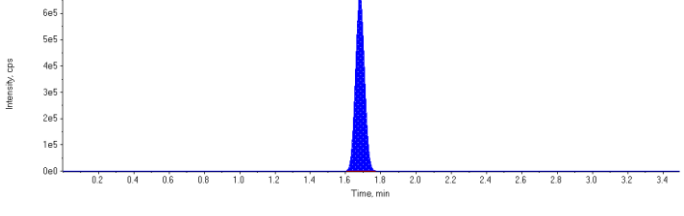
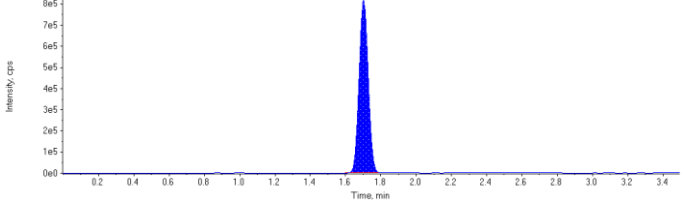
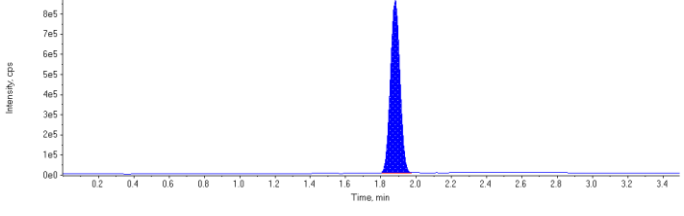
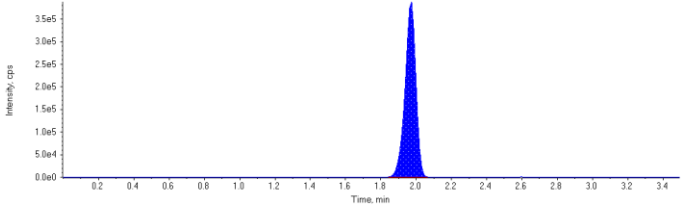
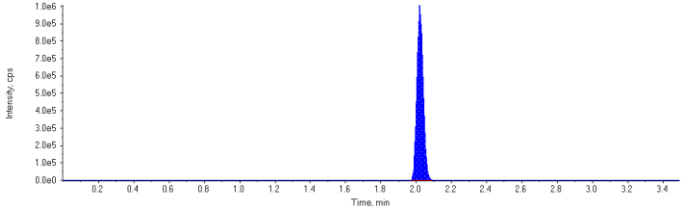
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 64.4 ng/L</p> <p>Area Ratio: 0.0456</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.69 (1.75) min</p> <p>Calculated Conc: 55.7 ng/L</p> <p>Area Ratio: 0.117</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.87 (1.88) min</p> <p>Calculated Conc: 60.5 ng/L</p> <p>Area Ratio: 0.110</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 63.3 ng/L</p> <p>Area Ratio: 0.0545</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 55.2 ng/L</p> <p>Area Ratio: 0.0856</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 119. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

Sample Name	4389346~SPIKE	Injection Vial	11
Sample ID	4389346~SPIKE	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:36:53 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	134000.	1.68	1.00	-
MPFHpA	408000.	1.70	1.00	-
MPFOA	347000.	1.88	1.00	-
MPFOS	172000.	1.97	1.00	-
MPFNA	275000.	2.02	1.00	-
13C6-PFHxA IS	1900000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2240000	1.11	50.0	56.8	114.0
PFHxS 1	2380000	1.68	50.0	59.1	118.0
PFHpA 1	2940000	1.70	50.0	56.5	113.0
PFOA 1	3210000	1.88	50.0	62.0	124.0
PFOS 1	1660000	1.97	50.0	55.2	110.0
PFNA 1	2500000	2.02	50.0	64.0	128.0
18O2-PFHxS	134000	1.68	100.	100.	100.0
13C4-PFHpA	408000	1.70	100.	102.	102.0
13C4-PFOA	347000	1.88	100.	100.	100.0
13C4-PFOS	172000	1.97	100.	106.	106.0
13C5-PFNA	275000	2.02	100.	93.6	93.6
13C6-PFHxA	1900000	1.43	100.	82.7	82.7

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 56.8 ng/L</p> <p>Area Ratio: 16.6</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 59.1 ng/L</p> <p>Area Ratio: 17.7</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 56.5 ng/L</p> <p>Area Ratio: 7.20</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 62.0 ng/L</p> <p>Area Ratio: 9.24</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 55.2 ng/L</p> <p>Area Ratio: 9.63</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 64.0 ng/L</p> <p>Area Ratio: 9.07</p> <p>Sample Type: (Quality Control)</p>	

<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 100. ng/L</p> <p>Area Ratio: 0.0709</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 102. ng/L</p> <p>Area Ratio: 0.215</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 100. ng/L</p> <p>Area Ratio: 0.183</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 106. ng/L</p> <p>Area Ratio: 0.0908</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 93.6 ng/L</p> <p>Area Ratio: 0.145</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 82.7 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

DoD Projects - Internal Data Validation Checklist				
Run date: 2016/02/22				
Worksheet #(s): 4389346				
Analysis: PFOLOW-W			1st 100% review	
Primary review by the analyst - 1st 100 % analysis review			yes	*2nd 100% review
			no	
			n/a	
1	Sample analyses meet hold time criteria	✓		✓
2	Analysis set-up meets method criteria	✓		✓
3	Tuning and correct calibration used - criteria meets method criteria	✓		✓
4	SQC/Control Charts updated, analysis in statistical/method control	✓		✓
5	Internal area counts checked (if applicable)	✓		✓
6	LCS, SRM are within acceptance criteria	✓		✓
7	Surrogate Recovery(s) is within acceptance criteria	✓		✓
8	Method Blank meets acceptance criteria	✓		✓
9	Matrix Spike recovery(s) meets acceptance criteria	✓		✓
10	Duplicate precision meets acceptance criteria	✓		✓
11	QC is documented on the run logs	✓		✓
12	Runs checked for carryover	✓		✓
13	Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts	✓		✓
14	Initial weights, splits, imprinter volumes (where applicable) are documented	✓		✓
15	Standards and reagents traceable to Certificates of Analysis	✓		✓
16	Samples above calibration range diluted and reanalyzed	✓		✓
17	Dilution factors (where justified) have been checked for correctness and entered	✓		✓
18	Analytical observations/anomalies documented in LIMS	✓		✓
19	Random calculation checked and in correct units	✓		✓
20	If corrective actions were applied they are documented, initialed & dated		✓	✓
21	Manual integration - before & after data with a reason included, initialed & dated		✓	✓
22	Transferred data is validated in LIMS for correctness	✓		✓
23	Data package assembled (where required)	✓		✓
Reviewed by: <i>CR</i>		Date: 2016/02/16		
Comments:				
Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review				
		yes	no	n/a
1	Repeats documented and referenced	✓		
2	Method and sample deviations noted, anomalies described (if applicable)			✓
3	Data and QC validated in LIMS	✓		
4	Random calculation checked	✓		
5	Benchsheet (s) signed and dated	✓		
6	Data Package (if required) checked for completeness	✓		
Reviewed by: <i>sw</i>		Date: 2016/02/23		
Comments: samples BVX844 & BVX845 sent for rework with dilutions due to high concentrations of target analytes				

*Note: 2nd 100% verification review documented by secondary qualified data review
 Primary and Secondary Internal Data Review Check must be performed by a different person

Worksheet Data Validation Checklist - Extractable Organics

Worksheet # **4389346** Testcode: **PFOSLOW-W**

Sample Preparation		yes	no	n/a
1	Samples extracted within hold time	/		
2	Client sample ID verified against Lab ID (waters & oils)	/		
3	Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	/		
4	Height of sediment or if sample was decanted, recorded on worksheet	/		
5	Method required QC processed with samples, maximum batch size = 20 client samples.	/		
6	Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	/		
7	Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	/		
8	If performed any additional dilution clearly recorded			/
9	Matrix spike / Duplicate performed on IOL samples if present			/
10	Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	/		
11	Spiking process witnessed and signed off	/		
12	Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)			/
13	Sample prep deviations documented within CompliantPro as a Policy Deviation			/
14	Job Remarks reviewed on 2nd page of worksheet.	/		
15	Worksheet and reagent tracking record completed and authorized.	/		

Reviewed by: **GSZ** Date: **2016/02/21**

Comments:

Worksheet Approval		yes	no	n/a
1	Verified the position of the vials in autosampler against sequence list; signed off sequence list	/		
2	Calibration and CCV standards valid (haven't expired)	/		
3	Initial calibration curve and DF TPP tune (if applicable) acceptable	/		
4	Continuing and Final CCV and DF TPP tune (if applicable) acceptable	/		
5	System performance check acceptable (if applicable)	/		
6	Internal standard responses acceptable	/		
7	Method blank meets acceptance criteria	/		
8	Lab Control Samples recoveries meets acceptance criteria	/		
9	Duplicate RPD meets acceptance criteria	/		
10	Matrix spike recoveries meets acceptance criteria		/	
11	Surrogate recoveries meets acceptance criteria	/		
12	Appropriate control charts updated			/
13	Samples above calibration range diluted and reanalyzed	/		
14	Dilutions clearly documented on tracking record, inst file and verified during data upload	/		
15	Samples following high level samples checked for carryover.	/		
16	Mass spectra ion ratios acceptable for positive results, hardcopy in file.			/
17	Analytical observations / anomalies documented	/		
18	DQW comments entered in LIMS, hardcopy in file			/
19	Sample Prep section (above) reviewed and verified.	/		
20	WS Approval performed in LIMS	/		

Reviewed by: **an** Date: **2016/2/23** See BRL FCD0007

Comments: **an 2016/2/23**
an 2016/2/23

Worksheet Validation		yes	no	n/a
1	Calibration, QC and sample results reviewed and determined acceptable			
2	Manual integrations verified			
3	Random calculation checked			
4	Data and QC validated in LIMS			
5	Comments reviewed for appropriateness			
6	Reworks / relogs documented in file			
7	Worksheet signed and dated,			
8	Worksheet approved and validated within LIMS			

Reviewed by: Date:

Comments:



RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Sunday, February 21, 2016

Assigned to : Geoffrey Sanchez

Test Code : PFOSLOW-W

Instrument Id:

Test Description : Low level PFOS and PFOA in water by LC-MS/MS

Sediment

Job Number	Sample Number	D	Sample ID	F	% Moisture	Wt or Vol	Final Vol	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date
	MTRX SPK	0	PFOSL BVX847-01		<0.1	125	0.3	1X					2016/02/21
	MTRX SPK	1	PFOSL BVX847-01		<0.1	125	0.3	1X					2016/02/21
	SPIKE		PFOSL		0	125	0.3	1X					2016/02/21
	BLANK				0	125	0.3	1X					2016/02/21
B630794*	*BVX806-01R		OF-FB47-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630794*	*BVX807-01R		OF-RW47-0216		<0.1	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630794*	*BVX808-01R		OF-FB47A-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630794*	*BVX809-01R		OF-RW47A-0216		<0.1	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630794*	*BVX810-01R		OF-FB48-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630794*	*BVX811-01R		OF-RW48-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX841-01R		OF-FB70-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX842-01R		OF-RW70-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX843-01R		OF-FB44-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX844-01R		OF-RW44-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX845-01R		OF-RW44P-0216		0	125	0.3	1X	1	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX846-01R		OF-FB65-0216		0	125	0.3	1X	2	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX847-01R		OF-RW65-0216		<0.1	125	0.3	1X	6	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX850-01R		OF-FB21-0216		0	125	0.3	1X	2	2016/02/22	2016/02/23 17:00		2016/02/21
B630799*	*BVX851-01R		OF-RW21-0216		<0.1	125	0.3	1X	2	2016/02/22	2016/02/23 17:00		2016/02/21
<i>652, 2016/02/21</i>													

Remarks:

Samples extracted by: Geoffrey Sanchez, 652 2016/02/21

Instrumentation performed by: CS

Date: 2016/02/22

Calculations performed by: CS

Date: 2016/02/23

Validated by: SU

Date: 2016/02/23

652, 2016/02/21

Job No.	Rep	Client Name	Contact	Client Tier	National
GB630794		MDG TestAmerica	PFC Reporting Group	Tier 1 (Air.)	Test America
		NREG PFOSLOW-W Level IV required Project #: 320-17219			
GB630799		MDG TestAmerica	PFC Reporting Group	Tier 1 (Air.)	Test America
		NREG PFOSLOW-W MS/MSD required on BVX847 Level IV required Project #: 320-17236			

Surrogates/Spikes		PFC Spk C	PFC Spk A	^{2nd Source} PFC Spk A	IS	Method Spike	Spikes	Samples
Calib	MeOH	SK-6220	I-4675	I-4676	SI-6010			
STD	ul	ul	ul	ul	ul			
1 -	2825 +	25			+ 150			
2 -	2800 +	50			+ 150			
3 -	2700 +	150			+ 150			
4 -	2813 +		37.5		+ 150			
5 -	2775 +		75		+ 150			
6 -	2725 +		125		+ 150			
ICV -	2788 +			62.5	+ 150			

Sample	Preparation Remarks

Sample	Instrumentation Remarks

Low level PFOS and PFOA in water - Water
ng/L

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	DL	B630794 BVX806
Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorobutane Sulfonate (PFBS)	ng/L	11 135.600	11 132.000	113.60000	0	2	0
Perfluorodecane Sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroheptanoic Acid (PFHpA)	ng/L	11 141.600	125.80000	113.00000	0	2	0
Perfluoroheptane sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexanoic Acid (PFHxA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexane Sulfonate (PFHxS)	ng/L	11 140.600	11 143.800	118.20000	0	2	0
Perfluorononanoic Acid (PFNA)	ng/L	130.20000	11 135.600	128.00000	0	2	0
Perfluoropentanoic Acid (PFPeA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotetradecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotridecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroundecanoic Acid (PFUnA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorododecanoic Acid (PFDA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorododecanoic Acid (PFDoA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	128.00000	11 137.600	124.00000	0	2	0
Perfluorooctane Sulfonate (PFOS)	ng/L	120.20000	117.60000	110.40000	0	2	0
13C2-perfluorotetradecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C5-Perfluorononanoic acid	ng/L	63.1	55.2	93.6	85.5		87.4
13C2-Perfluorododecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorododecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorohexanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluoroundecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluoroheptanoic acid	ng/L	60.1	55.7	102.	87.7		86.4
13C4-Perfluorooctanoic acid	ng/L	72.1	60.5	100.	96.3		91.0
13C4-Perfluorooctanesulfonate	ng/L	65.0	63.3	106.	95.1		84.0
13C5-Perfluoropentanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
18O2-Perfluorohexanesulfonate	ng/L	68.5	64.4	100.	87.1		80.0

Parameter Name	B630794 BVX807	B630794 BVX808	B630794 BVX809	B630794 BVX810	B630794 BVX811	B630799 BVX841	B630799 BVX842
Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorobutane Sulfonate (PFBS)	0.56900	0	0.52400	0	0	0	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0	0	0
Perfluoroheptane sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0	0	0
Perfluorononanoic Acid (PFNA)	0	0	0	0	0	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotetradecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotridecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0	0	0
Perfluorooctane Sulfonate (PFOS)	0	0	0	0	0	0	0
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C5-Perfluorononanoic acid	11 38.0	75.6	54.7	80.1	54.4	55.1	11 35.3
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorohexanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluoroheptanoic acid	11 39.8	79.5	56.6	74.5	52.8	56.0	11 35.0
13C4-Perfluorooctanoic acid	11 43.0	80.7	59.7	79.4	59.2	57.3	11 36.2
13C4-Perfluorooctanesulfonate	11 41.2	78.3	58.9	84.0	57.9	60.7	11 33.2
13C5-Perfluoropentanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
18O2-Perfluorohexanesulfonate	11 44.4	84.2	60.3	76.7	56.4	54.8	11 32.4

Low level PFOS and PFOA in water - Water
ng/L

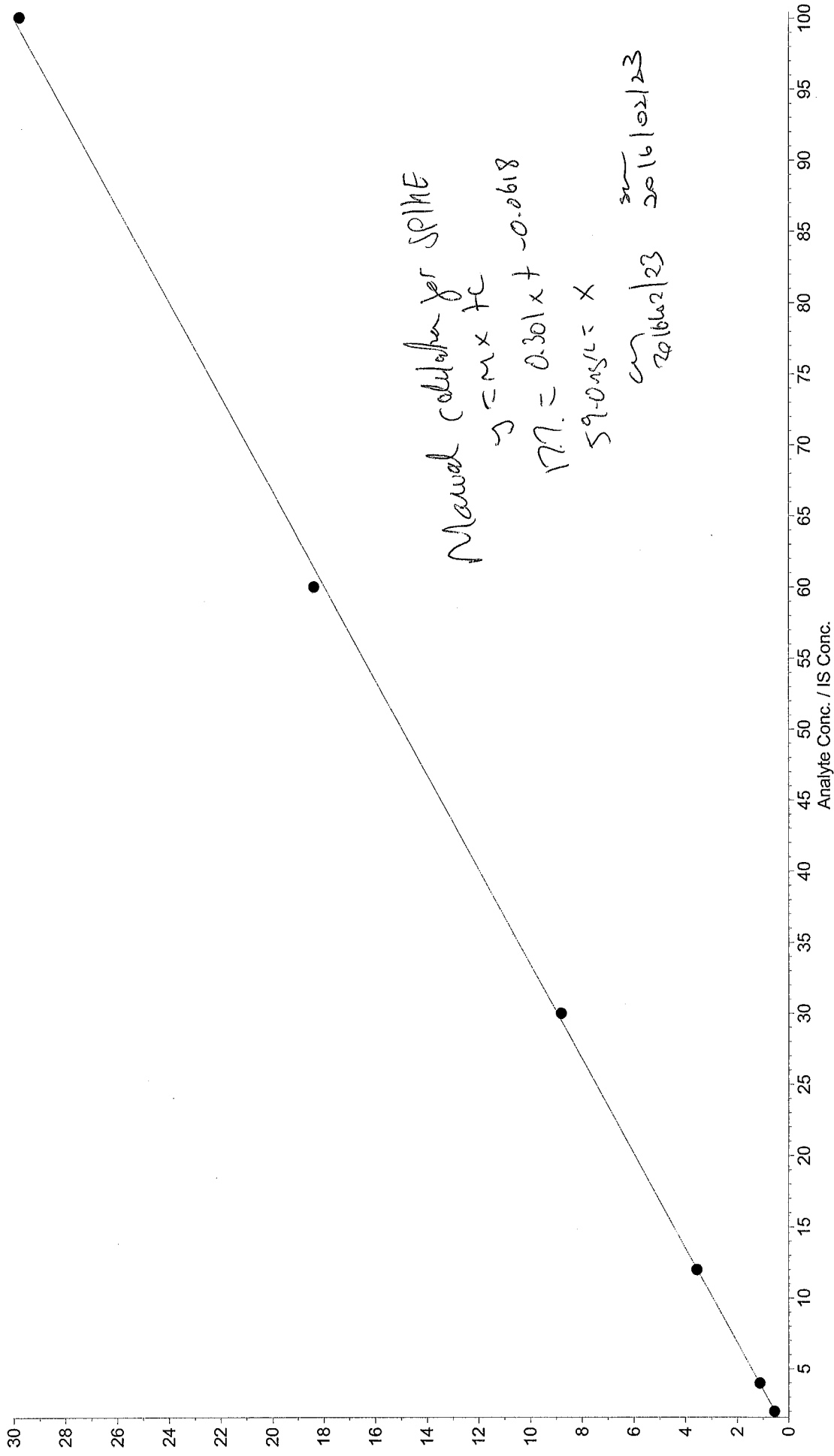
Parameter Name	B630799 BVX843	B630799 BVX844	B630799 BVX845	B630799 BVX846	B630799 BVX847	B630799 BVX850	B630799 BVX851
Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorobutane Sulfonate (PFBS)	0	48.90000	45.80000	0	0	0	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroheptanoic Acid (PFHpA)	0	28.40000	27.70000	0	0	0	0
Perfluoroheptane sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexane Sulfonate (PFHxS)	0	720.00000	708.00000	0	0	0	0.43600
Perfluorononanoic Acid (PFNA)	0	5.88000	6.51000	0	0	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotetradecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotridecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorodecanoic Acid (PFDA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	0	479.00000	462.00000	0	0	0	0
Perfluorooctane Sulfonate (PFOS)	0	1450.00000	1450.00000	0	0	0	0
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C5-Perfluorononanoic acid	63.9	51.4	52.1	127.	64.6	76.0	52.3
13C2-Perfluorodecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorohexanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluoroheptanoic acid	66.9	46.1	52.6	120.	66.1	69.5	46.9
13C4-Perfluorooctanoic acid	69.9	45.7	52.2	134.	65.5	76.4	51.4
13C4-Perfluorooctanesulfonate	70.8	42.7	47.1	137.	60.3	84.6	66.8
13C5-Perfluoropentanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
18O2-Perfluorohexanesulfonate	67.6	49.0	55.2	132.	68.1	83.7	71.1

Parameter Name	DL	RDL	MDL	IDL			
Perfluorobutanoic acid	2	2	0.41	0			
Perfluorobutane Sulfonate (PFBS)	2	2	0.27	0			
Perfluorodecane Sulfonate	2	2	0.38	0			
Perfluoroheptanoic Acid (PFHpA)	2	2	0.39	0			
Perfluoroheptane sulfonate	2	2	0.4	0			
Perfluorohexanoic Acid (PFHxA)	2	2	0.42	0			
Perfluorohexane Sulfonate (PFHxS)	2	2	0.4	0			
Perfluorononanoic Acid (PFNA)	2	2	0.33	0			
Perfluoropentanoic Acid (PFPeA)	2	2	0.46	0			
Perfluorotetradecanoic Acid	2	2	0.61	0			
Perfluorotridecanoic Acid	2	2	0.6	0			
Perfluoroundecanoic Acid (PFUnA)	2	2	0.5	0			
Perfluorodecanoic Acid (PFDA)	2	2	0.24	0			
Perfluorododecanoic Acid (PFDoA)	2	2	0.63	0			
Perfluoro-n-Octanoic Acid (PFOA)	2	2	0.39	0			
Perfluorooctane Sulfonate (PFOS)	2	2	0.3	0			
13C2-perfluorotetradecanoic acid							
13C4-Perfluorobutanoic acid							
13C5-Perfluorononanoic acid							
13C2-Perfluorodecanoic acid							
13C2-Perfluorododecanoic acid							
13C2-Perfluorohexanoic acid							
13C2-Perfluoroundecanoic acid							
13C4-Perfluoroheptanoic acid							
13C4-Perfluorooctanoic acid							
13C4-Perfluorooctanesulfonate							
13C5-Perfluoropentanoic acid							
18O2-Perfluorohexanesulfonate							

Results Path: \\miss-netapp2\lcms3\lcms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160222_4389346_ULow.rdb

Printing Date: Tuesday, February 23, 2016

PFC_Water_160222_4389346_ULow.rdb (PFHxS 1): "Linear" Regression ("1 / x" weighting): $y = 0.301 x + -0.0618$ ($r = 0.9999$)



Results Path: \\miss-netap2\lcms3\lcms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160222_4389346_ULow.rdb

Printing Date: Tuesday, February 23, 2016

Sample Name: STD 4 Sample ID: File: VMS4389346.wrf

Component: PFBS 1 Mess(es): 586.9079.950 Da

Carrier: Amulution:

Standard:

Sample Type: Standard

Concentration: 30.0 ng/L

Calculated Conc: 27.8 ng/L

Acq Date: 2016/02/23

Acq Time: 12:03:17 PM

Modified:

Proc. Algorithm: Analyst Classic

Smoothing: No

Smoothing Factor: 20.00 cps

Area Threshold: 2000.00 cps

Num. Smoother: 5

Sep. Width: 0.00

Sep. Height: 0.00

Exp. Adj. Ratio: 4.00

Exp. Val. Ratio: 3.00

RF Window: 10.0 sec

Expected RT: 1.15 min

Use Relative RT: No

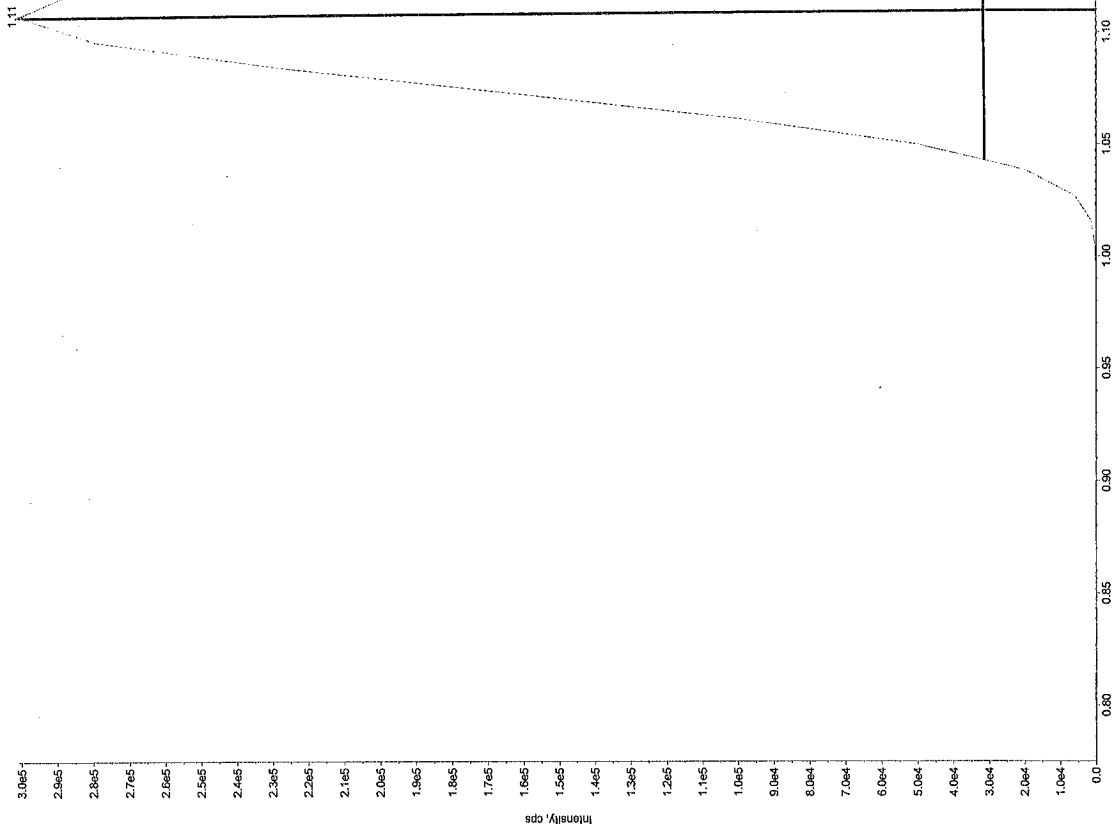
Int. Type: Base To Base

Retention Time: 1.11 min

Area: 136000.000 counts

Start Time: 3:06:58 PM

End Time: 1:29 min



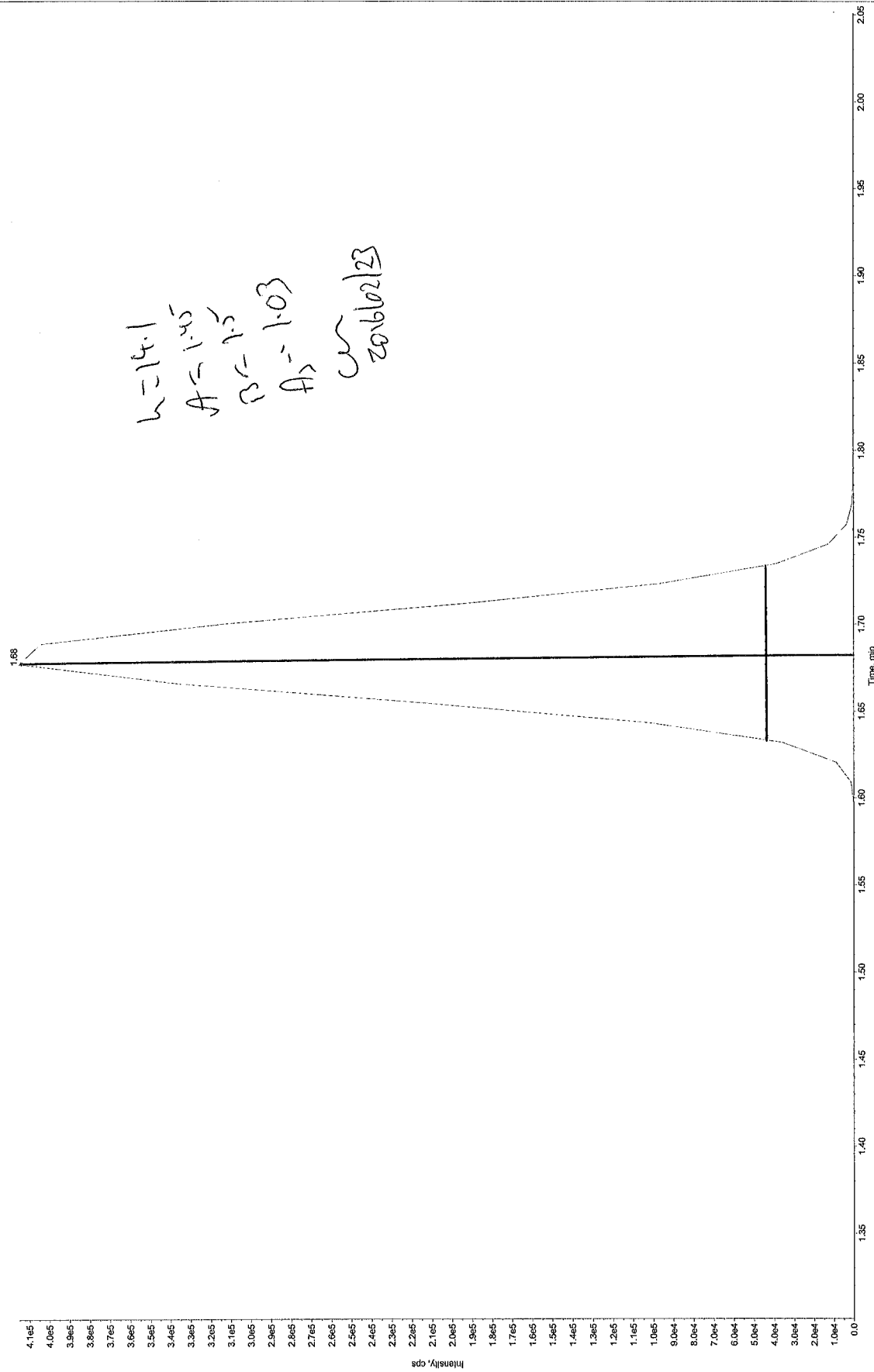
Results Path: \\miss-netapp2\lcms\lcms3\Analyst Data\Projects\Enviro\PFOS\Results\PFC_Water_160222_4389346_ULow.rdb

Printing Date: Tuesday, February 23, 2016

Sample Name: STD 4 Sample ID: File: W54389346.wiff
Peak Name: PFOS 1 Mass(es): 388.500/93.900 Da

Sample Index: 13
 Sample Type: Standard
 Concentration: 30.0 ng/L
 Calculated Conc: 29.3 ng/L
 Acquisition: 12/01/17 PM
 Acquisition: 4.095
 Method: No
 Proc. Algorithm: Analyst Classic
 Inching: No
 No. of Peaks: 20.00 cps
 Area Threshold: 5000.00 cps
 Num. Smooths: 6
 Sep. Width: 0.00
 Sep. Height: 5.00
 Sep. Ratio: 4.00
 Exp. Adj. Ratio: 4.00
 Exp. Val. Ratio: 3.00
 RT Window: 30.0 sec
 Supercr. RT: 1.68 min
 Use Relative RT: No
 3.295
 Int. Type: Base To Base
 Retention Time: 1.68 min
 Area: 149000.000 counts
 Peak: 4.294005 cps
 Start Time: 1.59 min
 End Time: 1.79 min

Handwritten:
 $k = 14.1$
 $A = 1.45$
 $B = 1.2$
 $A_2 = 1.03$
 CW
 20160223



Report Name: Worksheet - Parameter Lists

Report Date: 2016/02/21

Test Code: PFOSLOW-W

Worksheet Number: 4389346

<u>Sample Number</u>	<u>Parameter</u>
BVX806-01	Perfluorobutane Sulfonate (PFBS)
BVX807-01	Perfluoroheptanoic Acid (PFHpA)
BVX808-01	Perfluorohexanoic Acid (PFHxA) <i>sm 2016/02/23</i>
BVX809-01	Perfluorohexane Sulfonate (PFHxS)
BVX810-01	Perfluorononanoic Acid (PFNA)
BVX811-01	Perfluoro-n-Octanoic Acid (PFOA) Perfluorooctane Sulfonate (PFOS)
BVX841-01	Perfluorobutane Sulfonate (PFBS)
BVX842-01	Perfluoroheptane sulfonate
BVX843-01	Perfluorohexane Sulfonate (PFHxS)
BVX844-01	Perfluorononanoic Acid (PFNA)
BVX845-01	Perfluoro-n-Octanoic Acid (PFOA)
BVX846-01	Perfluorooctane Sulfonate (PFOS)
BVX847-01	
BVX850-01	
BVX851-01	

WorkSheet 4389346 Instrument Sequences

1.	 4389346:MTRX SPK	MTRX SPK
2.	 4389346:MTRX SPK:D1	MTRX SPK :D1
3.	 4389346:SPIKE	SPIKE
4.	 4389346:BLANK	BLANK
5.	 4389346:BVX806-01	OF-FB47-0216
6.	 4389346:BVX807-01	OF-RW47-0216
7.	 4389346:BVX808-01	OF-FB47A-0216
8.	 4389346:BVX809-01	OF-RW47A-0216
9.	 4389346:BVX810-01	OF-FB48-0216
10.	 4389346:BVX811-01	OF-RW48-0216
11.	 4389346:BVX841-01	OF-FB70-0216
12.	 4389346:BVX842-01	OF-RW70-0216
13.	 4389346:BVX843-01	OF-FB44-0216
14.	 4389346:BVX844-01	OF-RW44-0216
15.	 4389346:BVX845-01	OF-RW44P-0216
16.	 4389346:BVX846-01	OF-FB65-0216
17.	 4389346:BVX847-01	OF-RW65-0216
18.	 4389346:BVX850-01	OF-FB21-0216
19.	 4389346:BVX851-01	OF-RW21-0216

Worksheet Reagent Tracking Record

Worksheet # 4389346

Surrogate/Spike solutions	✓	Solution ID #	Conc.	Blk-Spk		MS		Samples	
				Solid	Liquid	Solid	Liquid	Solid	Liquid
DGT Spike			100 ug/mL	60	30	60	30	NA	NA
Diquat Dibromide			50 ug/mL	NA	350	NA	350	NA	NA
Explosives Spiking solution A			20 ug/mL	250	100	250	100	NA	NA
Explosives Spiking solution B			20/80 ug/mL	250	100	250	100	NA	NA
Formaldehyde Spike			100 ug/mL	25	25	25	25	NA	NA
Glyphosate Spike			25 ug/mL	500	20	500	20	NA	NA
Nonylphenol Ethoxylate Spike			100 ug/mL	100	100	100	100	NA	NA
Nonylphenol Spike			10 ug/mL	100	100	100	100	NA	NA
Paraquat Cl Tetrahydrate			20 ug/mL	NA	125	NA	125	NA	NA
Perchlorate Standard Spike			10 ng/mL	NA	100	NA	100	NA	NA
Perchlorate Standard Spike			500 ng/mL	40	NA	40	NA	NA	NA
Perchlorate O-18 Internal Standard			0.10 ng/uL	20	20	20	20	20	20
Morpholine Intermediate Std.			5 ug/mL	NA	50	NA	20	NA	NA
Morpholine-D8 Internal Standard			10 ug/mL	NA	100	NA	100	NA	100
Comp. PFC Spiking Solution A			1ug/mL	62.5	NA	62.5	NA	NA	NA
Comp. PFC Spiking Solution B			250 ng/mL	NA	40	75	NA	40	75
Comp. PFC Spiking Solution C	/	SK-6229	100 ng/mL	125	(62.5) NA	125	(62.5) NA	NA	NA
Internal Standard Solution A	/	SI-6010	50 ng/mL	50	(15) 100	50	(15) 100	50	(15) 100
Internal Standard Solution B			250ng/mL	50	NA	50	NA	50	NA
ICV/CCV PFC	/	I-4676	1ug/mL		(62.5)				
Solvent/Reagent	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/Prepared	*Spiked by: GSZ	
DCM				50% NaOH				Spike Date 2016/02/21	
Hexane				20mM TBAS				Spike Syringe ID# <i>Pignatton</i> M23487B	
Acetone				o-Phosphoric Acid				Int. Std Syringe ID# <i>Pignatton</i> M23487B	
Ottawa Sand				Borax				*Spiking Witnessed by: <i>yma</i>	
Methanol	/	SHBG 6076 V	2012/02/21	Calcium Chloride				Final pH	
2-Propanol (IPA)				EDTA				X	
Acetonitrile				Phosphate Buffer					
MTBE				Sodium Thiosulphate					
Sodium Sulfate 60:40 H ₂ O:MeOH Recon Solution	/	87-190	2016/02/12	5M Acetate Buffer					
DCM:Ethyl Ether (75:25)				FMOc					
Hexane:IPA (98:2)				0.25M Na ₂ CO ₃					
2% Formic Acid	/	87-131	2016/01/12	0.5M TBAS					
0.2% Formic Acid	/	87-114	2015/12/31	1% NH ₄ OH 0.2%	/	87-203	2016/02/21		
0.05M KOH				Leachate Fluid		SHBG 5572V			
0.05M HCl				Reagent Water	/	SHBG 6212V	2016/02/21		
Equipment	✓	Equipment	ID#	✓	Equipment	Lot #	Bottle Tracking		
Pipettor		M15944C K19609D P29746D		✓	SPE Cartridge	002635315A		Bottle#	14991
Dispenser				✓	Filter			Cap#	14443
Syringe					Centrifuge			Thermometer ID & Temp	SH 140614017 45°C
					Sonicator			Systems plus Lot#	16-01-06

Comments: 125ml Ref Bottle (HDPE)

Inj IS - SI-6039 - 2016/02/19

APIC Evaporation

Project: D:\Analyst Data\Projects\Enviro\FPOS Batch:PFC_160222 Tab:Sample Set:SET1 AcqMethod:PFC_Water_Low.dam

Sample	Sample Name	Rack Code	Rack Position	Plate Code	Plate Position	Vial Position	Data File	Inj. Volume (µl)
1	Rinse	2 Well Plates	1	*54VialPlate*	2	1	PFC_160222\WS#4387619	3.000
2	4387619-BLANK	2 Well Plates	1	*54VialPlate*	2	2	PFC_160222\WS#4387619	3.000
3	STD 1	2 Well Plates	1	*54VialPlate*	2	3	PFC_160222\WS#4387619	3.000
4	STD 2	2 Well Plates	1	*54VialPlate*	2	4	PFC_160222\WS#4387619	3.000
5	STD 3	2 Well Plates	1	*54VialPlate*	2	5	PFC_160222\WS#4387619	3.000
6	STD 4	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4387619	3.000
7	STD 5	2 Well Plates	1	*54VialPlate*	2	7	PFC_160222\WS#4387619	3.000
8	STD 6	2 Well Plates	1	*54VialPlate*	2	8	PFC_160222\WS#4387619	3.000
9	ICV	2 Well Plates	1	*54VialPlate*	2	9	PFC_160222\WS#4387619	3.000
10	CCV	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4387619	3.000
11	4387619-MTRX SPK	2 Well Plates	1	*54VialPlate*	2	10	PFC_160222\WS#4387619	3.000
12	4387619-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	2	11	PFC_160222\WS#4387619	3.000
13	4387619-SPK:E	2 Well Plates	1	*54VialPlate*	2	12	PFC_160222\WS#4387619	3.000
14	4387619-BVX728-01	2 Well Plates	1	*54VialPlate*	2	13	PFC_160222\WS#4387619	3.000
15	4387619-BVX727-01	2 Well Plates	1	*54VialPlate*	2	14	PFC_160222\WS#4387619	3.000
16	4387619-BVX728-01	2 Well Plates	1	*54VialPlate*	2	15	PFC_160222\WS#4387619	3.000
17	4387619-BVX729-01	2 Well Plates	1	*54VialPlate*	2	16	PFC_160222\WS#4387619	3.000
18	4387619-BVX730-01	2 Well Plates	1	*54VialPlate*	2	17	PFC_160222\WS#4387619	3.000
19	4387619-BVX731-01	2 Well Plates	1	*54VialPlate*	2	18	PFC_160222\WS#4387619	3.000
20	4387619-BVX732-01	2 Well Plates	1	*54VialPlate*	2	19	PFC_160222\WS#4387619	3.000
21	4387619-BVX733-01	2 Well Plates	1	*54VialPlate*	2	20	PFC_160222\WS#4387619	3.000
22	4387619-BVX734-01	2 Well Plates	1	*54VialPlate*	2	21	PFC_160222\WS#4387619	3.000
23	4387619-BVX735-01	2 Well Plates	1	*54VialPlate*	2	22	PFC_160222\WS#4387619	3.000
24	CCV	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4387619	3.000
25	4387619-BVX736-01	2 Well Plates	1	*54VialPlate*	2	23	PFC_160222\WS#4387619	3.000
26	4387619-BVX737-01	2 Well Plates	1	*54VialPlate*	2	24	PFC_160222\WS#4387619	3.000
27	4387619-BVX738-01	2 Well Plates	1	*54VialPlate*	2	25	PFC_160222\WS#4387619	3.000
28	4387619-BVX739-01	2 Well Plates	1	*54VialPlate*	2	26	PFC_160222\WS#4387619	3.000
29	4387619-BVX740-01	2 Well Plates	1	*54VialPlate*	2	27	PFC_160222\WS#4387619	3.000
30	4387619-BVX741-01	2 Well Plates	1	*54VialPlate*	2	28	PFC_160222\WS#4387619	3.000
31	4387619-BVX743-01	2 Well Plates	1	*54VialPlate*	2	29	PFC_160222\WS#4387619	3.000
32	4387619-BVX744-01	2 Well Plates	1	*54VialPlate*	2	30	PFC_160222\WS#4387619	3.000
33	4387619-BVX745-01	2 Well Plates	1	*54VialPlate*	2	31	PFC_160222\WS#4387619	3.000
34	4387619-BVX746-01	2 Well Plates	1	*54VialPlate*	2	32	PFC_160222\WS#4387619	3.000
35	CCV	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4387619	3.000
36	4388131-BLANK	2 Well Plates	1	*54VialPlate*	2	33	PFC_160222\WS#4388131	3.000
37	4388131-MTRX SPK	2 Well Plates	1	*54VialPlate*	2	34	PFC_160222\WS#4388131	3.000
38	4388131-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	2	35	PFC_160222\WS#4388131	3.000
39	4388131-SPK:E	2 Well Plates	1	*54VialPlate*	2	36	PFC_160222\WS#4388131	3.000
40	4388131-BVX819-01 (20x)	2 Well Plates	1	*54VialPlate*	2	37	PFC_160222\WS#4388131	3.000
41	4388131-BVX747-01	2 Well Plates	1	*54VialPlate*	2	38	PFC_160222\WS#4388131	3.000
42	4388131-BVX975-01	2 Well Plates	1	*54VialPlate*	2	39	PFC_160222\WS#4388131	3.000
43	4388131-BVX976-01	2 Well Plates	1	*54VialPlate*	2	40	PFC_160222\WS#4388131	3.000
44	4388131-BVX977-01	2 Well Plates	1	*54VialPlate*	2	41	PFC_160222\WS#4388131	3.000
45	4388131-BVX978-01	2 Well Plates	1	*54VialPlate*	2	42	PFC_160222\WS#4388131	3.000
46	4388131-BVX979-01	2 Well Plates	1	*54VialPlate*	2	43	PFC_160222\WS#4388131	3.000
47	4388131-BVX980-01	2 Well Plates	1	*54VialPlate*	2	44	PFC_160222\WS#4388131	3.000
48	4388131-BVX981-01	2 Well Plates	1	*54VialPlate*	2	45	PFC_160222\WS#4388131	3.000
49	4388131-BVX982-01	2 Well Plates	1	*54VialPlate*	2	46	PFC_160222\WS#4388131	3.000
50	CCV	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4388131	3.000
51	4388131-BVX983-01	2 Well Plates	1	*54VialPlate*	2	47	PFC_160222\WS#4388131	3.000
52	4388131-BVX984-01	2 Well Plates	1	*54VialPlate*	2	48	PFC_160222\WS#4388131	3.000
53	4388131-BVX985-01	2 Well Plates	1	*54VialPlate*	2	49	PFC_160222\WS#4388131	3.000
54	4388131-BVX986-01	2 Well Plates	1	*54VialPlate*	2	50	PFC_160222\WS#4388131	3.000
55	4388131-BVX987-01	2 Well Plates	1	*54VialPlate*	2	51	PFC_160222\WS#4388131	3.000
56	4388131-BVX988-01	2 Well Plates	1	*54VialPlate*	2	52	PFC_160222\WS#4388131	3.000
57	4388131-BVX989-01	2 Well Plates	1	*54VialPlate*	2	53	PFC_160222\WS#4388131	3.000
58	CCV	2 Well Plates	1	*54VialPlate*	2	6	PFC_160222\WS#4388131	3.000
59	4389346-BLANK	2 Well Plates	1	*54VialPlate*	1	1	PFC_160222\WS#4389346	3.000
60	STD 1	2 Well Plates	1	*54VialPlate*	1	2	PFC_160222\WS#4389346	3.000
61	STD 2	2 Well Plates	1	*54VialPlate*	1	3	PFC_160222\WS#4389346	3.000
62	STD 3	2 Well Plates	1	*54VialPlate*	1	4	PFC_160222\WS#4389346	3.000
63	STD 4	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389346	3.000
64	STD 5	2 Well Plates	1	*54VialPlate*	1	6	PFC_160222\WS#4389346	3.000
65	STD 6	2 Well Plates	1	*54VialPlate*	1	7	PFC_160222\WS#4389346	3.000
66	ICV	2 Well Plates	1	*54VialPlate*	1	8	PFC_160222\WS#4389346	3.000
67	CCV	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389346	3.000
68	4389346-MTRX SPK	2 Well Plates	1	*54VialPlate*	1	9	PFC_160222\WS#4389346	3.000
69	4389346-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	1	10	PFC_160222\WS#4389346	3.000
70	4389346-SPK:E	2 Well Plates	1	*54VialPlate*	1	11	PFC_160222\WS#4389346	3.000
71	4389346-BVX806-01	2 Well Plates	1	*54VialPlate*	1	12	PFC_160222\WS#4389346	3.000
72	4389346-BVX807-01	2 Well Plates	1	*54VialPlate*	1	13	PFC_160222\WS#4389346	3.000
73	4389346-BVX808-01	2 Well Plates	1	*54VialPlate*	1	14	PFC_160222\WS#4389346	3.000
74	4389346-BVX809-01	2 Well Plates	1	*54VialPlate*	1	15	PFC_160222\WS#4389346	3.000
75	4389346-BVX810-01	2 Well Plates	1	*54VialPlate*	1	16	PFC_160222\WS#4389346	3.000
76	4389346-BVX811-01	2 Well Plates	1	*54VialPlate*	1	17	PFC_160222\WS#4389346	3.000
77	4389346-BVX814-01	2 Well Plates	1	*54VialPlate*	1	18	PFC_160222\WS#4389346	3.000
78	4389346-BVX842-01	2 Well Plates	1	*54VialPlate*	1	19	PFC_160222\WS#4389346	3.000
79	4389346-BVX843-01	2 Well Plates	1	*54VialPlate*	1	20	PFC_160222\WS#4389346	3.000
80	4389346-BVX844-01	2 Well Plates	1	*54VialPlate*	1	21	PFC_160222\WS#4389346	3.000
81	CCV	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389346	3.000
82	4389346-BVX845-01	2 Well Plates	1	*54VialPlate*	1	22	PFC_160222\WS#4389346	3.000
83	4389346-BVX846-01	2 Well Plates	1	*54VialPlate*	1	23	PFC_160222\WS#4389346	3.000

Column # 122
 MPA = Sol # 513, /JREI7
 MPB = MeOH, /Fisher # 152613
 on 20.6.6.2/22

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160222 Tab:Sample Set:SET1 AcqMethod:PFC_Water_Low.dam

Sample	Sample Name	Rack Code	Rack Position	Plate Code	Plate Position	Vial Position	Data File	Inj. Volume (µl)
84	4389346-BVX847-01	2 Well Plates	1	*54VialPlate*	1	24	PFC_160222\WS#4389346	3,000
85	4389346-BVX850-01	2 Well Plates	1	*54VialPlate*	1	25	PFC_160222\WS#4389346	3,000
86	4389346-BVX851-01	2 Well Plates	1	*54VialPlate*	1	26	PFC_160222\WS#4389346	3,000
87	CCV	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389346	3,000
88	4389346-BLANK	2 Well Plates	1	*54VialPlate*	1	27	PFC_160222\WS#4389348	3,000
89	4389346-MTRX SPK	2 Well Plates	1	*54VialPlate*	1	28	PFC_160222\WS#4389348	3,000
90	4389346-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	1	29	PFC_160222\WS#4389348	3,000
91	4389346-SPIKE	2 Well Plates	1	*54VialPlate*	1	30	PFC_160222\WS#4389348	3,000
92	4389346-BWN179-01	2 Well Plates	1	*54VialPlate*	1	31	PFC_160222\WS#4389348	3,000
93	4389346-BWN180-01	2 Well Plates	1	*54VialPlate*	1	32	PFC_160222\WS#4389348	3,000
94	4389346-BWN181-01	2 Well Plates	1	*54VialPlate*	1	33	PFC_160222\WS#4389348	3,000
95	4389346-BWN182-01	2 Well Plates	1	*54VialPlate*	1	34	PFC_160222\WS#4389348	3,000
96	4389346-BWN183-01	2 Well Plates	1	*54VialPlate*	1	35	PFC_160222\WS#4389348	3,000
97	4389346-BWN184-01	2 Well Plates	1	*54VialPlate*	1	36	PFC_160222\WS#4389348	3,000
98	4389346-BWN185-01	2 Well Plates	1	*54VialPlate*	1	37	PFC_160222\WS#4389348	3,000
99	4389346-BWN186-01	2 Well Plates	1	*54VialPlate*	1	38	PFC_160222\WS#4389348	3,000
100	4389346-BWN187-01	2 Well Plates	1	*54VialPlate*	1	39	PFC_160222\WS#4389348	3,000
101	4389346-BWN188-01	2 Well Plates	1	*54VialPlate*	1	40	PFC_160222\WS#4389348	3,000
102	CCV	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389348	3,000
103	4389346-BWN189-01	2 Well Plates	1	*54VialPlate*	1	41	PFC_160222\WS#4389348	3,000
104	4389346-BWN190-01	2 Well Plates	1	*54VialPlate*	1	42	PFC_160222\WS#4389348	3,000
105	4389346-BWN212-01	2 Well Plates	1	*54VialPlate*	1	43	PFC_160222\WS#4389348	3,000
106	4389346-BWN213-01	2 Well Plates	1	*54VialPlate*	1	44	PFC_160222\WS#4389348	3,000
107	4389346-BWN214-01	2 Well Plates	1	*54VialPlate*	1	45	PFC_160222\WS#4389348	3,000
108	4389346-BWN215-01	2 Well Plates	1	*54VialPlate*	1	46	PFC_160222\WS#4389348	3,000
109	4389346-BWN216-01	2 Well Plates	1	*54VialPlate*	1	47	PFC_160222\WS#4389348	3,000
110	4389346-BWN217-01	2 Well Plates	1	*54VialPlate*	1	48	PFC_160222\WS#4389348	3,000
111	4389346-BWN218-01	2 Well Plates	1	*54VialPlate*	1	49	PFC_160222\WS#4389348	3,000
112	4389346-BWN219-01	2 Well Plates	1	*54VialPlate*	1	50	PFC_160222\WS#4389348	3,000
113	CCV	2 Well Plates	1	*54VialPlate*	1	5	PFC_160222\WS#4389348	3,000

Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1	2016/02/22 11:40:54 PM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	1	*54VialPlate*	1
2	2016/02/22 11:46:00 PM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	2	*54VialPlate*	1
3	2016/02/22 11:51:06 PM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	3	*54VialPlate*	1
4	2016/02/22 11:56:12 PM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	4	*54VialPlate*	1
5	2016/02/23 12:01:17 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	5	*54VialPlate*	1
6	2016/02/23 12:06:21 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	6	*54VialPlate*	1
7	2016/02/23 12:11:27 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	7	*54VialPlate*	1
8	2016/02/23 12:16:32 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	8	*54VialPlate*	1
9	2016/02/23 12:21:38 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	5	*54VialPlate*	1
10	2016/02/23 12:26:43 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	9	*54VialPlate*	1
11	2016/02/23 12:31:48 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	10	*54VialPlate*	1
12	2016/02/23 12:36:53 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	11	*54VialPlate*	1
13	2016/02/23 12:41:59 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	12	*54VialPlate*	1
14	2016/02/23 12:47:03 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	13	*54VialPlate*	1
15	2016/02/23 12:52:09 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	14	*54VialPlate*	1
16	2016/02/23 12:57:15 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	15	*54VialPlate*	1
17	2016/02/23 1:02:21 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	16	*54VialPlate*	1
18	2016/02/23 1:07:27 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	17	*54VialPlate*	1
19	2016/02/23 1:12:33 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	18	*54VialPlate*	1
20	2016/02/23 1:17:38 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	19	*54VialPlate*	1
21	2016/02/23 1:22:44 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	20	*54VialPlate*	1
22	2016/02/23 1:27:50 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	21	*54VialPlate*	1
23	2016/02/23 1:32:56 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	5	*54VialPlate*	1
24	2016/02/23 1:38:01 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	22	*54VialPlate*	1
25	2016/02/23 1:43:07 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	23	*54VialPlate*	1
26	2016/02/23 1:48:12 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	24	*54VialPlate*	1
27	2016/02/23 1:53:17 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	25	*54VialPlate*	1
28	2016/02/23 1:58:24 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	26	*54VialPlate*	1
29	2016/02/23 2:03:30 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	5	*54VialPlate*	1
30	2016/02/23 2:08:36 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	9	*54VialPlate*	1
31	2016/02/23 2:13:42 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	10	*54VialPlate*	1
32	2016/02/23 2:18:48 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	13	*54VialPlate*	1
33	2016/02/23 2:23:54 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	19	*54VialPlate*	1
34	2016/02/23 2:29:00 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	23	*54VialPlate*	1
35	2016/02/23 2:34:06 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	26	*54VialPlate*	1
36	2016/02/23 2:39:12 AM	PFC_Water_Low.dam	PFC_160222\WS#4389346.wiff	2 Well Plates	1	5	*54VialPlate*	1



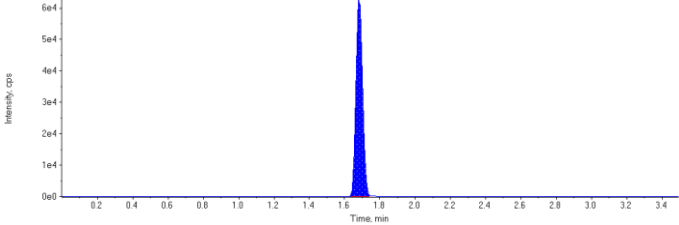
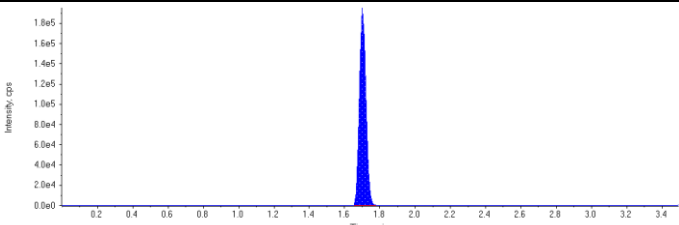
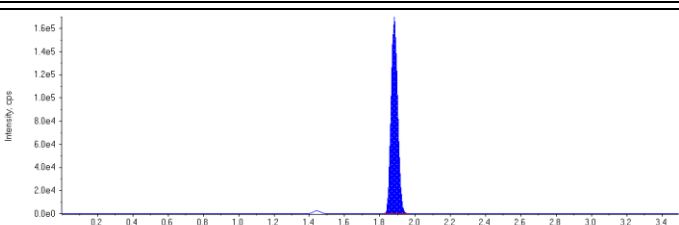
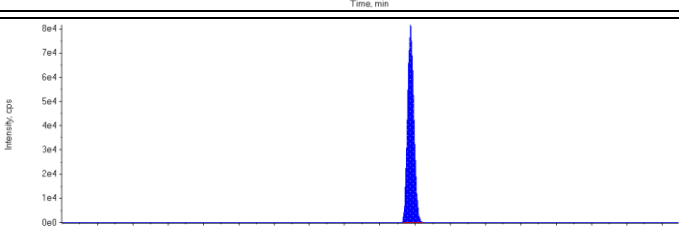
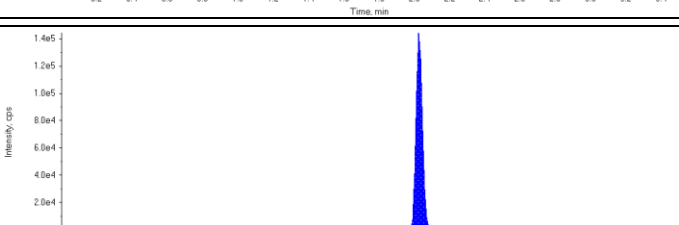
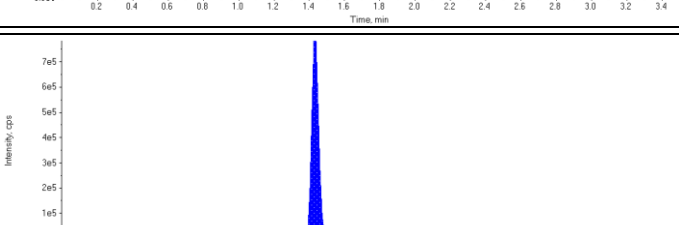
5. Initial Calibration

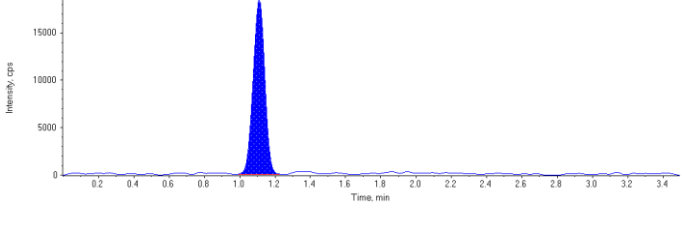
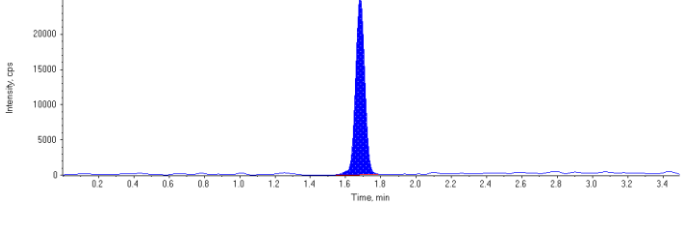
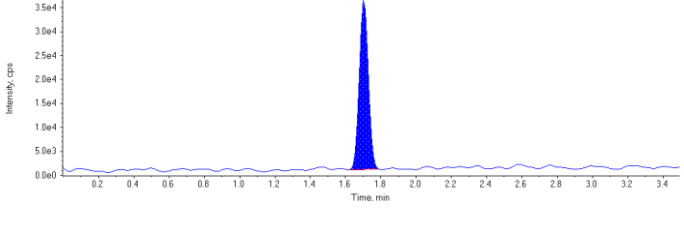
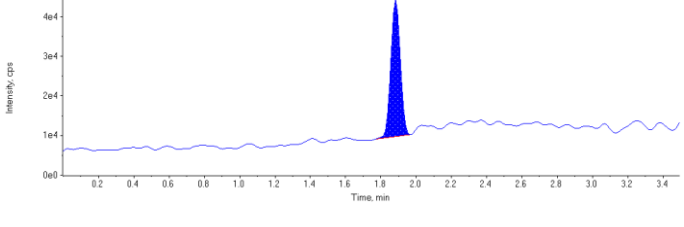
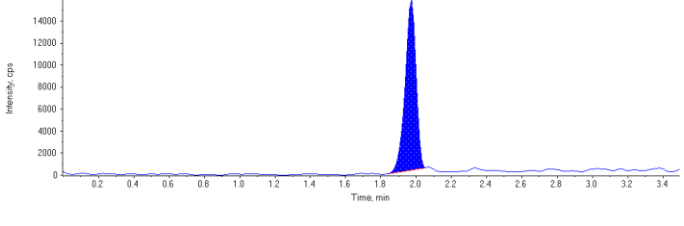
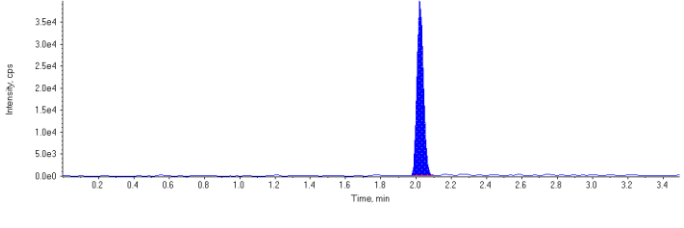
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

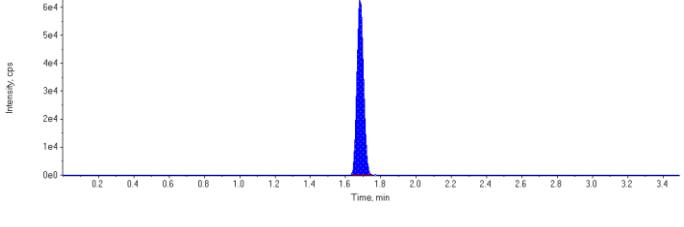
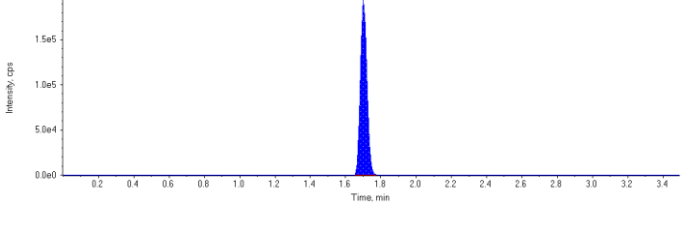
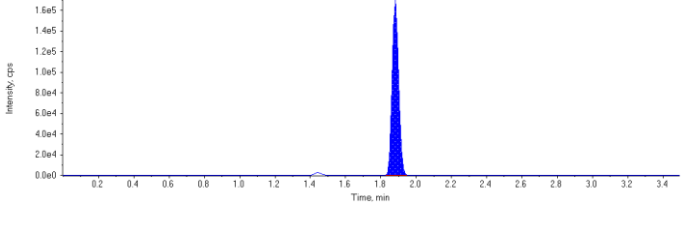
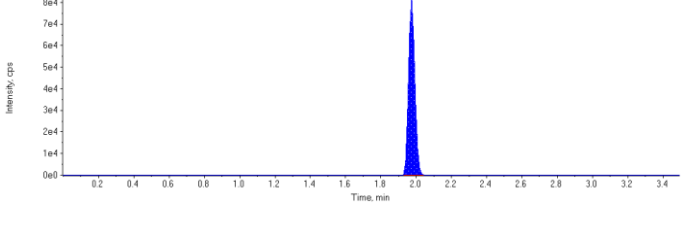
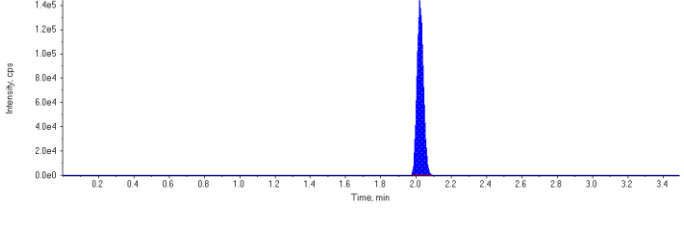
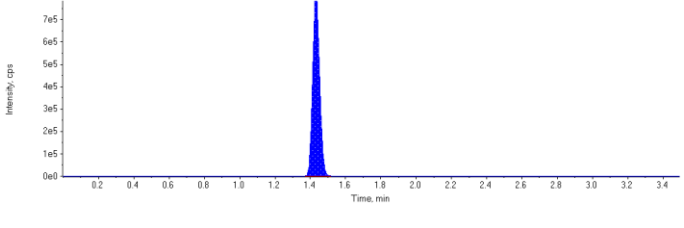
Sample Name	STD 1	Injection Vial	2
Sample ID	STD 1	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/22 11:46:00 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	165000.	1.68	1.00	-
MPFHpA	494000.	1.70	1.00	-
MPFOA	430000.	1.88	1.00	-
MPFOS	202000.	1.97	1.00	-
MPFNA	363000.	2.02	1.00	-
13C6-PFHxA IS	2220000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	84600	1.11	2.00	2.17	109.0
PFHxS 1	90900	1.68	2.00	2.03	102.0
PFHpA 1	125000	1.70	2.00	1.97	98.4
PFOA 1	129000	1.88	2.00	1.97	98.7
PFOS 1	65900	1.97	2.00	2.26	113.0
PFNA 1	100000	2.02	2.00	2.10	105.0
18O2-PFHxS	165000	1.68	100.	105.	105.0
13C4-PFHpA	494000	1.70	100.	106.	106.0
13C4-PFOA	430000	1.88	100.	106.	106.0
13C4-PFOS	202000	1.97	100.	106.	106.0
13C5-PFNA	363000	2.02	100.	105.	105.0
13C6-PFHxA	2220000	1.43	100.	96.8	96.8

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

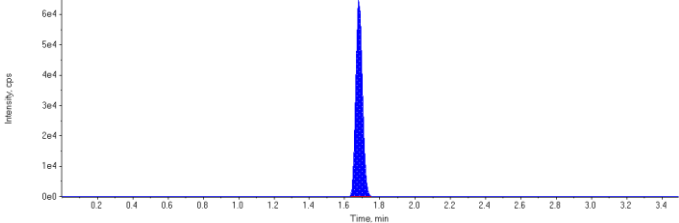
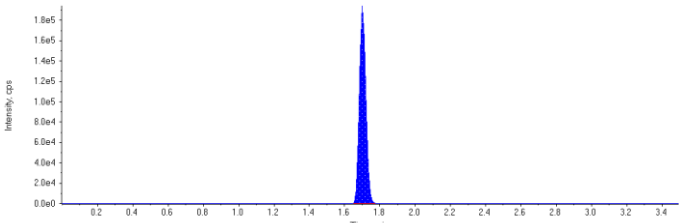
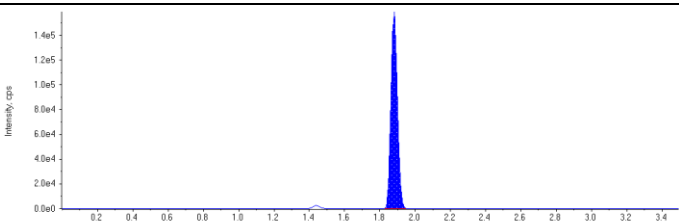
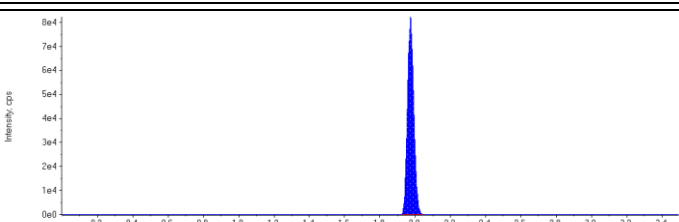
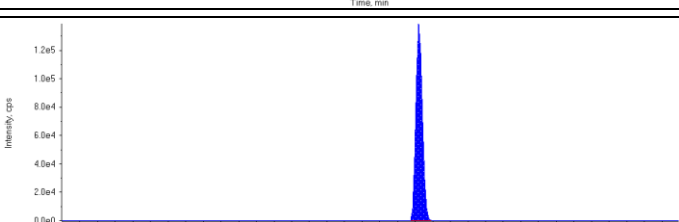
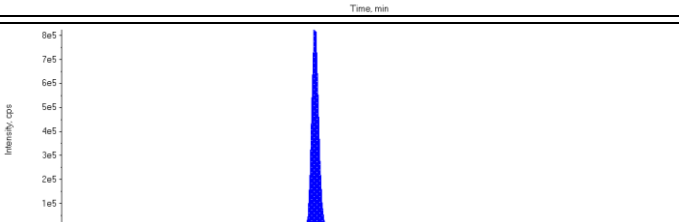
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 2.17 ng/L</p> <p>Area Ratio: 0.513</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 2.03 ng/L</p> <p>Area Ratio: 0.551</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 1.97 ng/L</p> <p>Area Ratio: 0.254</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 1.97 ng/L</p> <p>Area Ratio: 0.299</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 2.26 ng/L</p> <p>Area Ratio: 0.327</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 2.10 ng/L</p> <p>Area Ratio: 0.277</p> <p>Sample Type: (Standard)</p>	

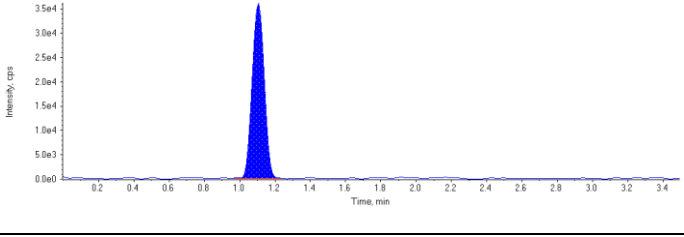
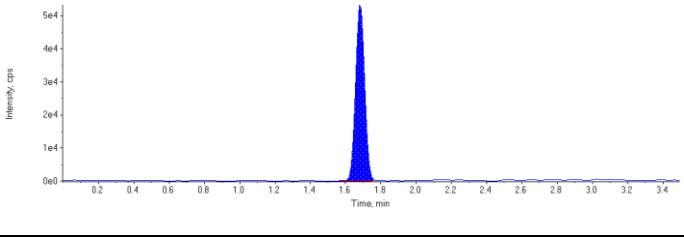
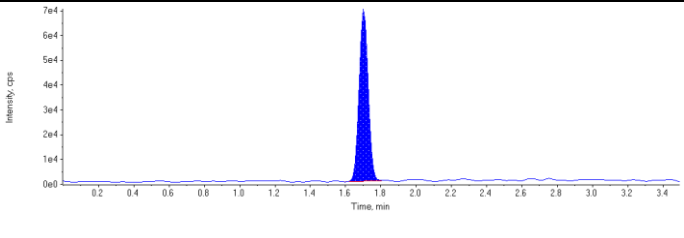
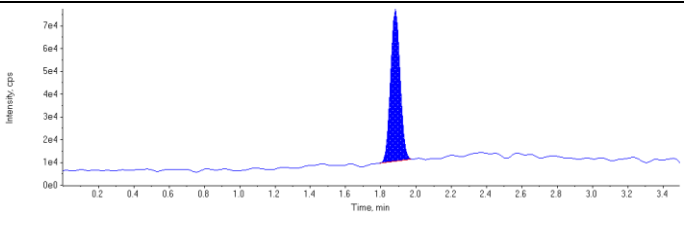
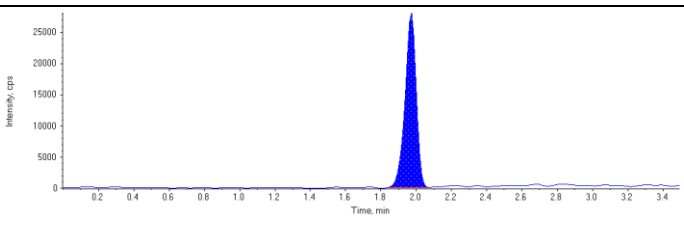
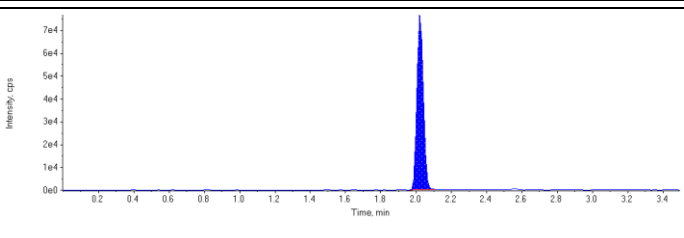
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 105. ng/L</p> <p>Area Ratio: 0.0743</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 106. ng/L</p> <p>Area Ratio: 0.223</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 106. ng/L</p> <p>Area Ratio: 0.194</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 106. ng/L</p> <p>Area Ratio: 0.0909</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 105. ng/L</p> <p>Area Ratio: 0.163</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 96.8 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

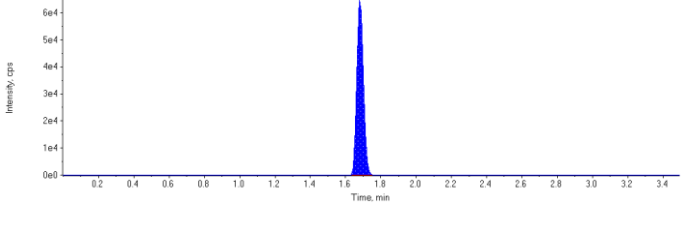
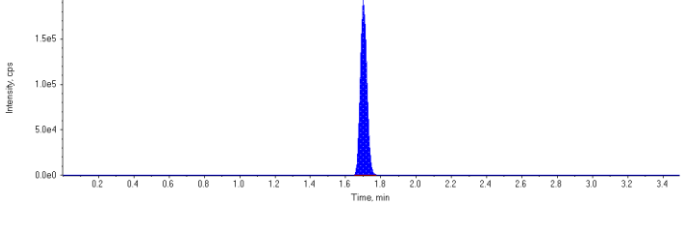
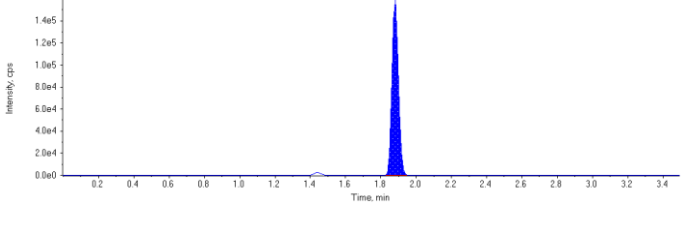
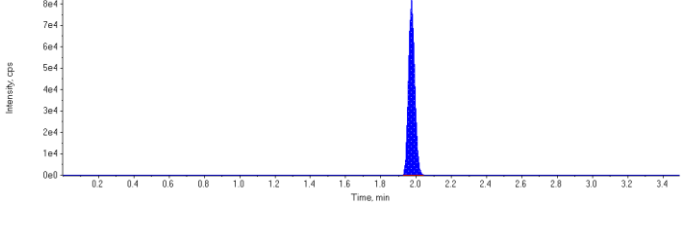
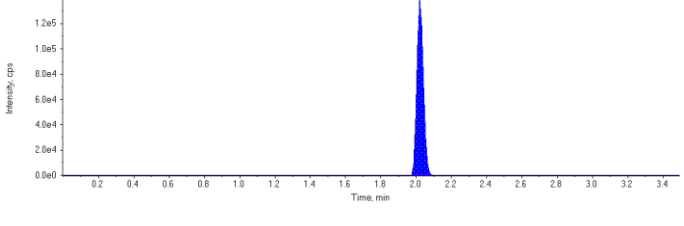
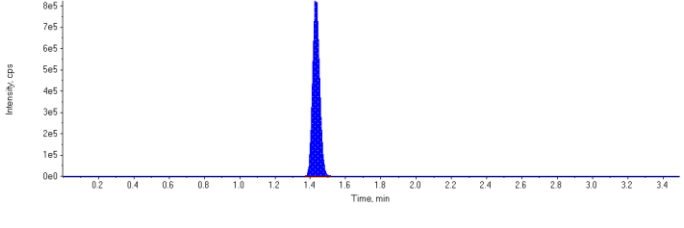
Sample Name	STD 2	Injection Vial	3
Sample ID	STD 2	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/22 11:51:06 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	170000.	1.68	1.00	-
MPFHpA	492000.	1.70	1.00	-
MPFOA	404000.	1.88	1.00	-
MPFOS	202000.	1.97	1.00	-
MPFNA	355000.	2.02	1.00	-
13C6-PFHxA IS	2330000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	172000	1.11	4.00	3.86	96.6
PFHxS 1	190000	1.68	4.00	3.93	98.2
PFHpA 1	246000	1.70	4.00	3.91	97.6
PFOA 1	249000	1.88	4.00	4.10	102.0
PFOS 1	123000	1.97	4.00	3.85	96.3
PFNA 1	194000	2.02	4.00	3.98	99.6
18O2-PFHxS	170000	1.68	100.	103.	103.0
13C4-PFHpA	492000	1.70	100.	100.	100.0
13C4-PFOA	404000	1.88	100.	95.2	95.2
13C4-PFOS	202000	1.97	100.	101.	101.0
13C5-PFNA	355000	2.02	100.	98.4	98.4
13C6-PFHxA	2330000	1.43	100.	101.	101.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

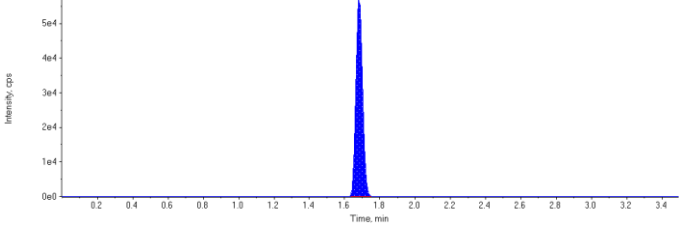
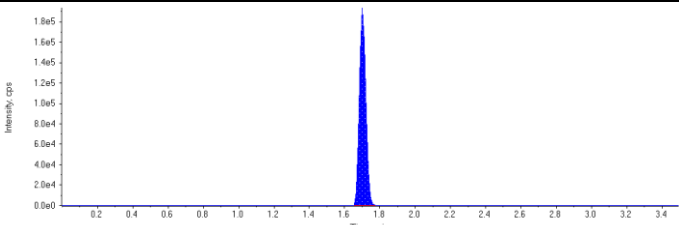
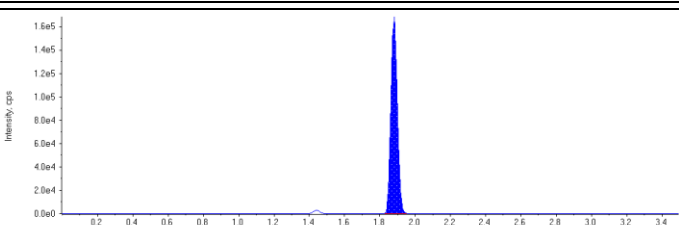
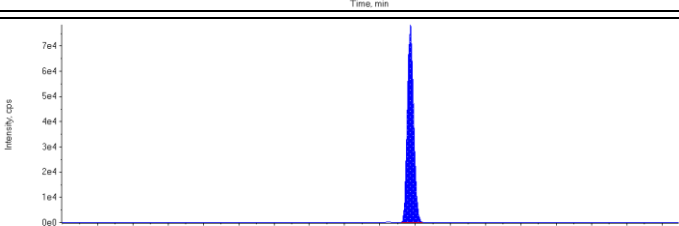
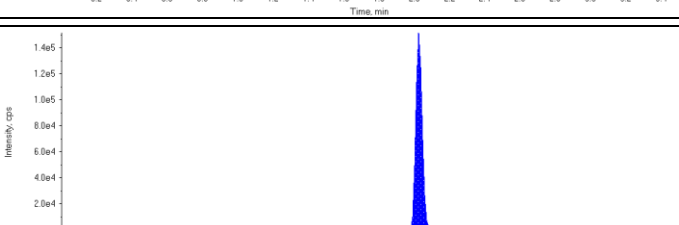
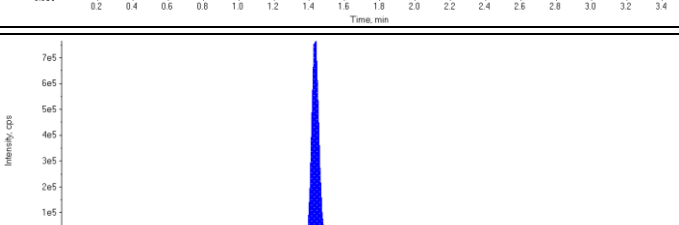
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 3.86 ng/L</p> <p>Area Ratio: 1.01</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 3.93 ng/L</p> <p>Area Ratio: 1.12</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 3.91 ng/L</p> <p>Area Ratio: 0.501</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 4.10 ng/L</p> <p>Area Ratio: 0.616</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 3.85 ng/L</p> <p>Area Ratio: 0.606</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 3.98 ng/L</p> <p>Area Ratio: 0.545</p> <p>Sample Type: (Standard)</p>	

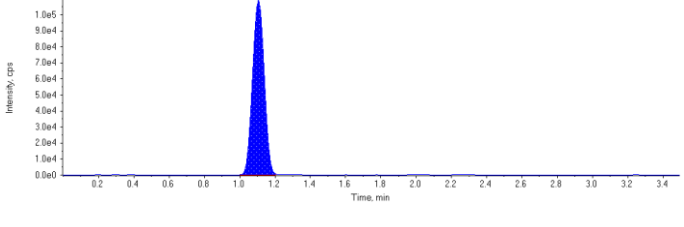
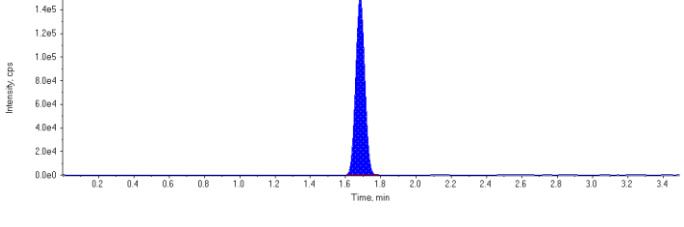
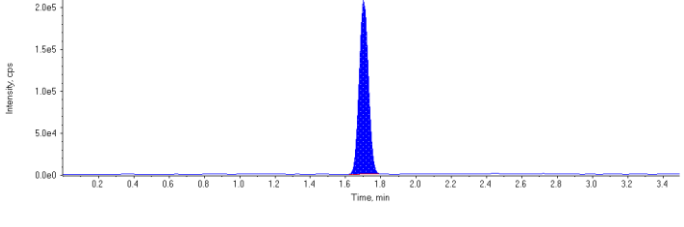
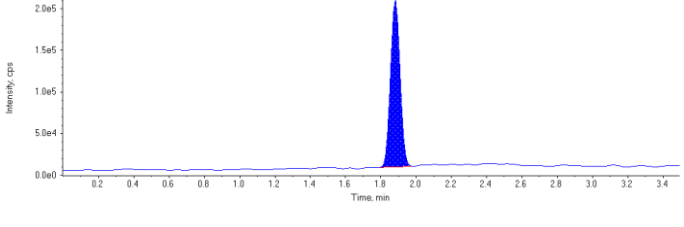
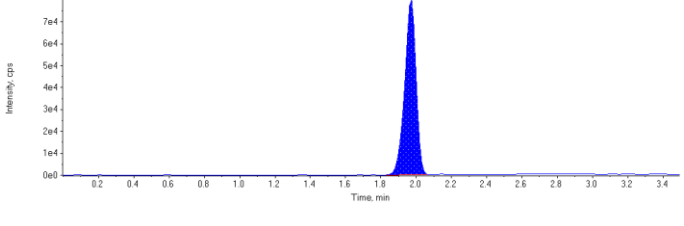
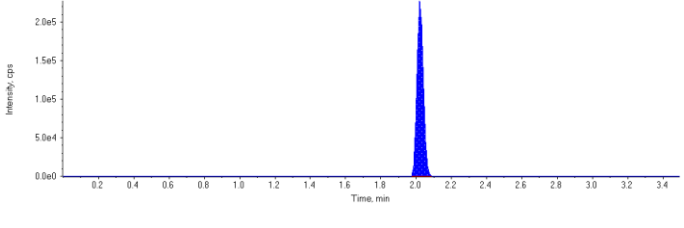
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 103. ng/L</p> <p>Area Ratio: 0.0729</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 100. ng/L</p> <p>Area Ratio: 0.211</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 95.2 ng/L</p> <p>Area Ratio: 0.173</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.0869</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 98.4 ng/L</p> <p>Area Ratio: 0.153</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

Sample Name	STD 3	Injection Vial	4
Sample ID	STD 3	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/22 11:56:12 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	151000.	1.68	1.00	-
MPFHpA	489000.	1.70	1.00	-
MPFOA	427000.	1.88	1.00	-
MPFOS	195000.	1.97	1.00	-
MPFNA	377000.	2.02	1.00	-
13C6-PFHxA IS	2180000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	505000	1.11	12.0	11.8	98.2
PFHxS 1	536000	1.68	12.0	12.0	100.0
PFHpA 1	741000	1.70	12.0	11.9	98.9
PFOA 1	751000	1.88	12.0	11.8	98.0
PFOS 1	356000	1.97	12.0	10.8	90.3
PFNA 1	574000	2.02	12.0	10.9	90.5
18O2-PFHxS	151000	1.68	100.	97.6	97.6
13C4-PFHpA	489000	1.70	100.	107.	107.0
13C4-PFOA	427000	1.88	100.	108.	108.0
13C4-PFOS	195000	1.97	100.	104.	104.0
13C5-PFNA	377000	2.02	100.	112.	112.0
13C6-PFHxA	2180000	1.43	100.	94.9	94.9

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

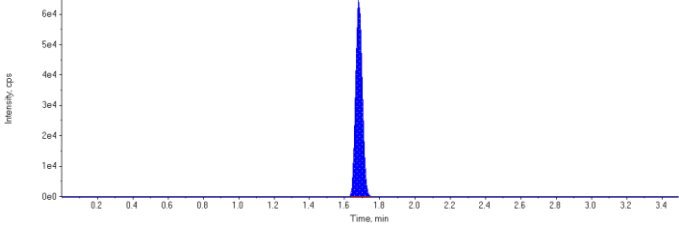
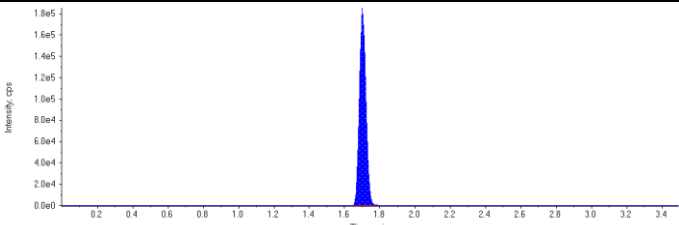
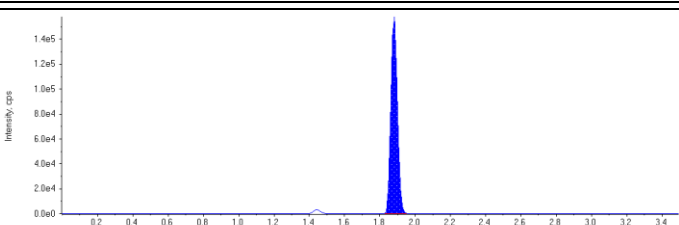
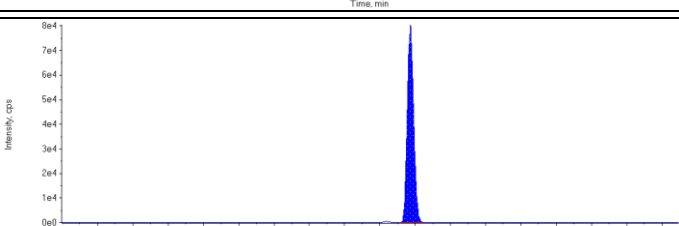
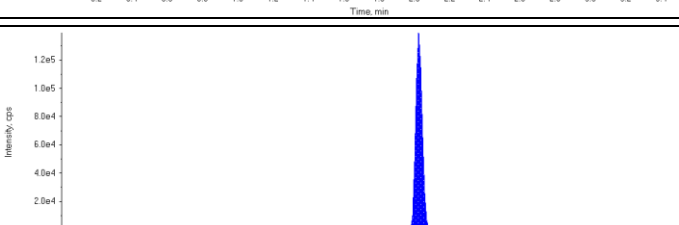
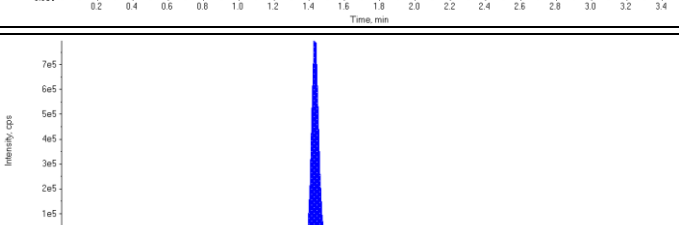
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 11.8 ng/L</p> <p>Area Ratio: 3.35</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 12.0 ng/L</p> <p>Area Ratio: 3.56</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 11.9 ng/L</p> <p>Area Ratio: 1.52</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 11.8 ng/L</p> <p>Area Ratio: 1.76</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 10.8 ng/L</p> <p>Area Ratio: 1.83</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 10.9 ng/L</p> <p>Area Ratio: 1.52</p> <p>Sample Type: (Standard)</p>	

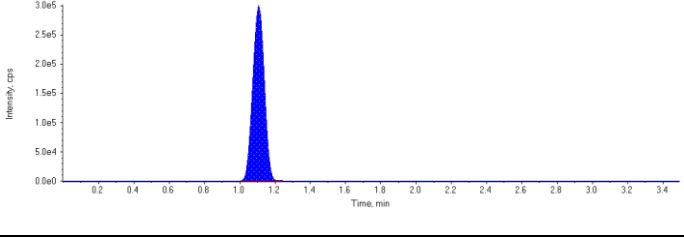
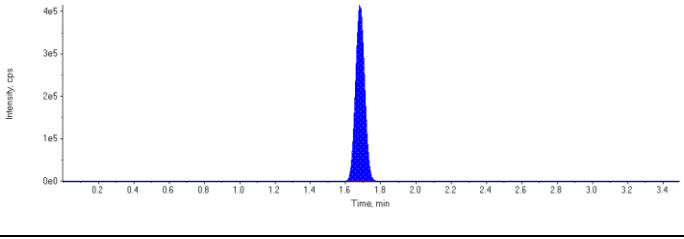
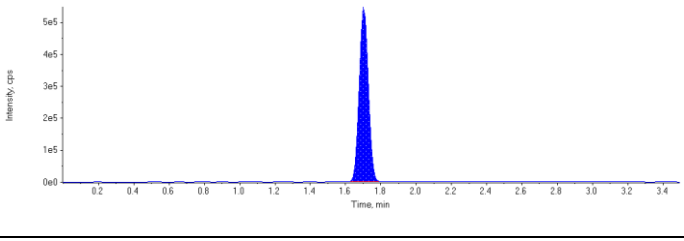
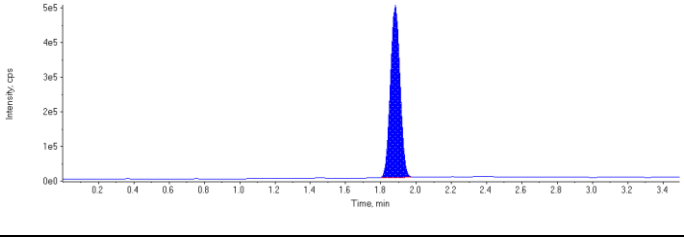
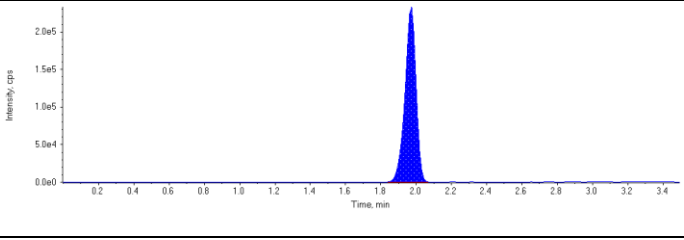
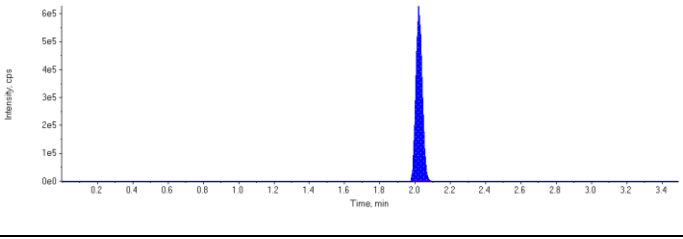
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 97.6 ng/L</p> <p>Area Ratio: 0.0691</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 107. ng/L</p> <p>Area Ratio: 0.225</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 108. ng/L</p> <p>Area Ratio: 0.196</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 104. ng/L</p> <p>Area Ratio: 0.0893</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 112. ng/L</p> <p>Area Ratio: 0.173</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 94.9 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

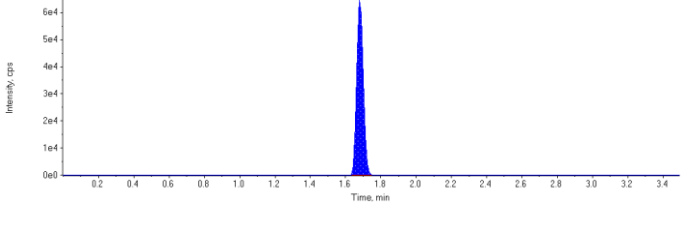
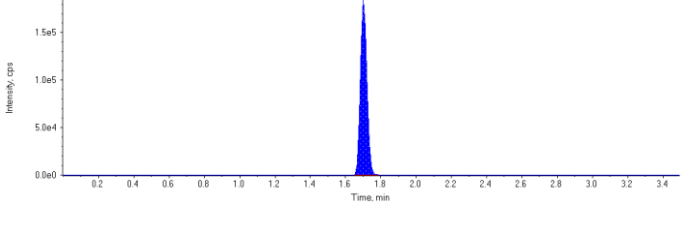
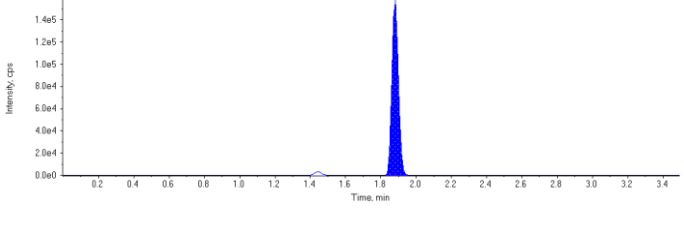
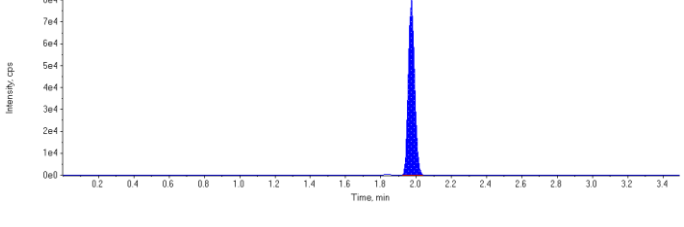
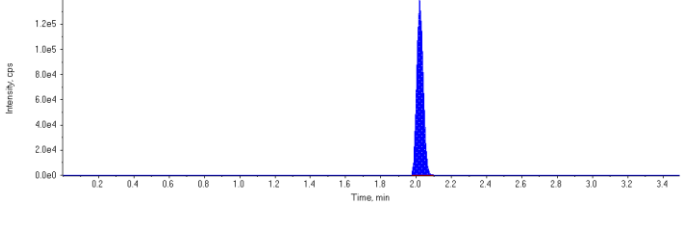
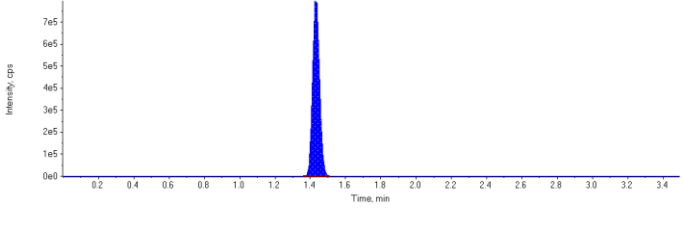
Sample Name	STD 4	Injection Vial	5
Sample ID	STD 4	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:01:17 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	169000.	1.68	1.00	-
MPFHpA	468000.	1.70	1.00	-
MPFOA	407000.	1.88	1.00	-
MPFOS	200000.	1.97	1.00	-
MPFNA	353000.	2.02	1.00	-
13C6-PFHxA IS	2240000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1360000	1.11	30.0	27.8	92.8
PFHxS 1	1490000	1.68	30.0	29.5	98.3
PFHpA 1	1950000	1.70	30.0	32.6	109.0
PFOA 1	1870000	1.88	30.0	30.8	103.0
PFOS 1	1020000	1.97	30.0	29.4	97.9
PFNA 1	1580000	2.02	30.0	31.6	105.0
18O2-PFHxS	169000	1.68	100.	106.	106.0
13C4-PFHpA	468000	1.70	100.	99.2	99.2
13C4-PFOA	407000	1.88	100.	99.5	99.5
13C4-PFOS	200000	1.97	100.	104.	104.0
13C5-PFNA	353000	2.02	100.	102.	102.0
13C6-PFHxA	2240000	1.43	100.	97.7	97.7

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

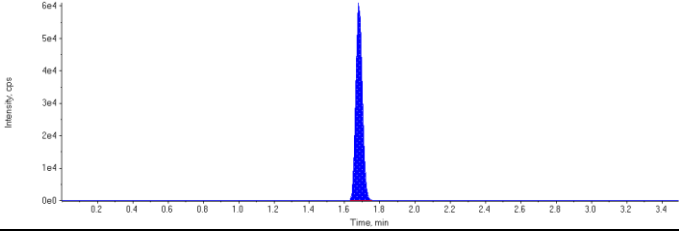
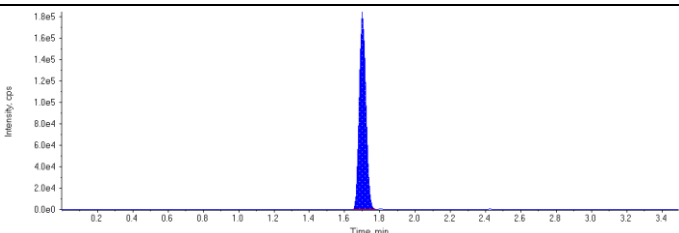
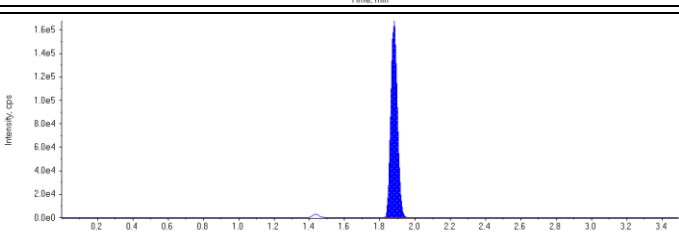
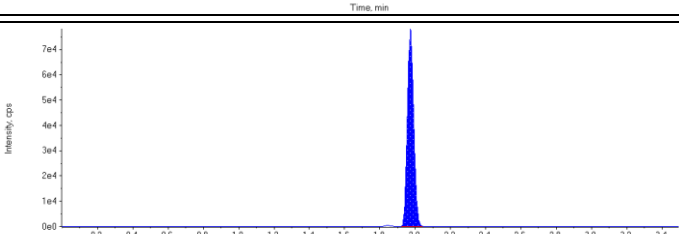
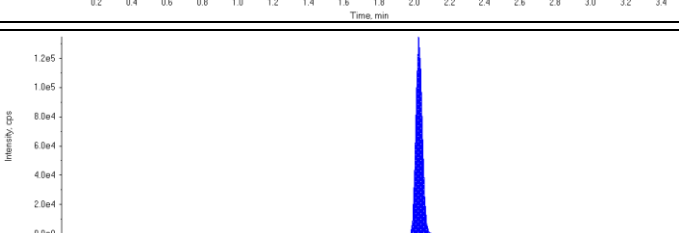
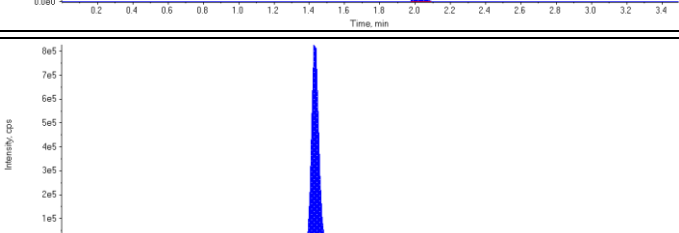
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 27.8 ng/L</p> <p>Area Ratio: 8.09</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 29.5 ng/L</p> <p>Area Ratio: 8.82</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 32.6 ng/L</p> <p>Area Ratio: 4.16</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 30.8 ng/L</p> <p>Area Ratio: 4.59</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 29.4 ng/L</p> <p>Area Ratio: 5.09</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 31.6 ng/L</p> <p>Area Ratio: 4.46</p> <p>Sample Type: (Standard)</p>	

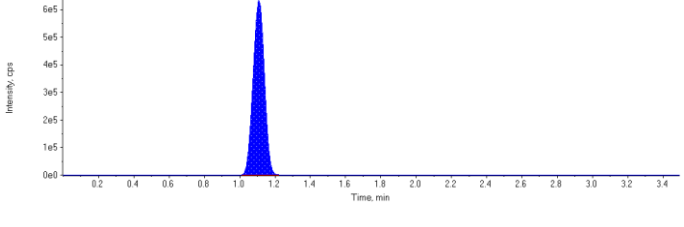
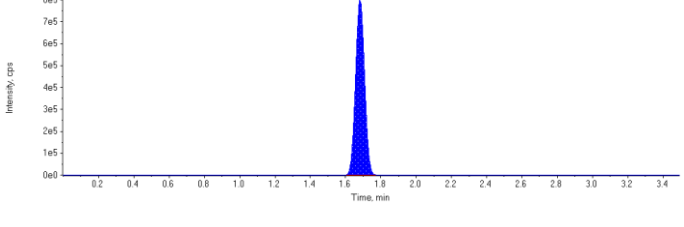
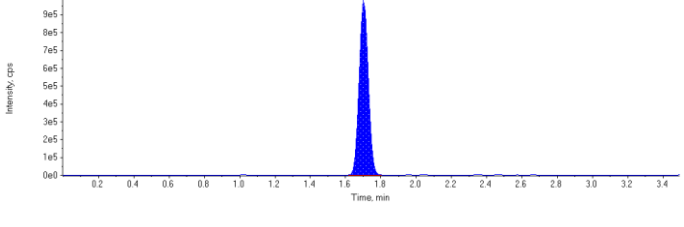
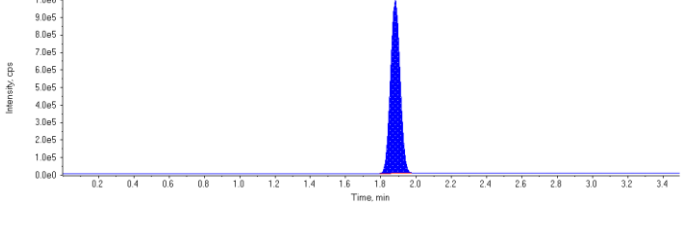
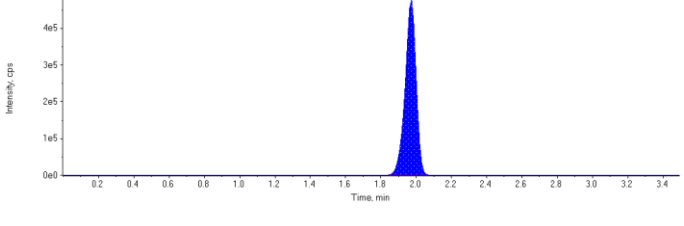
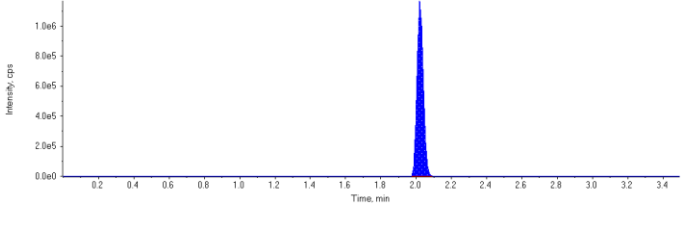
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 106. ng/L</p> <p>Area Ratio: 0.0752</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 99.2 ng/L</p> <p>Area Ratio: 0.209</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 99.5 ng/L</p> <p>Area Ratio: 0.181</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 104. ng/L</p> <p>Area Ratio: 0.0891</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 102. ng/L</p> <p>Area Ratio: 0.158</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 97.7 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

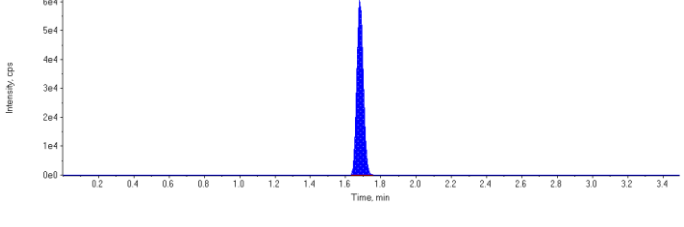
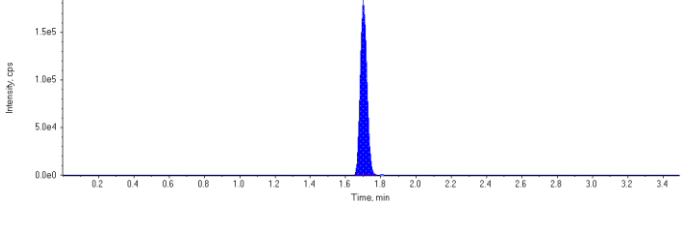
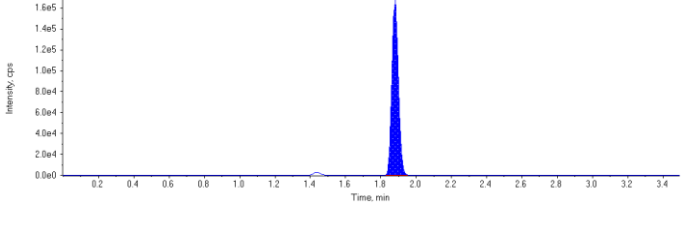
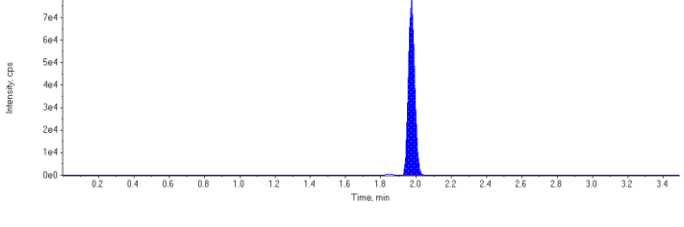
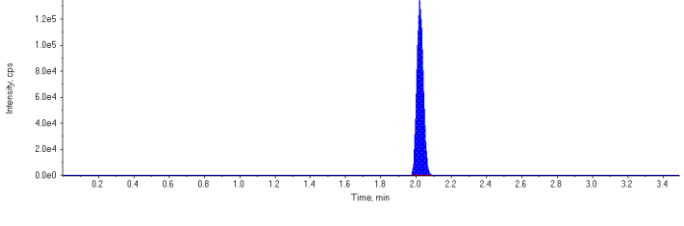
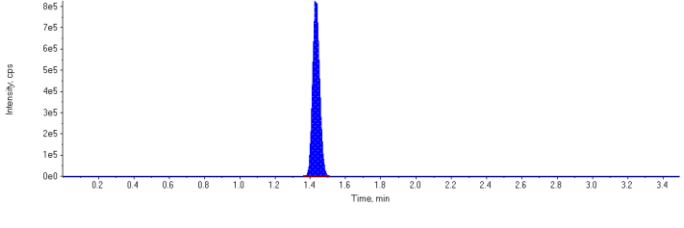
Sample Name	STD 5	Injection Vial	6
Sample ID	STD 5	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:06:21 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.68	1.00	-
MPFHpA	473000.	1.70	1.00	-
MPFOA	429000.	1.88	1.00	-
MPFOS	194000.	1.97	1.00	-
MPFNA	339000.	2.02	1.00	-
13C6-PFHxA IS	2330000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2840000	1.11	60.0	62.2	104.0
PFHxS 1	2870000	1.68	60.0	61.4	102.0
PFHpA 1	3500000	1.70	60.0	58.1	96.8
PFOA 1	3730000	1.88	60.0	58.3	97.2
PFOS 1	2060000	1.97	60.0	60.9	102.0
PFNA 1	2910000	2.02	60.0	60.5	101.0
18O2-PFHxS	156000	1.68	100.	94.4	94.4
13C4-PFHpA	473000	1.70	100.	96.5	96.5
13C4-PFOA	429000	1.88	100.	101.	101.0
13C4-PFOS	194000	1.97	100.	96.7	96.7
13C5-PFNA	339000	2.02	100.	93.8	93.8
13C6-PFHxA	2330000	1.43	100.	101.	101.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

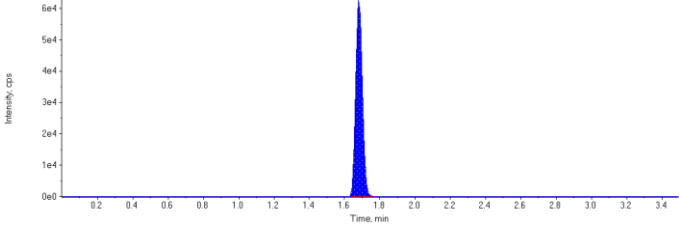
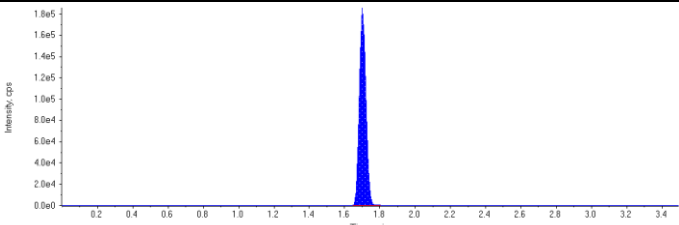
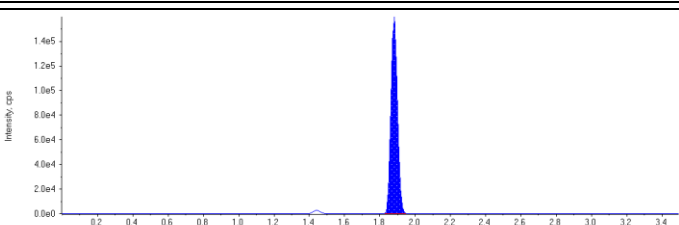
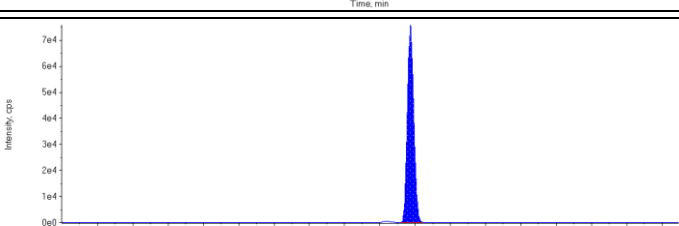
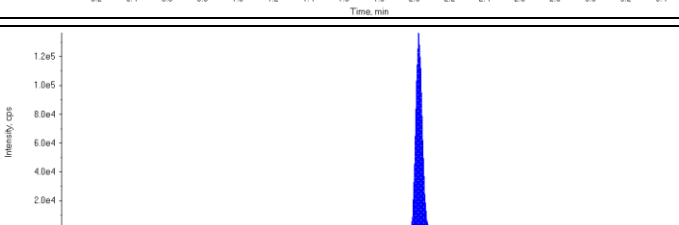
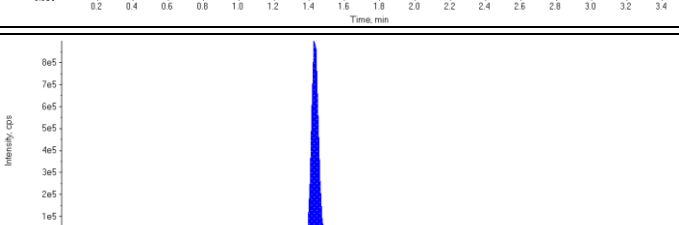
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 62.2 ng/L</p> <p>Area Ratio: 18.2</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 61.4 ng/L</p> <p>Area Ratio: 18.4</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 58.1 ng/L</p> <p>Area Ratio: 7.41</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 58.3 ng/L</p> <p>Area Ratio: 8.69</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 60.9 ng/L</p> <p>Area Ratio: 10.6</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 60.5 ng/L</p> <p>Area Ratio: 8.58</p> <p>Sample Type: (Standard)</p>	

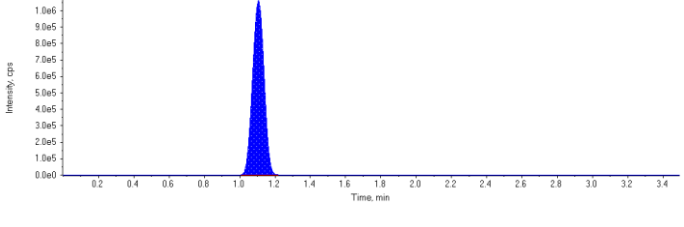
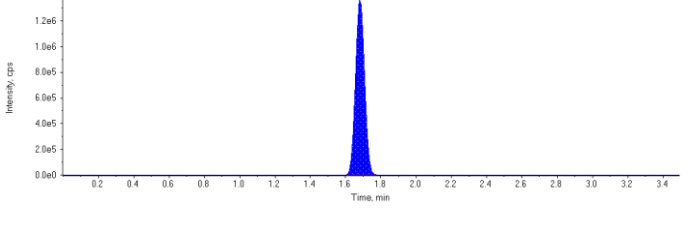
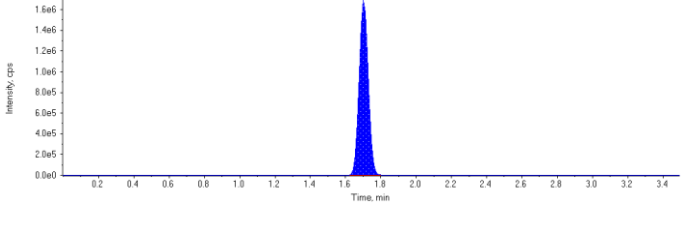
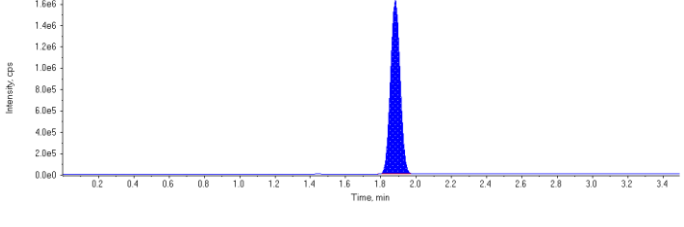
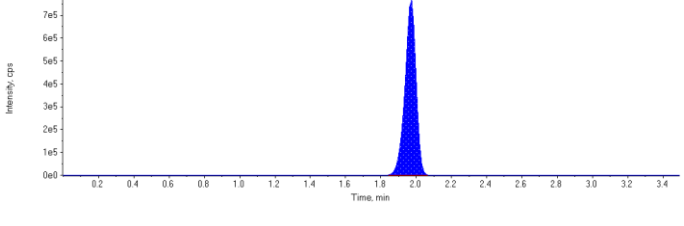
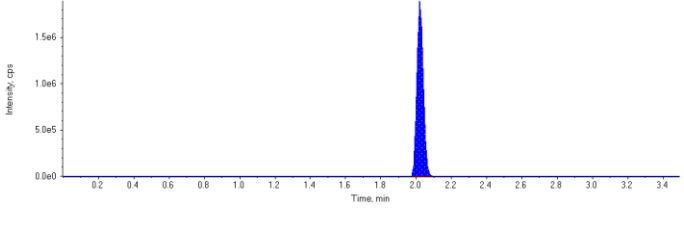
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 94.4 ng/L</p> <p>Area Ratio: 0.0669</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 96.5 ng/L</p> <p>Area Ratio: 0.203</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.184</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 96.7 ng/L</p> <p>Area Ratio: 0.0832</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 93.8 ng/L</p> <p>Area Ratio: 0.146</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

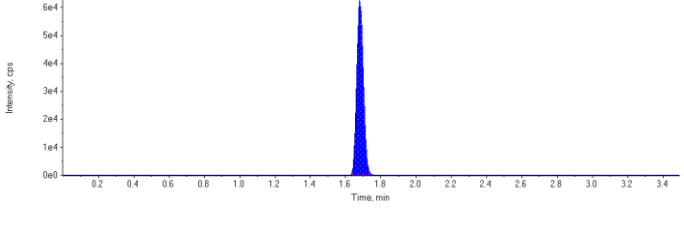
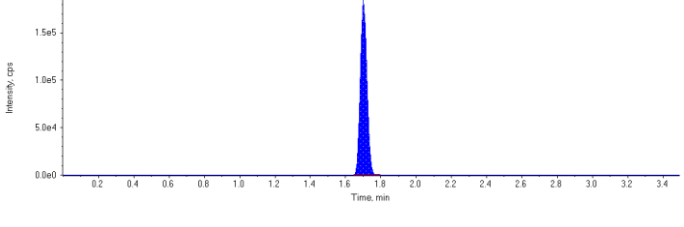
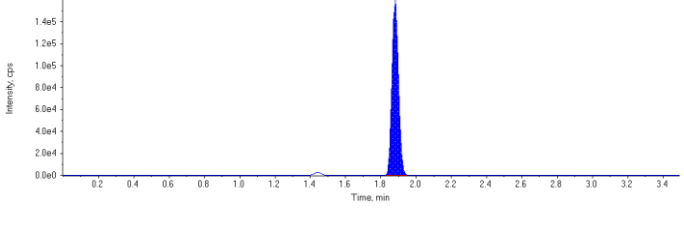
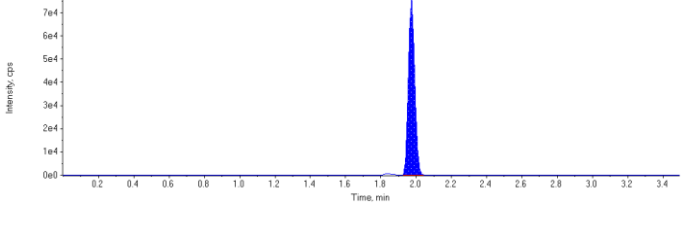
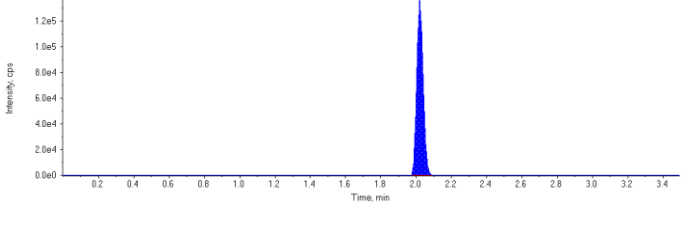
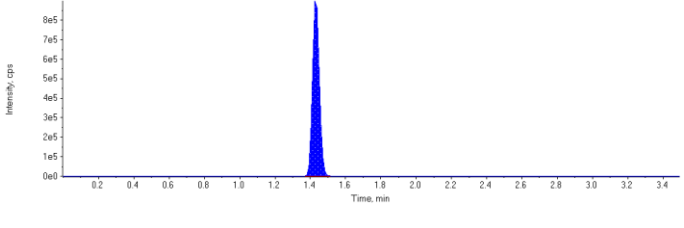
Sample Name	STD 6	Injection Vial	7
Sample ID	STD 6	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:11:27 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	164000.	1.68	1.00	-
MPFHpA	476000.	1.70	1.00	-
MPFOA	406000.	1.88	1.00	-
MPFOS	189000.	1.97	1.00	-
MPFNA	342000.	2.02	1.00	-
13C6-PFHxA IS	2470000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	4840000	1.11	100.	100.	100.0
PFHxS 1	4900000	1.68	100.	99.1	99.1
PFHpA 1	6040000	1.70	100.	99.6	99.6
PFOA 1	6120000	1.88	100.	101.	101.0
PFOS 1	3330000	1.97	100.	101.	101.0
PFNA 1	4800000	2.02	100.	99.0	99.0
18O2-PFHxS	164000	1.68	100.	94.0	94.0
13C4-PFHpA	476000	1.70	100.	91.5	91.5
13C4-PFOA	406000	1.88	100.	90.3	90.3
13C4-PFOS	189000	1.97	100.	89.1	89.1
13C5-PFNA	342000	2.02	100.	89.2	89.2
13C6-PFHxA	2470000	1.43	100.	108.	108.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)</p>	<p style="text-align: center;">This image is not available</p>

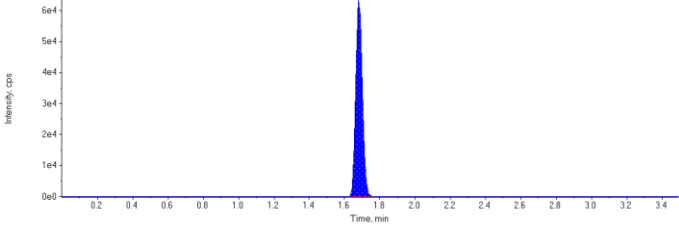
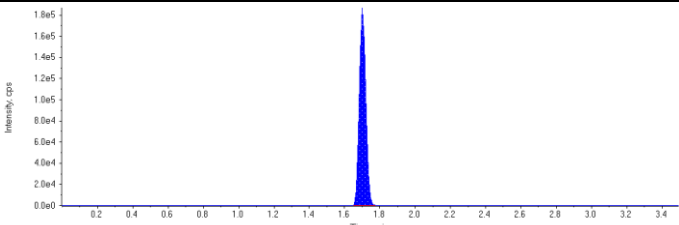
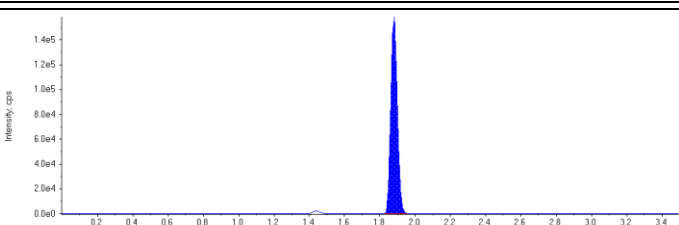
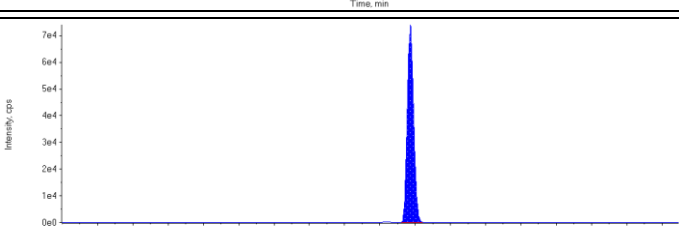
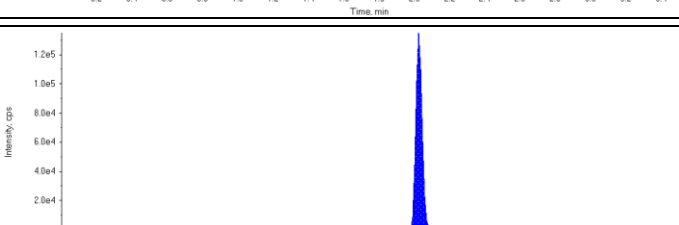
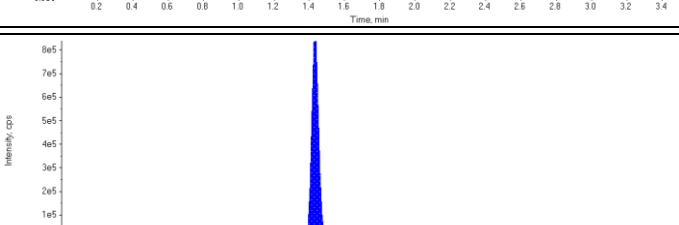
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 100. ng/L</p> <p>Area Ratio: 29.4</p> <p>Sample Type: (Standard)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 99.1 ng/L</p> <p>Area Ratio: 29.8</p> <p>Sample Type: (Standard)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 99.6 ng/L</p> <p>Area Ratio: 12.7</p> <p>Sample Type: (Standard)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 15.1</p> <p>Sample Type: (Standard)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 17.6</p> <p>Sample Type: (Standard)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 99.0 ng/L</p> <p>Area Ratio: 14.0</p> <p>Sample Type: (Standard)</p>	

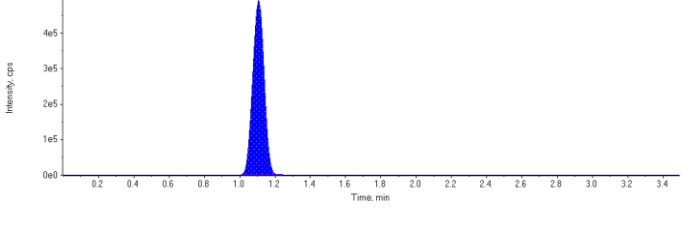
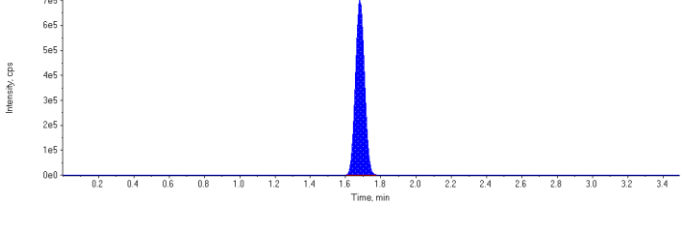
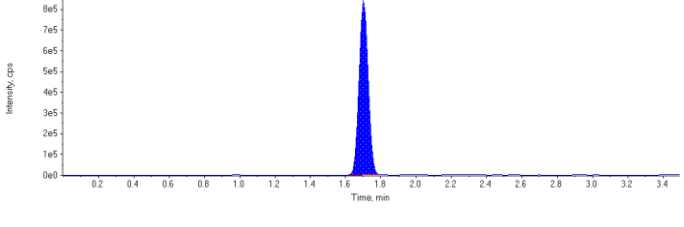
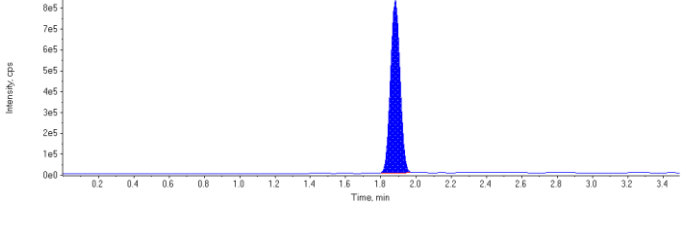
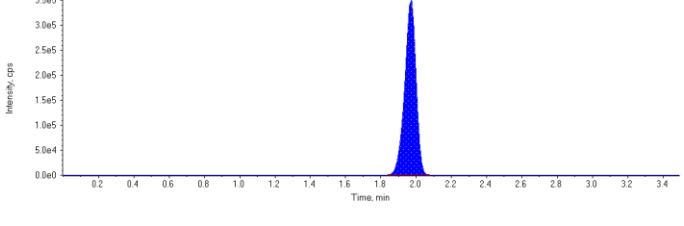
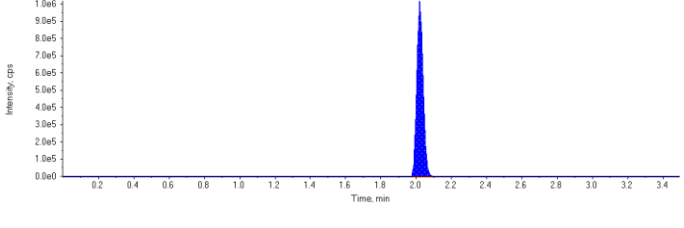
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 94.0 ng/L</p> <p>Area Ratio: 0.0666</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 91.5 ng/L</p> <p>Area Ratio: 0.193</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 90.3 ng/L</p> <p>Area Ratio: 0.165</p> <p>Sample Type: (Standard)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 89.1 ng/L</p> <p>Area Ratio: 0.0766</p> <p>Sample Type: (Standard)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 89.2 ng/L</p> <p>Area Ratio: 0.138</p> <p>Sample Type: (Standard)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 108. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Standard)</p>	

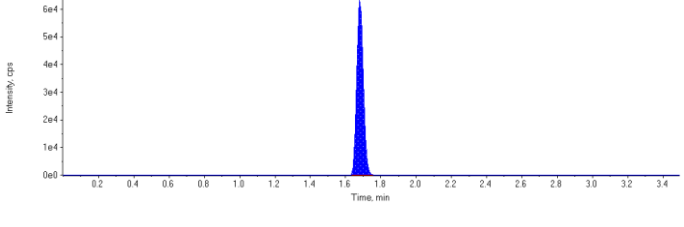
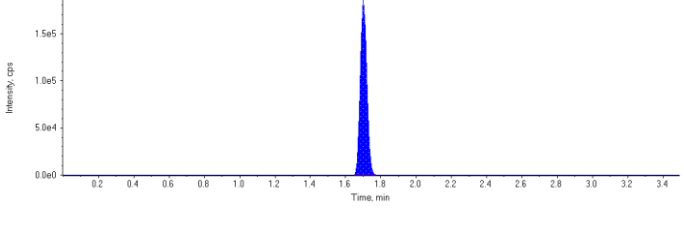
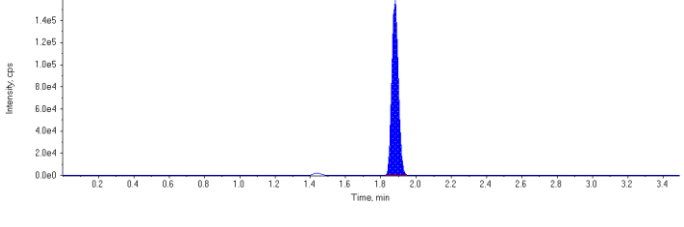
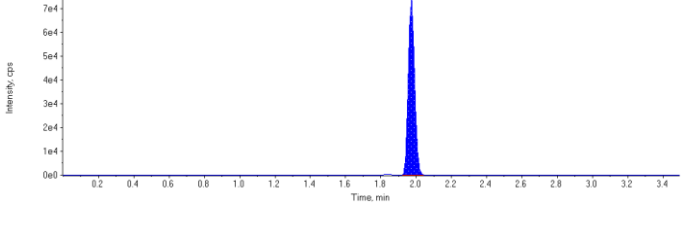
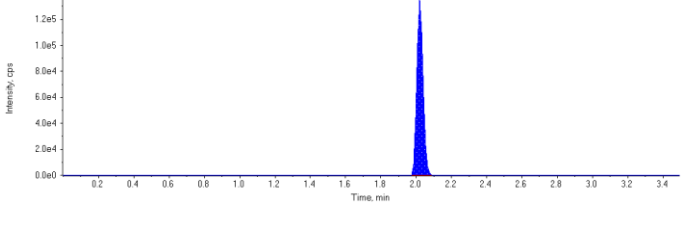
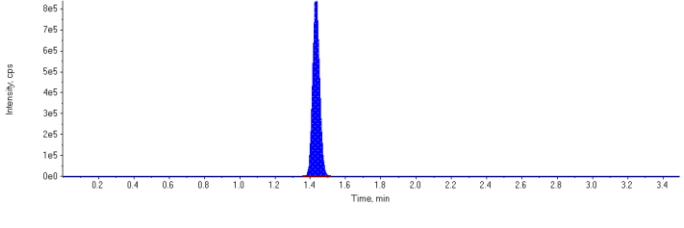
Sample Name	ICV	Injection Vial	8
Sample ID	ICV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:16:32 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	164000.	1.68	1.00	-
MPFHpA	473000.	1.70	1.00	-
MPFOA	404000.	1.88	1.00	-
MPFOS	184000.	1.97	1.00	-
MPFNA	334000.	2.02	1.00	-
13C6-PFHxA IS	2350000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2210000	1.11	50.0	45.9	91.8
PFHxS 1	2510000	1.68	50.0	51.0	102.0
PFHpA 1	2990000	1.70	50.0	49.6	99.3
PFOA 1	3100000	1.88	50.0	51.3	103.0
PFOS 1	1550000	1.97	50.0	48.3	96.7
PFNA 1	2520000	2.02	50.0	53.4	107.0
18O2-PFHxS	164000	1.68	100.	98.5	98.5
13C4-PFHpA	473000	1.70	100.	95.4	95.4
13C4-PFOA	404000	1.88	100.	94.2	94.2
13C4-PFOS	184000	1.97	100.	91.1	91.1
13C5-PFNA	334000	2.02	100.	91.3	91.3
13C6-PFHxA	2350000	1.43	100.	103.	103.0

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 45.9 ng/L</p> <p>Area Ratio: 13.4</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 51.0 ng/L</p> <p>Area Ratio: 15.3</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 49.6 ng/L</p> <p>Area Ratio: 6.33</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 51.3 ng/L</p> <p>Area Ratio: 7.66</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 48.3 ng/L</p> <p>Area Ratio: 8.42</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 53.4 ng/L</p> <p>Area Ratio: 7.56</p> <p>Sample Type: (Quality Control)</p>	

<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 98.5 ng/L</p> <p>Area Ratio: 0.0698</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 95.4 ng/L</p> <p>Area Ratio: 0.201</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 94.2 ng/L</p> <p>Area Ratio: 0.172</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 91.1 ng/L</p> <p>Area Ratio: 0.0783</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 91.3 ng/L</p> <p>Area Ratio: 0.142</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 103. ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

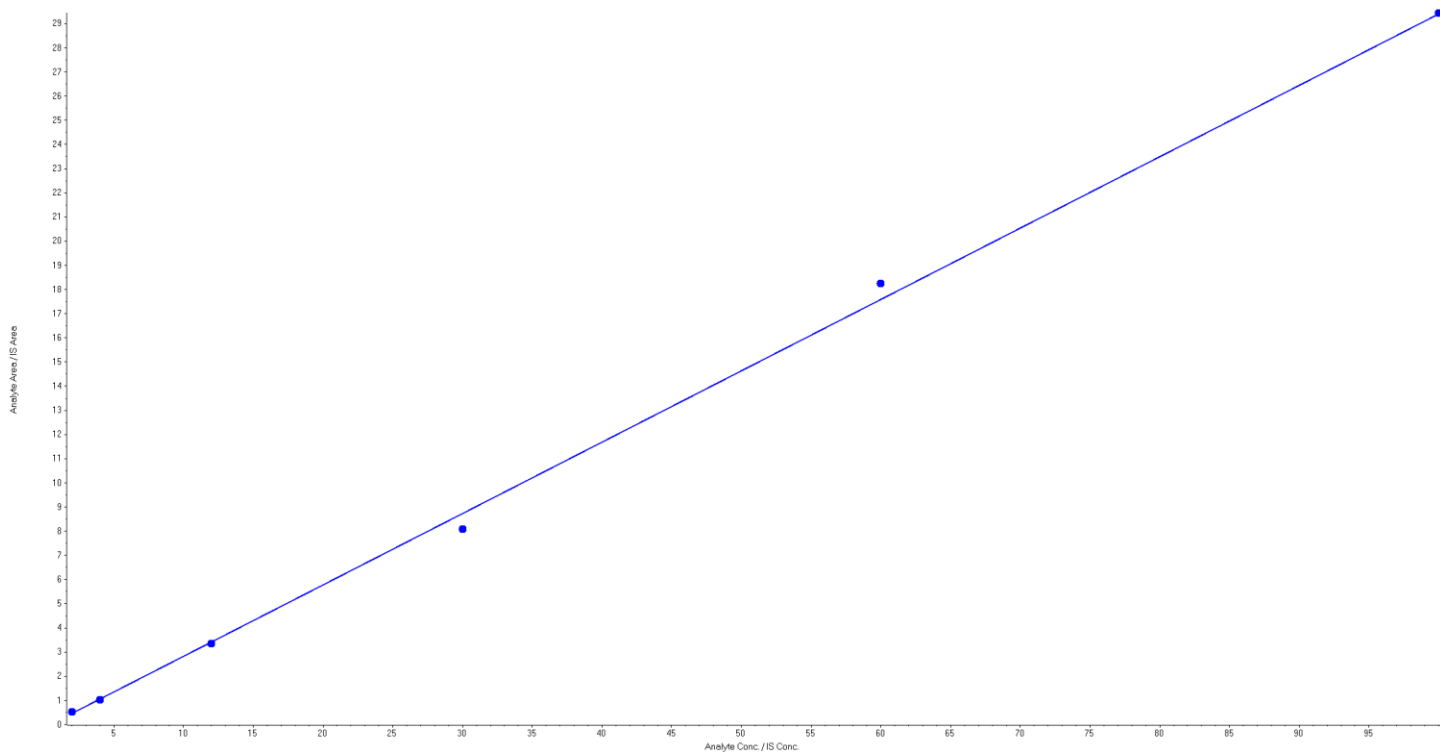
Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	162500		162500		482000		417167		197000		354833	
		IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)
4389346~BLANK		133000	82	133000	82	399000	83	379000	91	177000	90	287000	81
STD 1		165000	102	165000	102	494000	102	430000	103	202000	103	363000	102
STD 2		170000	105	170000	105	492000	102	404000	97	202000	103	355000	100
STD 3		151000	93	151000	93	489000	101	427000	102	195000	99	377000	106
STD 4		169000	104	169000	104	468000	97	407000	98	200000	102	353000	99
STD 5		156000	96	156000	96	473000	98	429000	103	194000	98	339000	96
STD 6		164000	101	164000	101	476000	99	406000	97	189000	96	342000	96
ICV		164000	101	164000	101	473000	98	404000	97	184000	93	334000	94
CCV		156000	96	156000	96	494000	102	435000	104	198000	101	358000	101
4389346~MTRX SPK		132000	81	132000	81	412000	85	351000	84	150000	76	284000	80
4389346~MTRX SPK:D1		135000	83	135000	83	357000	74	329000	79	143000	73	254000	72
4389346~SPIKE		134000	82	134000	82	408000	85	347000	83	172000	87	275000	78
4389346~BVX806-01		116000	71	116000	71	371000	77	338000	81	147000	75	277000	78
4389346~BVX807-01		94800	58	94800	58	283000	59	259000	62	110000	56	192000	54
4389346~BVX808-01		120000	74	120000	74	336000	70	295000	71	135000	69	235000	66
4389346~BVX809-01		116000	71	116000	71	323000	67	295000	71	137000	70	230000	65
4389346~BVX810-01		99300	61	99300	61	287000	60	265000	64	132000	67	227000	64
4389346~BVX811-01		105000	65	105000	65	293000	61	284000	68	131000	66	222000	63
4389346~BVX841-01		92100	57	92100	57	280000	58	248000	59	124000	63	203000	57
4389346~BVX842-01		76700	47	76700	47	242000	50	231000	55	82900	42	183000	52
4389346~BVX843-01		108000	66	108000	66	319000	66	288000	69	138000	70	224000	63
4389346~BVX844-01		106000	65	106000	65	296000	61	254000	61	112000	57	243000	68
CCV		140000	86	140000	86	426000	88	386000	93	191000	97	327000	92
4389346~BVX845-01		109000	67	109000	67	308000	64	265000	64	113000	57	225000	63
4389346~BVX846-01		186000	114	186000	114	536000	111	513000	123	246000	125	410000	116
4389346~BVX847-01		126000	78	126000	78	364000	76	312000	75	136000	69	262000	74
4389346~BVX850-01		125000	77	125000	77	308000	64	293000	70	153000	78	248000	70
4389346~BVX851-01		139000	86	139000	86	263000	55	258000	62	156000	79	209000	59
CCV		141000	87	141000	87	411000	85	393000	94	197000	100	331000	93
4389346~MTRX SPK		129000	79	129000	79	336000	70	349000	84	148000	75	260000	73
4389346~MTRX SPK:D1		124000	76	124000	76	319000	66	299000	72	148000	75	233000	66
4389346~BVX807-01		95700	59	95700	59	255000	53	238000	57	108000	55	179000	50
4389346~BVX842-01		70600	43	70600	43	227000	47	203000	49	87800	45	169000	48
4389346~BVX846-01		193000	119	193000	119	524000	109	505000	121	244000	124	408000	115
4389346~BVX851-01		132000	81	132000	81	258000	54	245000	59	150000	76	212000	60
CCV		144000	89	144000	89	399000	83	367000	88	181000	92	305000	86

Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.295 x + -0.128$ (r = 0.9992)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.17	108.6
4	1	3.86	96.6
12	1	11.79	98.2
30	1	27.84	92.8
60	1	62.20	103.7
100	1	100.14	100.1

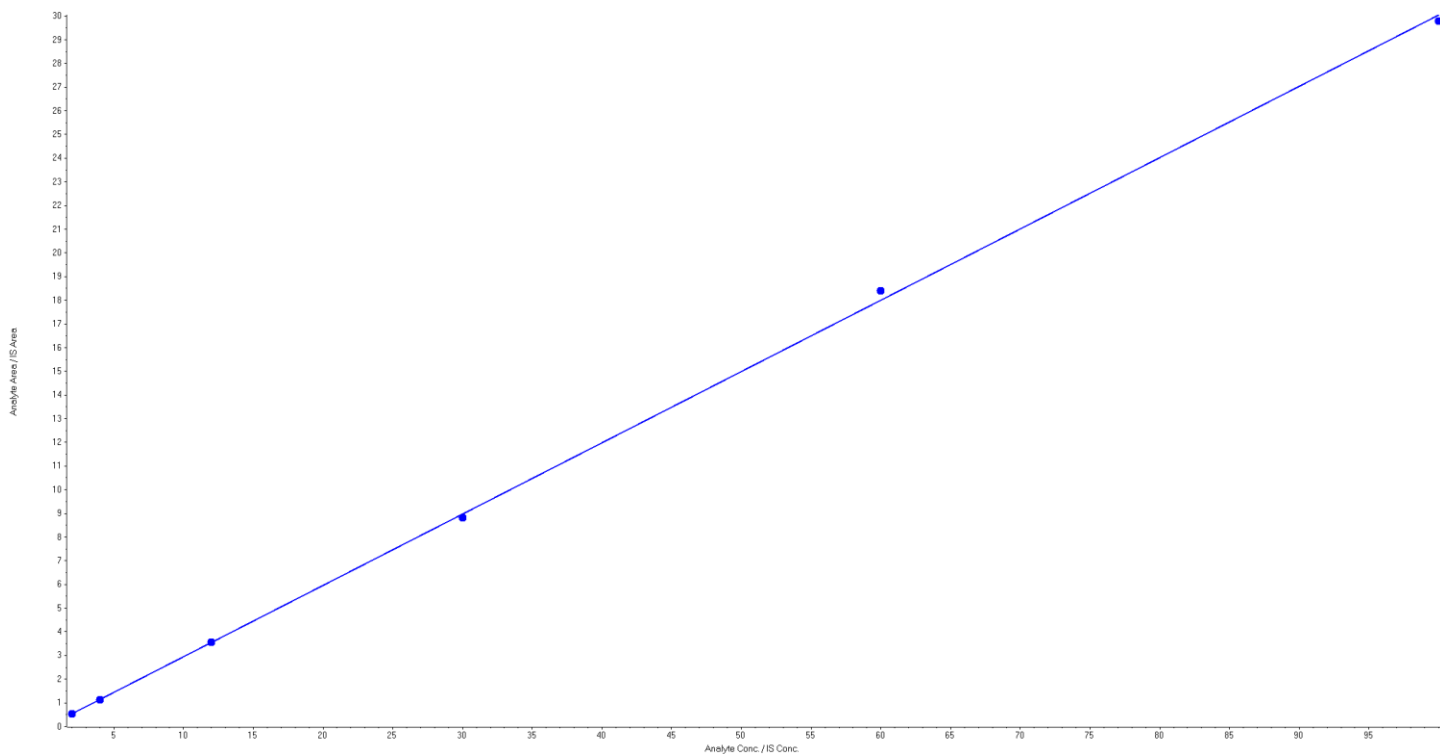


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.301 x + -0.0618$ (r = 0.9999)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.03	101.7
4	1	3.93	98.2
12	1	12.04	100.3
30	1	29.49	98.3
60	1	61.36	102.3
100	1	99.15	99.1

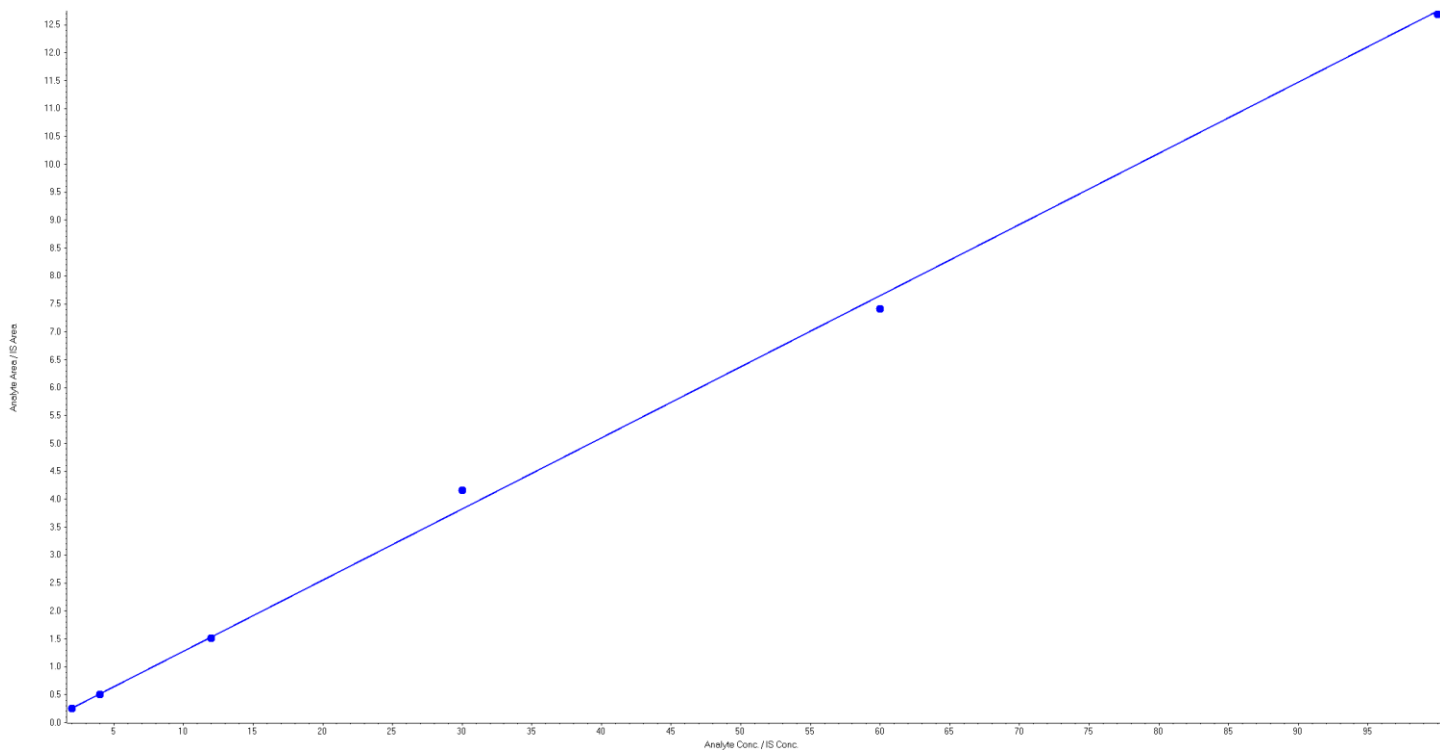


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.127 x + 0.00305$ (r = 0.9991)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	1.97	98.4
4	1	3.91	97.6
12	1	11.87	98.9
30	1	32.60	108.7
60	1	58.11	96.8
100	1	99.55	99.6

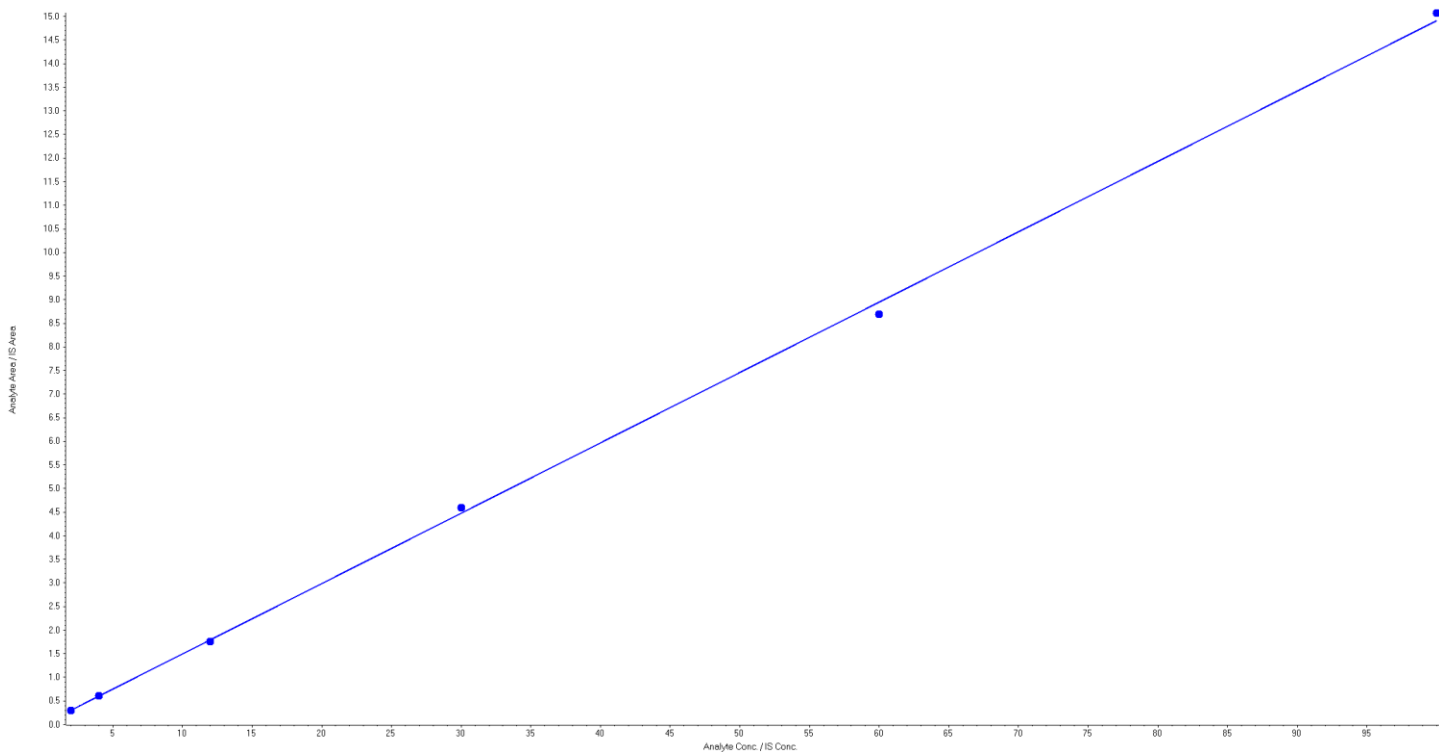


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.149x + 0.00499$ (r = 0.9997)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	1.97	98.7
4	1	4.10	102.4
12	1	11.77	98.0
30	1	30.79	102.6
60	1	58.29	97.2
100	1	101.08	101.1

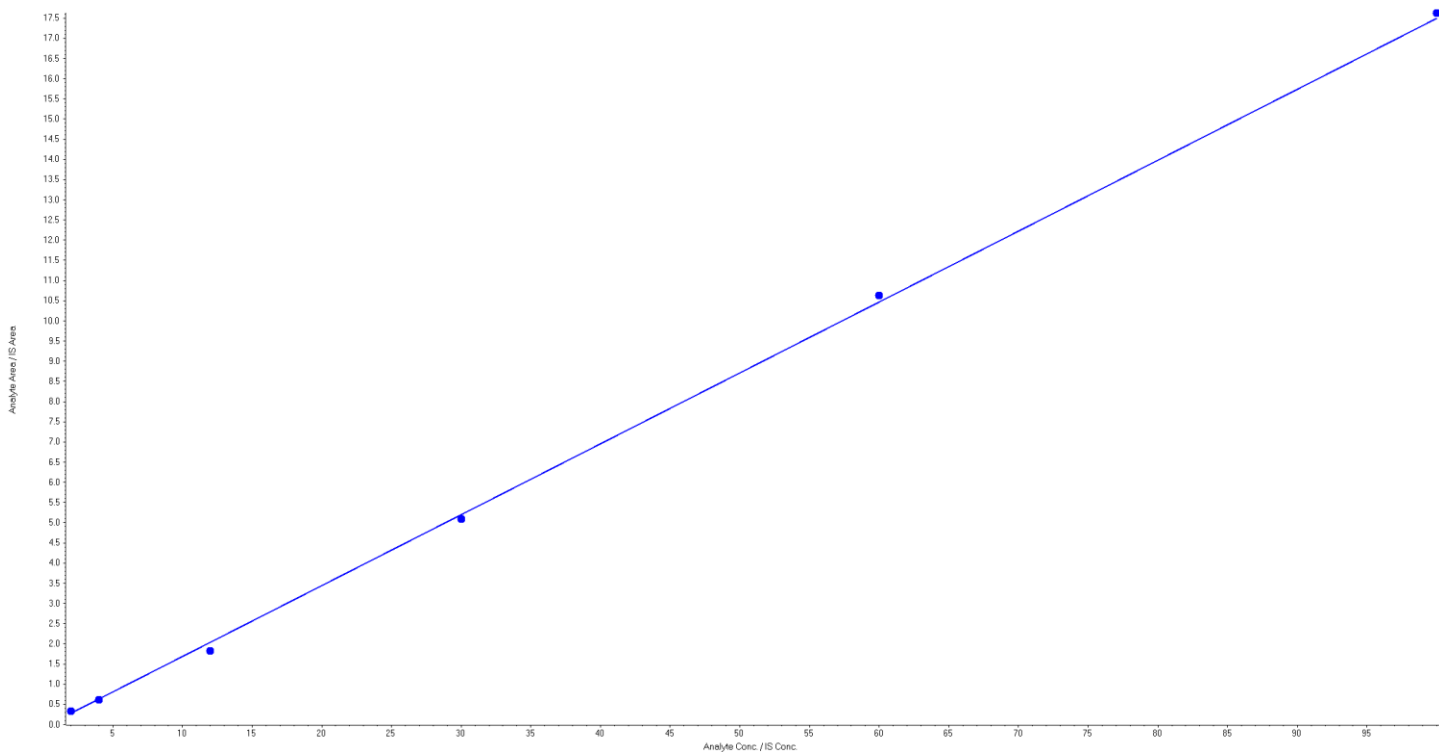


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.176 x + -0.0708$ (r = 0.9994)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.26	113.2
4	1	3.85	96.3
12	1	10.83	90.3
30	1	29.37	97.9
60	1	60.93	101.5
100	1	100.75	100.8

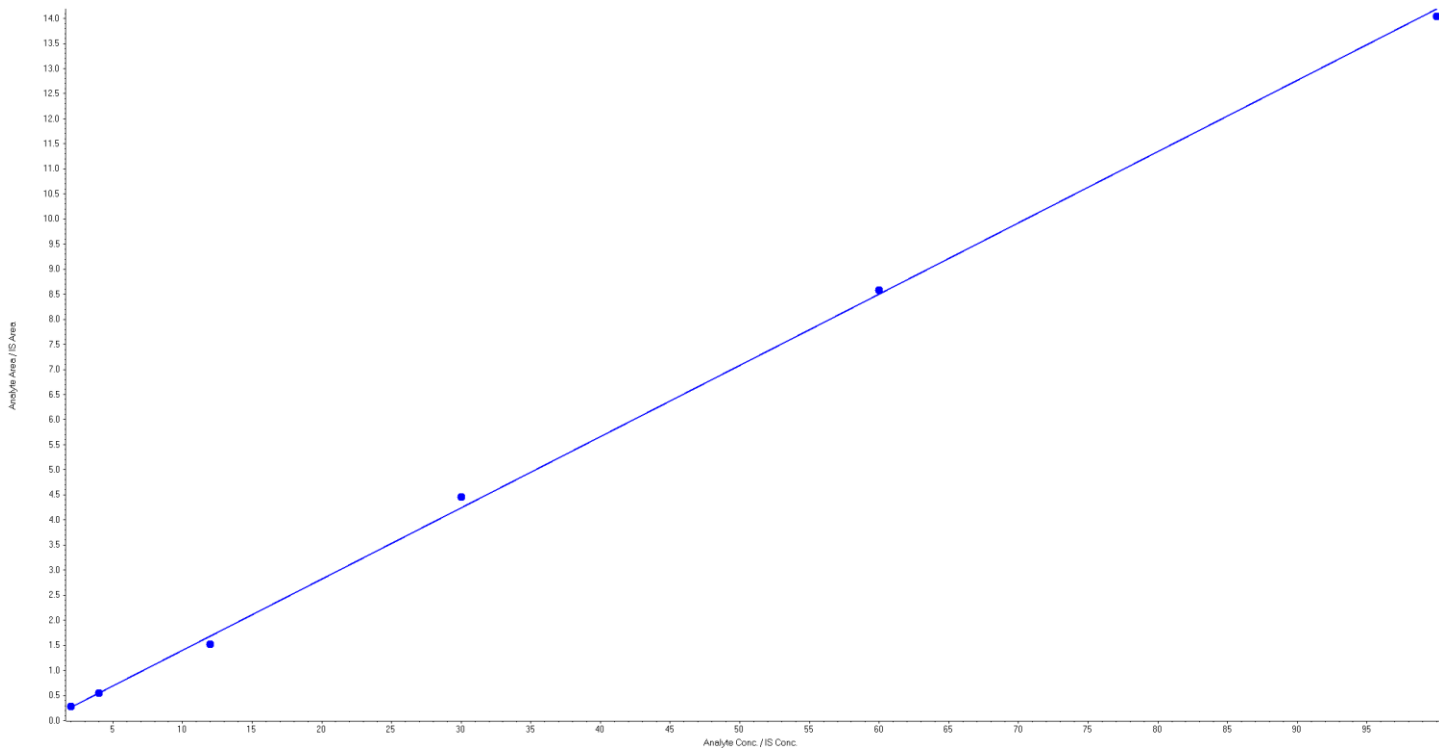


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.142 x + -0.0211$ (r = 0.9994)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.10	104.9
4	1	3.98	99.6
12	1	10.86	90.5
30	1	31.56	105.2
60	1	60.54	100.9
100	1	98.96	99.0

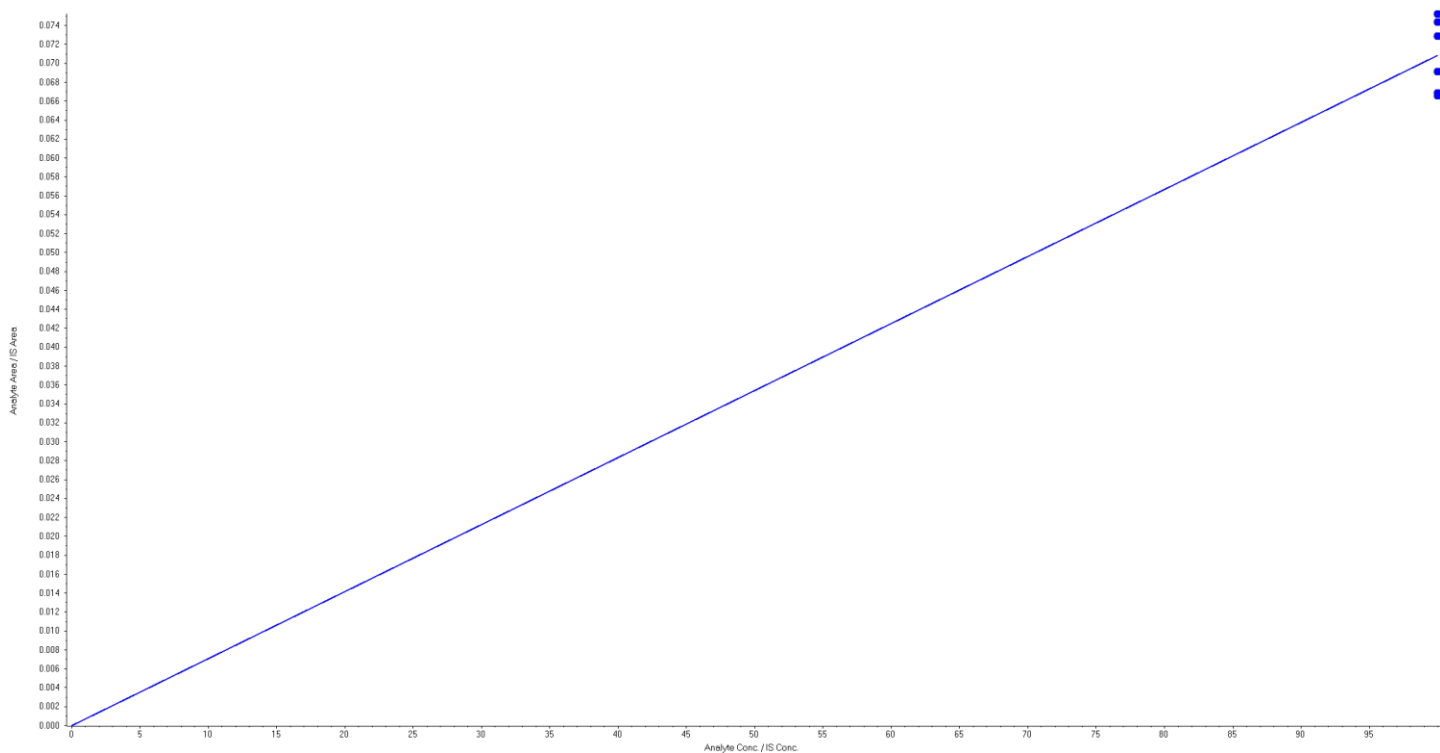


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000708 x (r = 0.9988)$

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

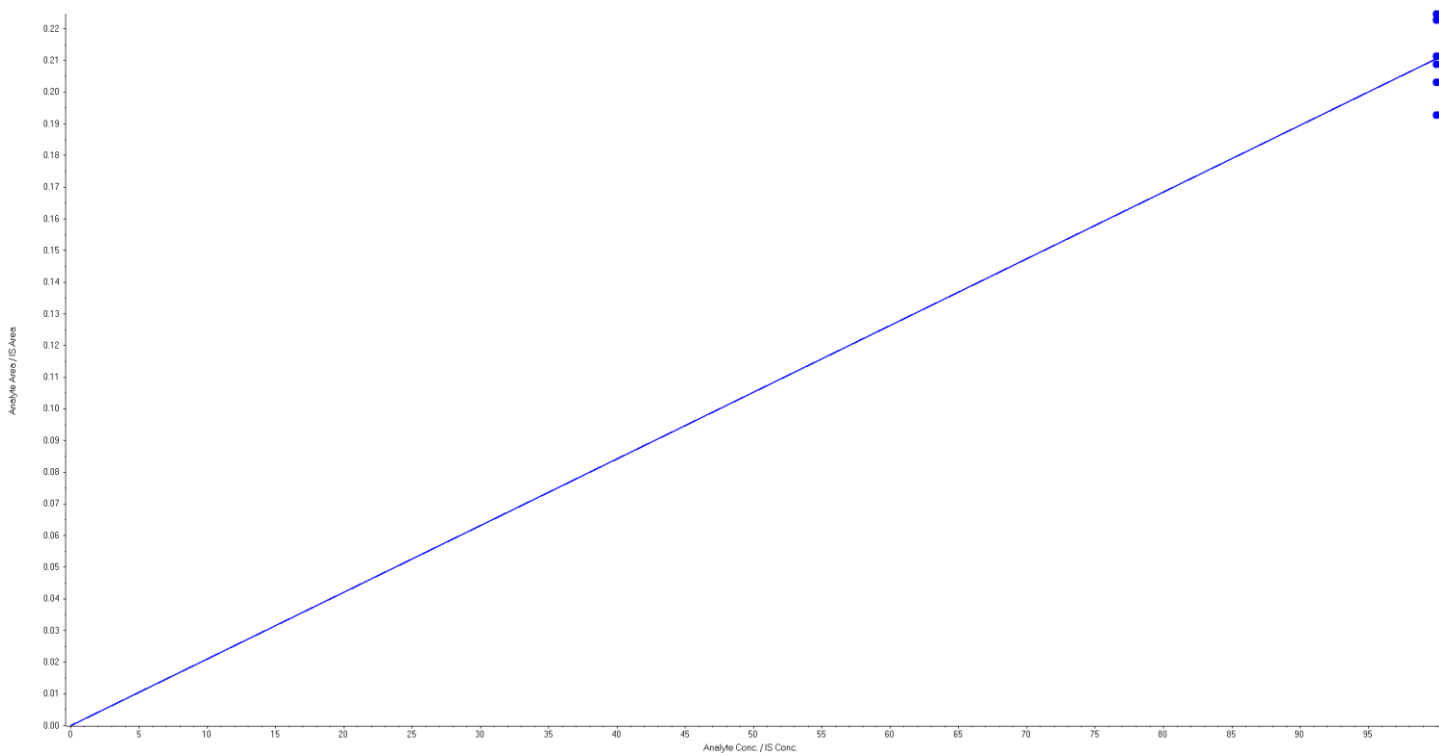


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00211 x (r = 0.9986)$

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

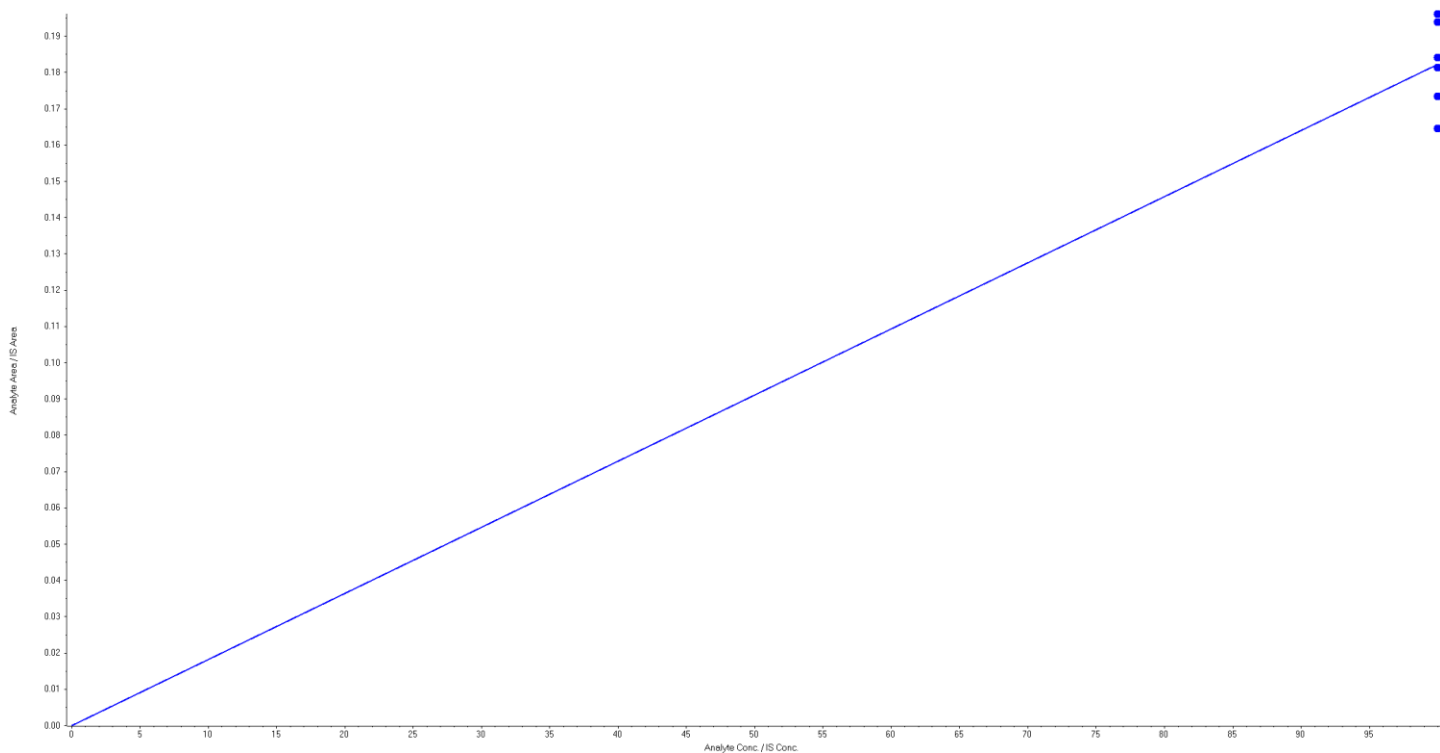


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00182 x (r = 0.9982)$

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

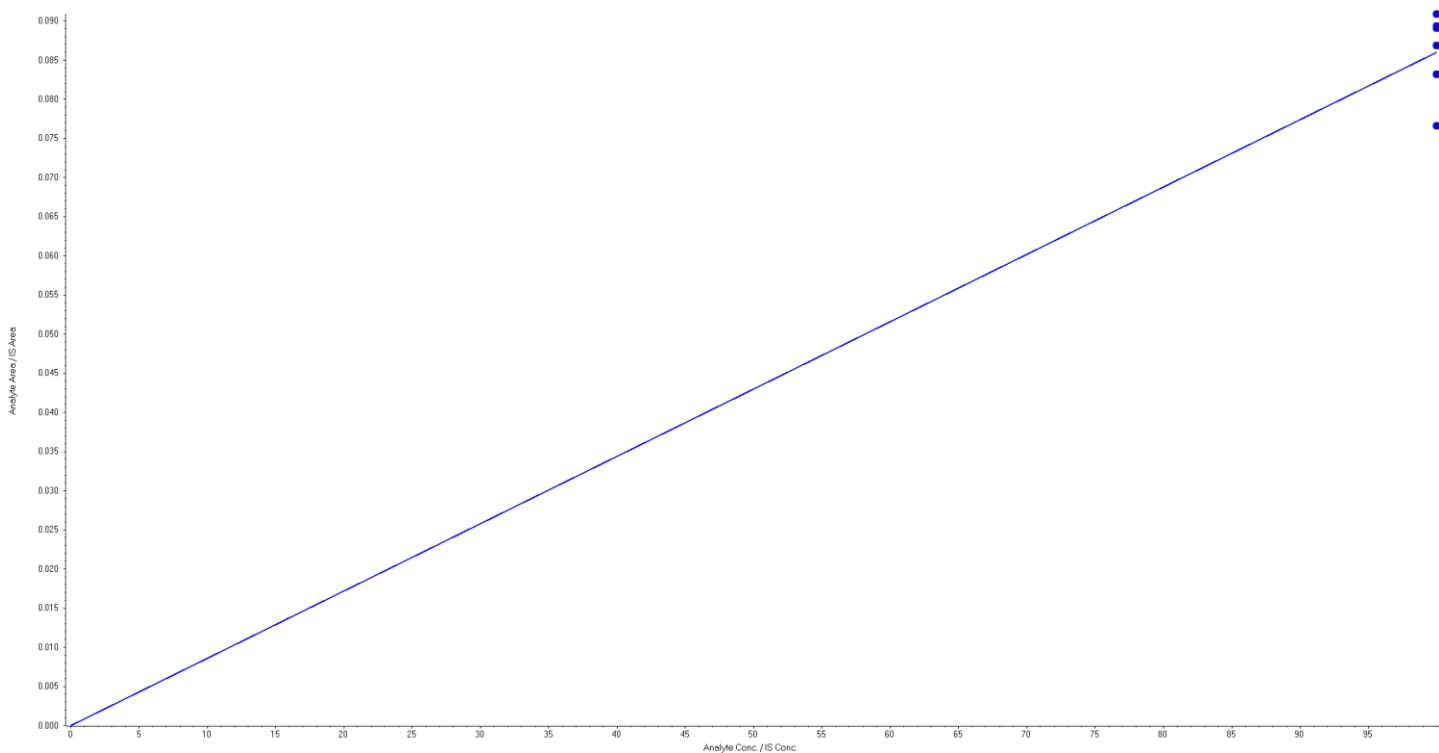


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00086 x (r = 0.9984)$

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

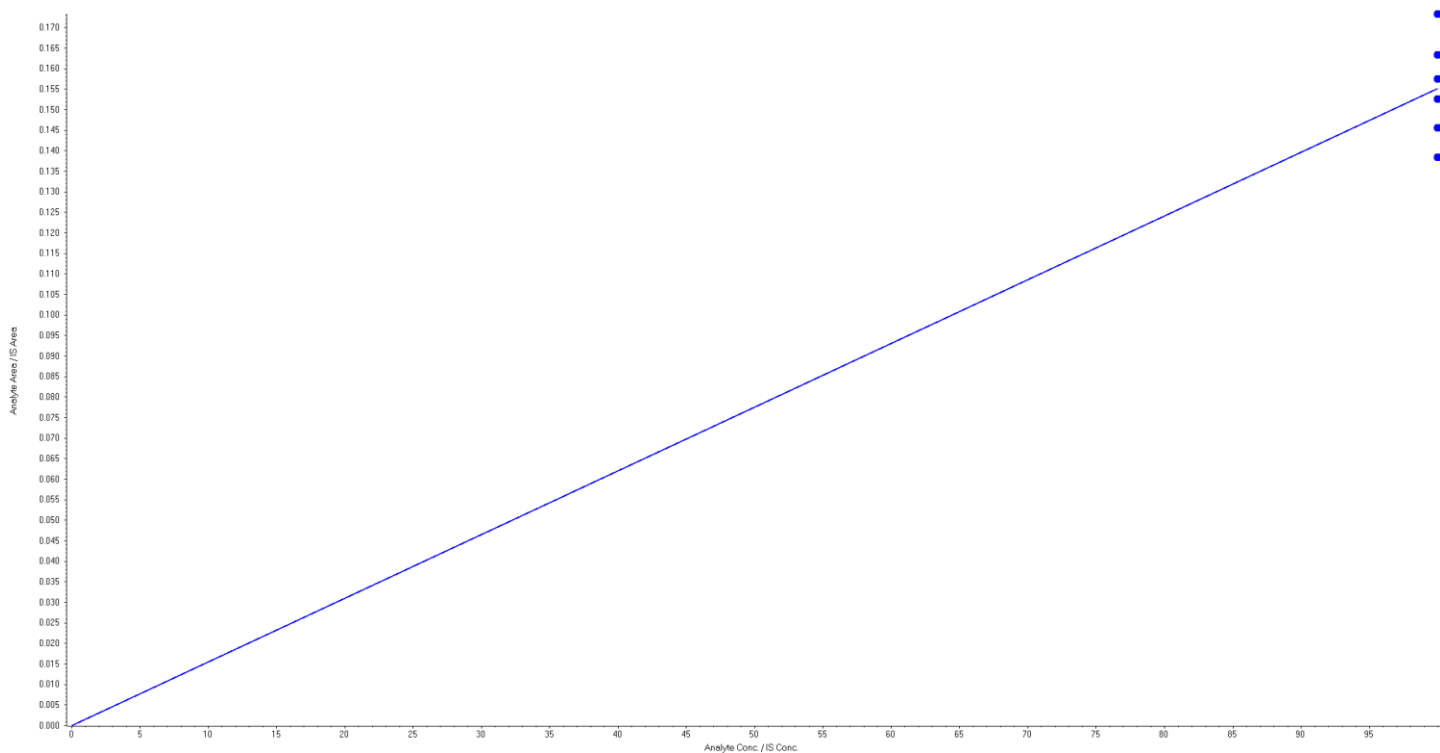


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160222\WS#4389346.wiff	Result Table	PFC_Water_160222_4389346_ULow.rdb
Acquisition Date	2016/02/22 11:40:54 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00155 x (r = 0.9973)$

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0





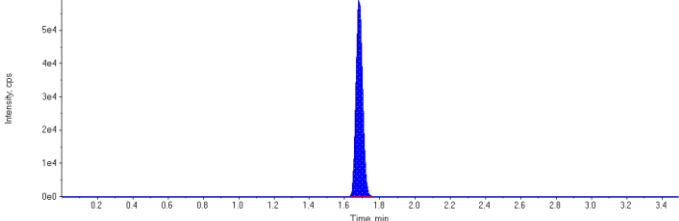
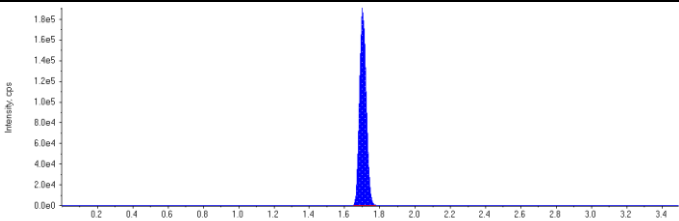
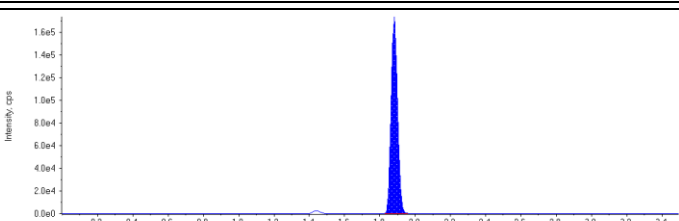
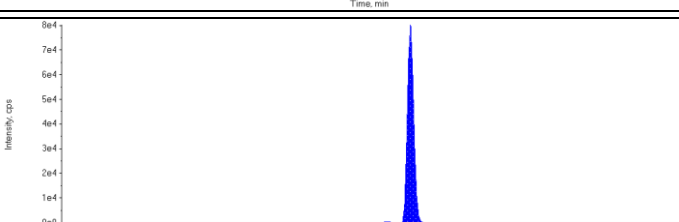
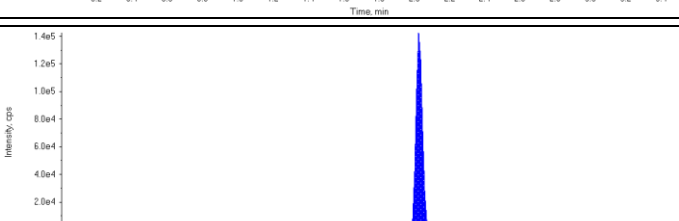
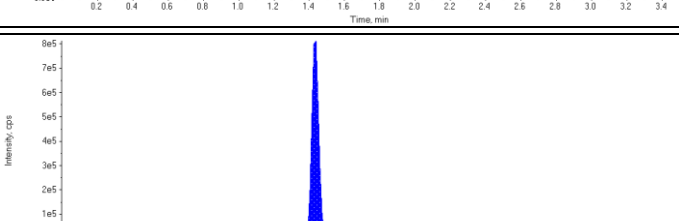
6. Continuing Calibration

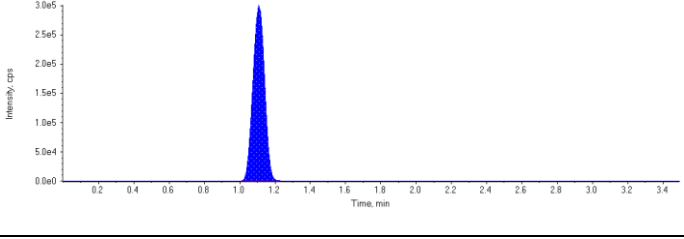
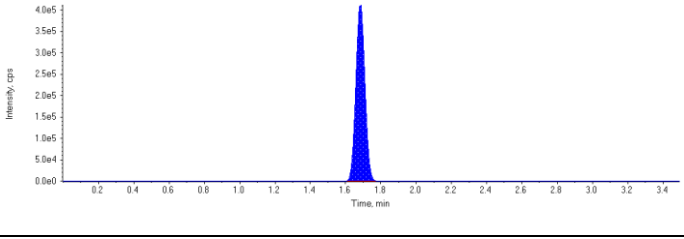
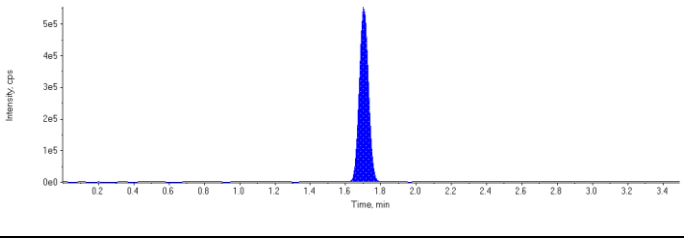
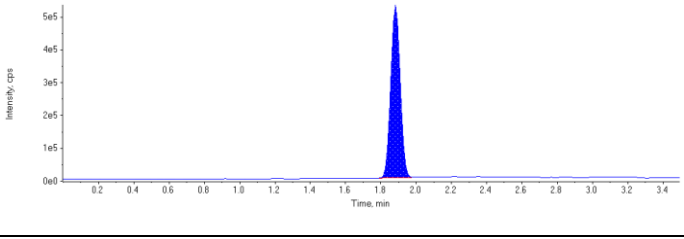
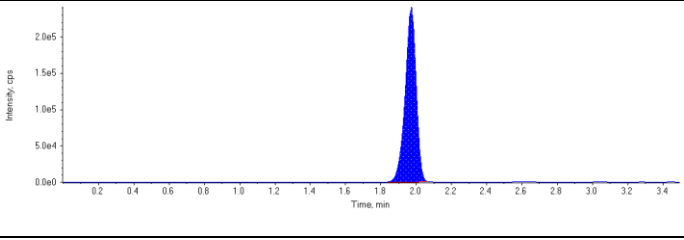
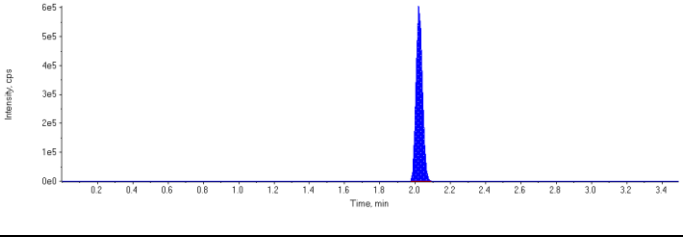
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

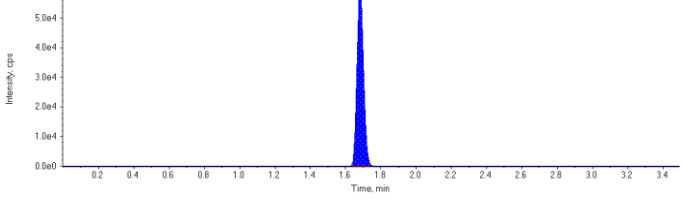
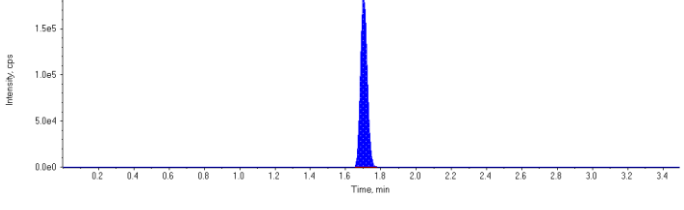
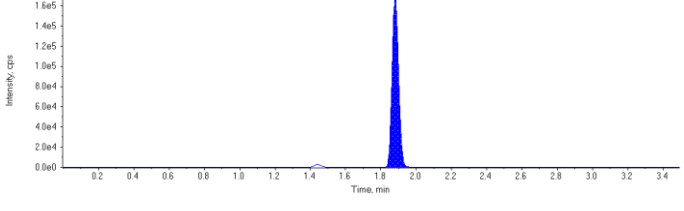
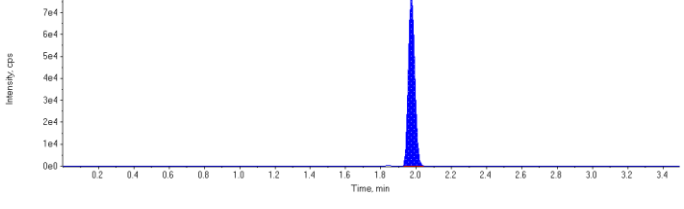
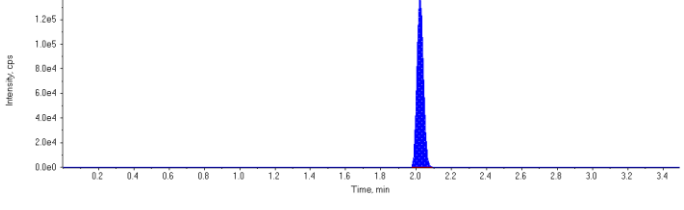
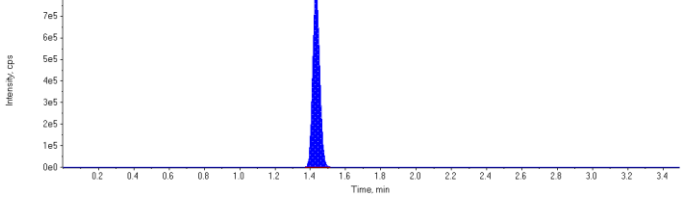
Sample Name	CCV	Injection Vial	5
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 12:21:38 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.68	1.00	-
MPFHpA	494000.	1.70	1.00	-
MPFOA	435000.	1.88	1.00	-
MPFOS	198000.	1.97	1.00	-
MPFNA	358000.	2.02	1.00	-
13C6-PFHxA IS	2290000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1380000	1.11	30.0	30.4	101.0
PFHxS 1	1480000	1.68	30.0	31.9	106.0
PFHpA 1	1960000	1.70	30.0	31.2	104.0
PFOA 1	1950000	1.88	30.0	30.0	100.0
PFOS 1	1040000	1.97	30.0	30.3	101.0
PFNA 1	1530000	2.02	30.0	30.1	100.0
18O2-PFHxS	156000	1.68	100.	96.0	96.0
13C4-PFHpA	494000	1.70	100.	103.	103.0
13C4-PFOA	435000	1.88	100.	104.	104.0
13C4-PFOS	198000	1.97	100.	101.	101.0
13C5-PFNA	358000	2.02	100.	101.	101.0
13C6-PFHxA	2290000	1.43	100.	99.8	99.8

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

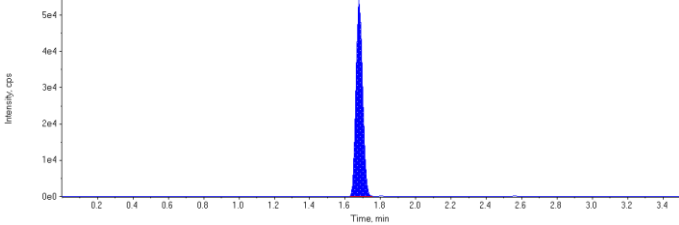
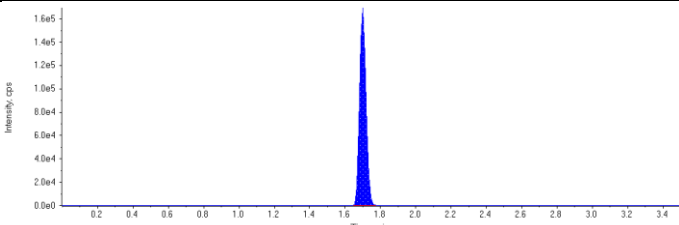
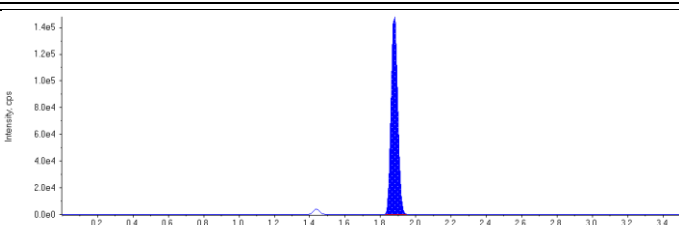
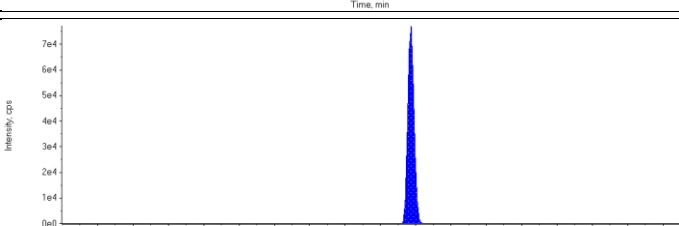
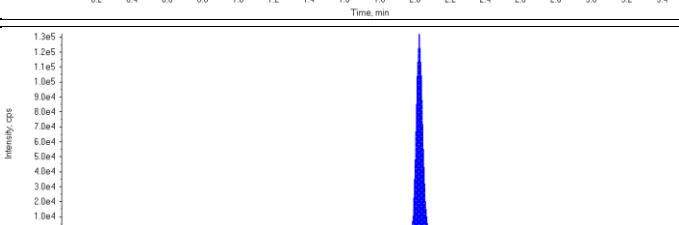
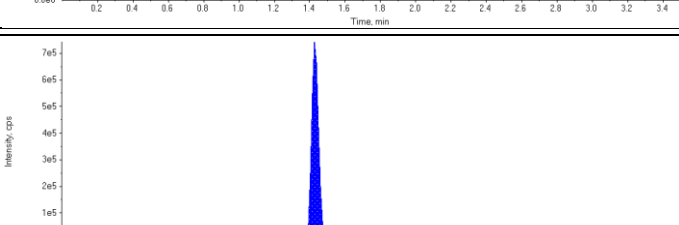
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 30.4 ng/L</p> <p>Area Ratio: 8.86</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 31.9 ng/L</p> <p>Area Ratio: 9.53</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 31.2 ng/L</p> <p>Area Ratio: 3.97</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 30.0 ng/L</p> <p>Area Ratio: 4.48</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 30.3 ng/L</p> <p>Area Ratio: 5.25</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 30.1 ng/L</p> <p>Area Ratio: 4.26</p> <p>Sample Type: (Quality Control)</p>	

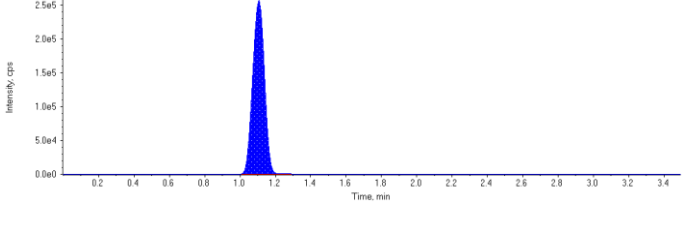
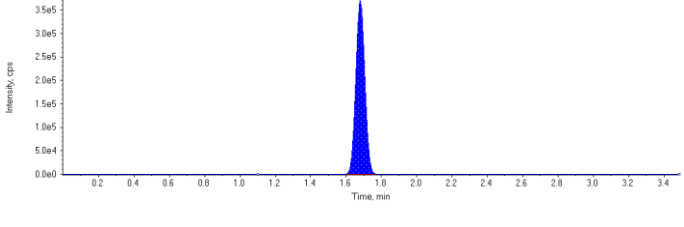
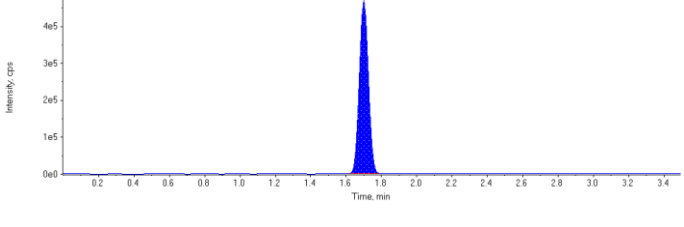
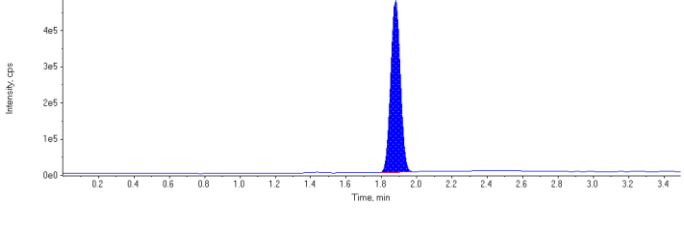
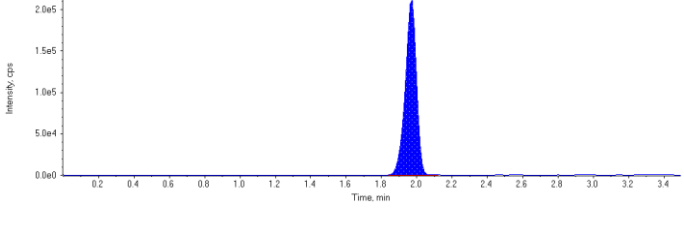
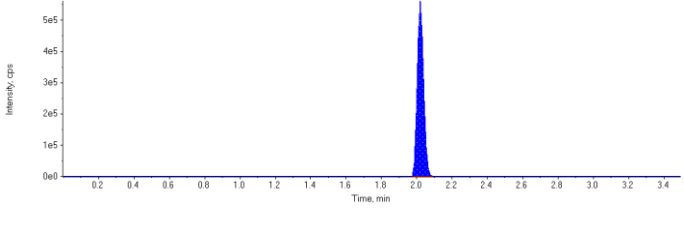
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 96.0 ng/L</p> <p>Area Ratio: 0.0680</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 103. ng/L</p> <p>Area Ratio: 0.216</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 104. ng/L</p> <p>Area Ratio: 0.190</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.0866</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.157</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 99.8 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

Sample Name	CCV	Injection Vial	5
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 1:32:56 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	140000.	1.68	1.00	-
MPFHpA	426000.	1.70	1.00	-
MPFOA	386000.	1.88	1.00	-
MPFOS	191000.	1.97	1.00	-
MPFNA	327000.	2.02	1.00	-
13C6-PFHxA IS	2030000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1190000	1.11	30.0	29.2	97.2
PFHxS 1	1320000	1.68	30.0	31.4	105.0
PFHpA 1	1670000	1.70	30.0	30.8	103.0
PFOA 1	1790000	1.88	30.0	31.1	104.0
PFOS 1	930000	1.97	30.0	28.1	93.6
PFNA 1	1400000	2.02	30.0	30.4	101.0
18O2-PFHxS	140000	1.68	100.	97.4	97.4
13C4-PFHpA	426000	1.70	100.	99.4	99.4
13C4-PFOA	386000	1.88	100.	104.	104.0
13C4-PFOS	191000	1.97	100.	109.	109.0
13C5-PFNA	327000	2.02	100.	104.	104.0
13C6-PFHxA	2030000	1.43	100.	88.7	88.7

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

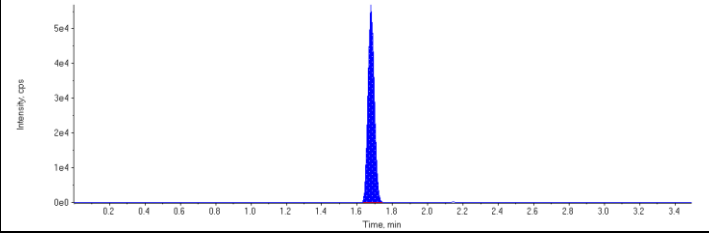
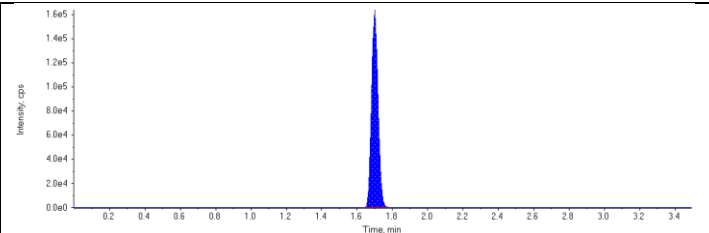
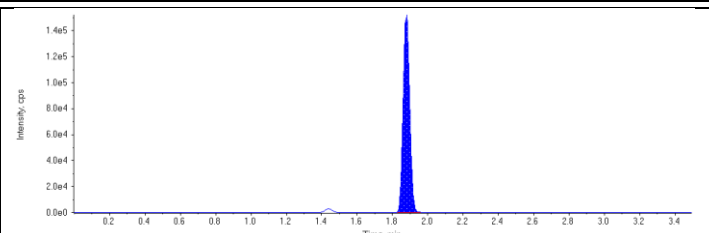
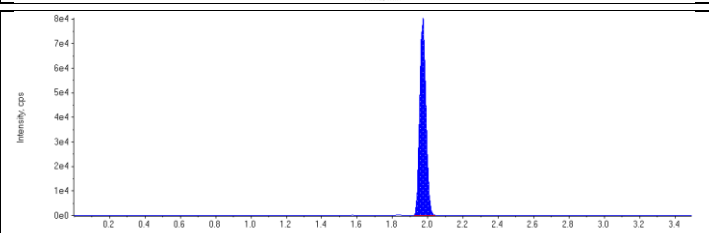
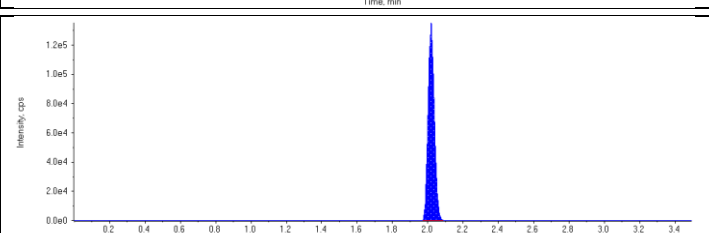
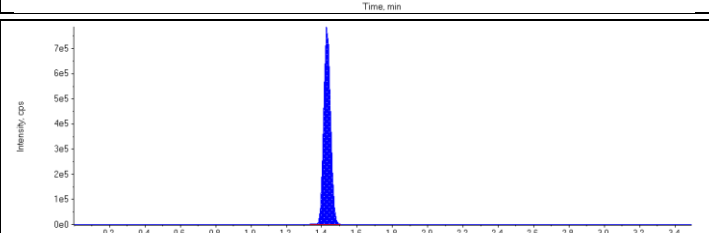
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.11 (1.15) min</p> <p>Calculated Conc: 29.2 ng/L</p> <p>Area Ratio: 8.48</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 31.4 ng/L</p> <p>Area Ratio: 9.38</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 30.8 ng/L</p> <p>Area Ratio: 3.93</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 31.1 ng/L</p> <p>Area Ratio: 4.65</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 28.1 ng/L</p> <p>Area Ratio: 4.86</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 30.4 ng/L</p> <p>Area Ratio: 4.29</p> <p>Sample Type: (Quality Control)</p>	

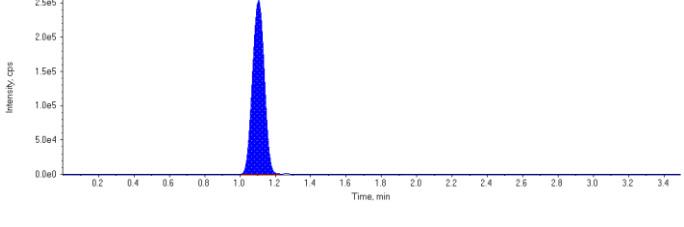
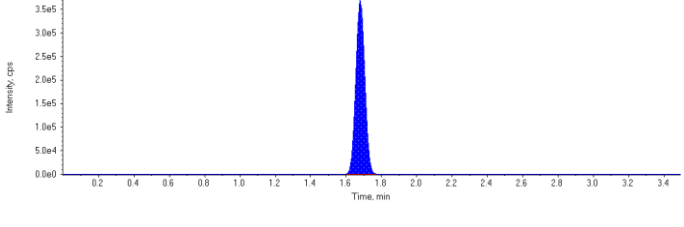
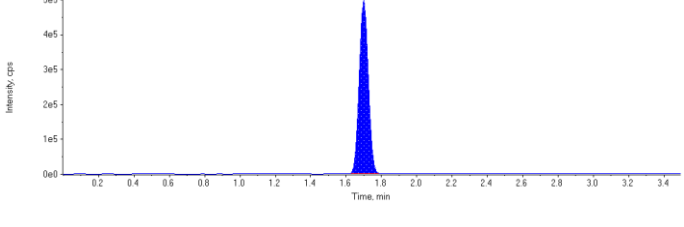
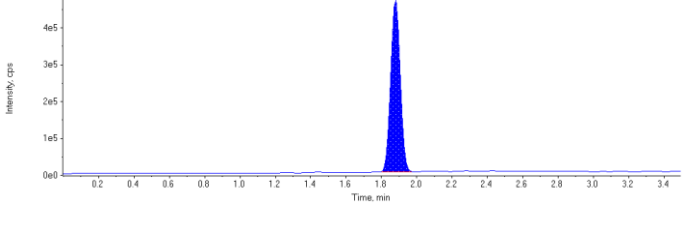
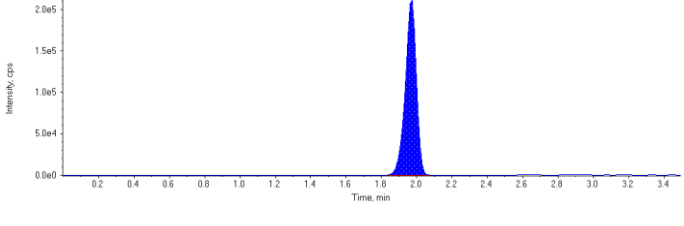
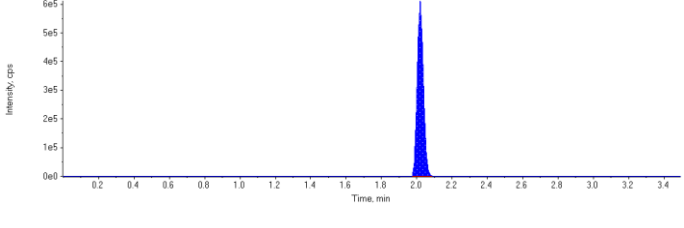
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 97.4 ng/L</p> <p>Area Ratio: 0.0690</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 99.4 ng/L</p> <p>Area Ratio: 0.209</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 104. ng/L</p> <p>Area Ratio: 0.190</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 109. ng/L</p> <p>Area Ratio: 0.0941</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 104. ng/L</p> <p>Area Ratio: 0.161</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 88.7 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

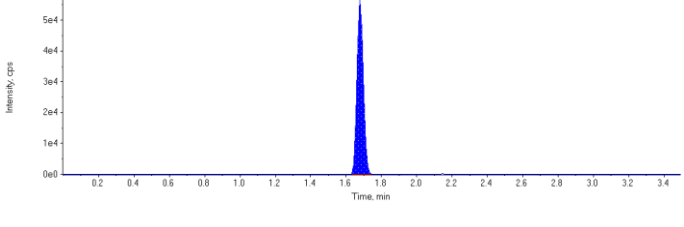
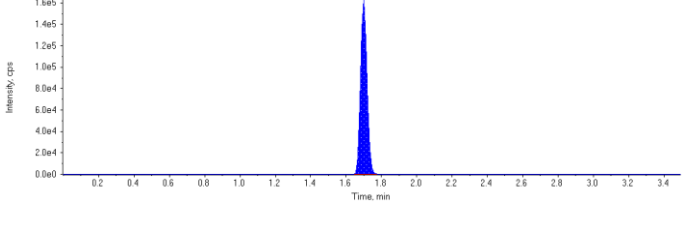
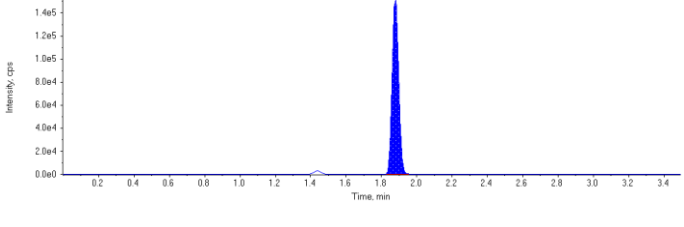
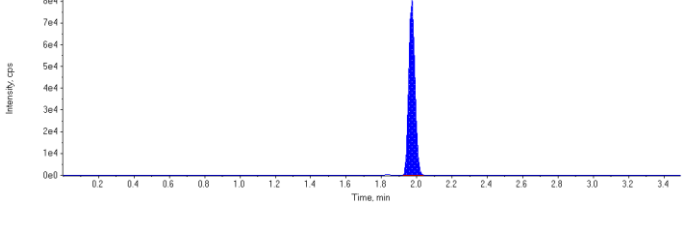
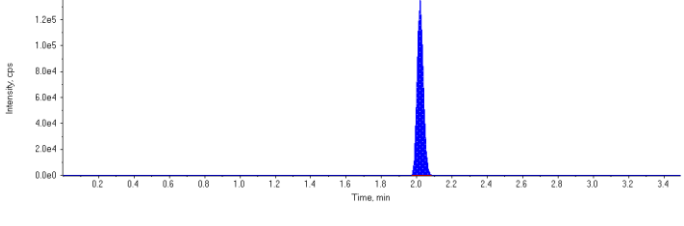
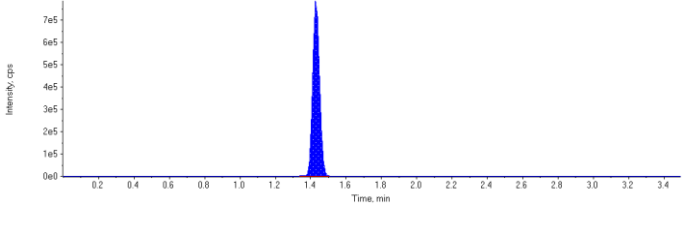
Sample Name	CCV	Injection Vial	5
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:03:30 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	141000.	1.68	1.00	-
MPFHpA	411000.	1.70	1.00	-
MPFOA	393000.	1.88	1.00	-
MPFOS	197000.	1.97	1.00	-
MPFNA	331000.	2.02	1.00	-
13C6-PFHxA IS	2140000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1180000	1.10	30.0	28.7	95.8
PFHxS 1	1310000	1.68	30.0	31.2	104.0
PFHpA 1	1760000	1.70	30.0	33.6	112.0
PFOA 1	1750000	1.88	30.0	29.8	99.5
PFOS 1	924000	1.97	30.0	27.1	90.2
PFNA 1	1480000	2.02	30.0	31.7	106.0
18O2-PFHxS	141000	1.68	100.	92.6	92.6
13C4-PFHpA	411000	1.70	100.	91.0	91.0
13C4-PFOA	393000	1.88	100.	101.	101.0
13C4-PFOS	197000	1.97	100.	107.	107.0
13C5-PFNA	331000	2.02	100.	99.5	99.5
13C6-PFHxA	2140000	1.43	100.	93.4	93.4

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.88(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

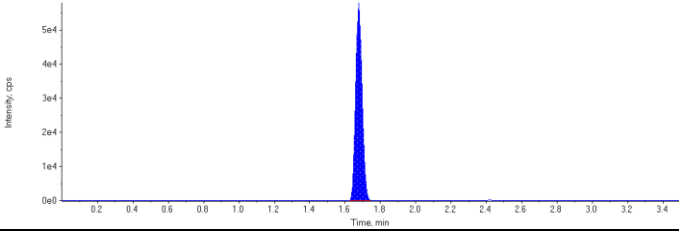
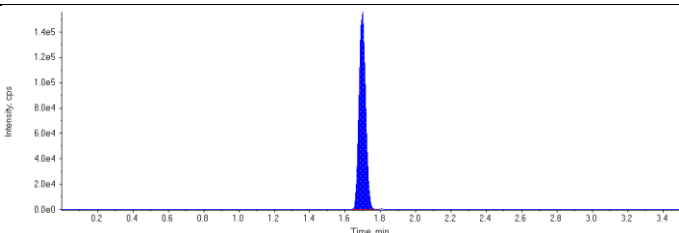
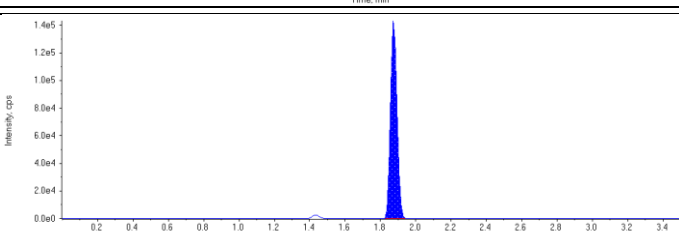
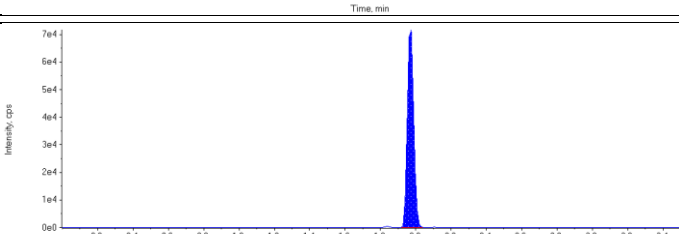
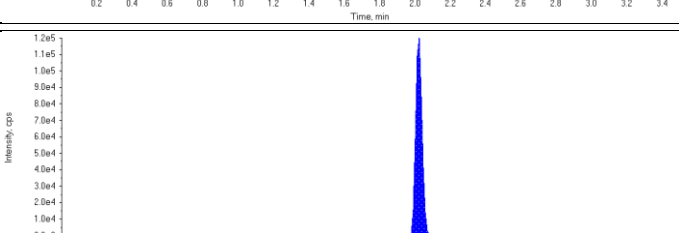
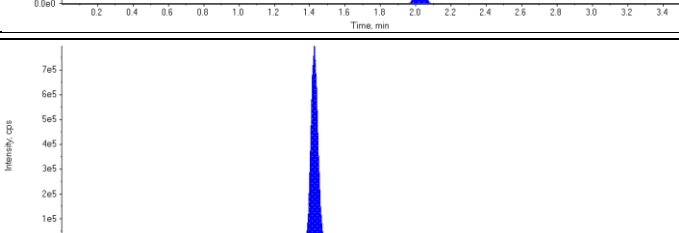
<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.10 (1.15) min</p> <p>Calculated Conc: 28.7 ng/L</p> <p>Area Ratio: 8.36</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 31.2 ng/L</p> <p>Area Ratio: 9.33</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 33.6 ng/L</p> <p>Area Ratio: 4.29</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 29.8 ng/L</p> <p>Area Ratio: 4.45</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 27.1 ng/L</p> <p>Area Ratio: 4.68</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 31.7 ng/L</p> <p>Area Ratio: 4.48</p> <p>Sample Type: (Quality Control)</p>	

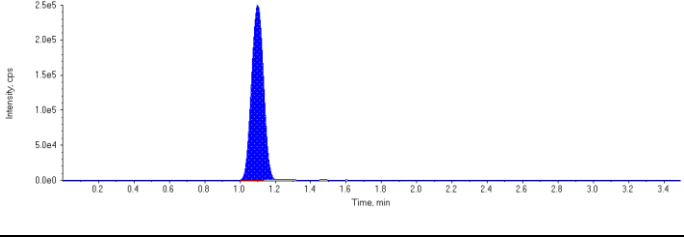
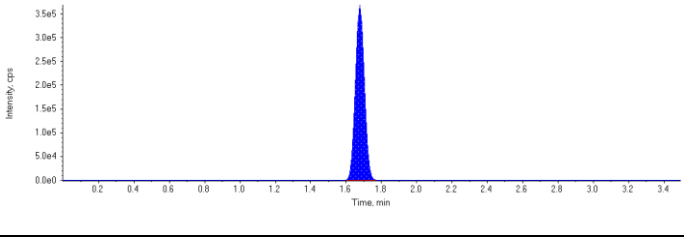
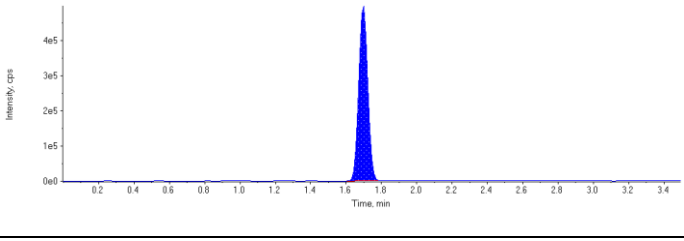
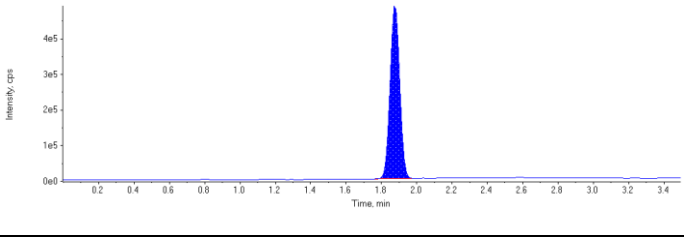
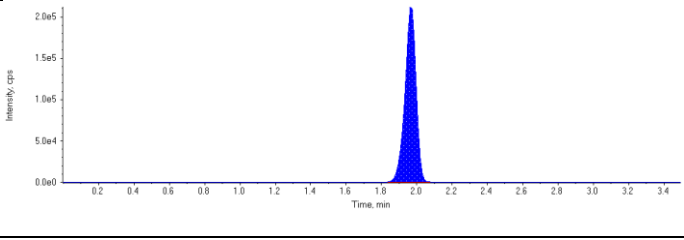
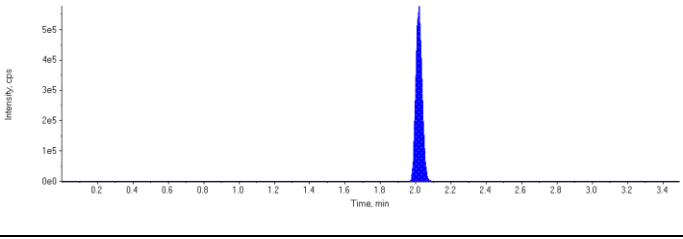
<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 92.6 ng/L</p> <p>Area Ratio: 0.0656</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 91.0 ng/L</p> <p>Area Ratio: 0.192</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.88) min</p> <p>Calculated Conc: 101. ng/L</p> <p>Area Ratio: 0.183</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 107. ng/L</p> <p>Area Ratio: 0.0922</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 99.5 ng/L</p> <p>Area Ratio: 0.154</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 93.4 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	

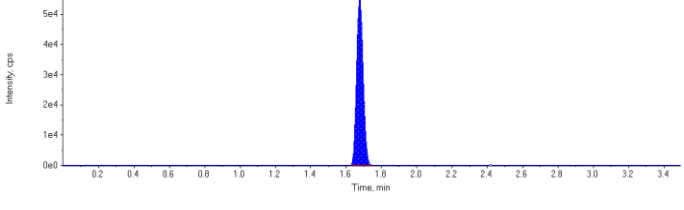
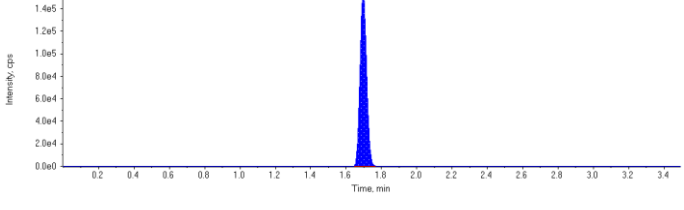
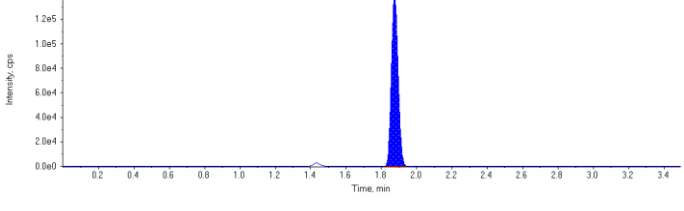
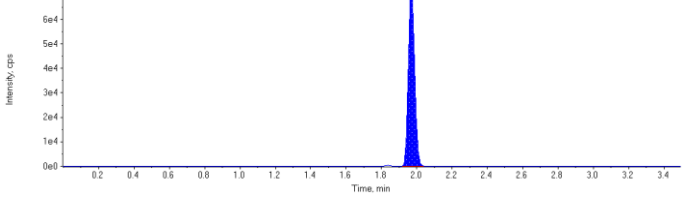
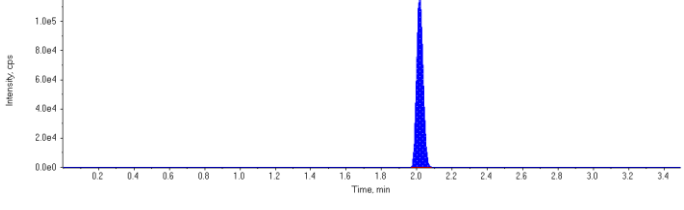
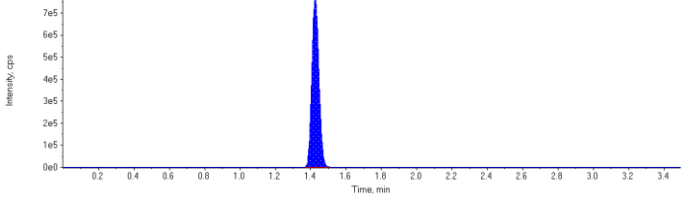
Sample Name	CCV	Injection Vial	5
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 7:50:31 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160222\WS#4389346.wiff		
Result Table	PFC_Water_160222_4389346_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	144000.	1.68	1.00	-
MPFHpA	399000.	1.70	1.00	-
MPFOA	367000.	1.87	1.00	-
MPFOS	181000.	1.97	1.00	-
MPFNA	305000.	2.02	1.00	-
13C6-PFHxA IS	2160000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1170000	1.10	30.0	27.9	93.1
PFHxS 1	1300000	1.68	30.0	30.0	100.0
PFHpA 1	1770000	1.70	30.0	34.8	116.0
PFOA 1	1830000	1.88	30.0	33.5	112.0
PFOS 1	930000	1.97	30.0	29.7	98.9
PFNA 1	1440000	2.02	30.0	33.4	111.0
18O2-PFHxS	144000	1.68	100.	94.2	94.2
13C4-PFHpA	399000	1.70	100.	87.6	87.6
13C4-PFOA	367000	1.87	100.	93.2	93.2
13C4-PFOS	181000	1.97	100.	97.3	97.3
13C5-PFNA	305000	2.02	100.	90.8	90.8
13C6-PFHxA	2160000	1.43	100.	94.3	94.3

<p>MPFHxS (Internal Standard)</p> <p>RT (Exp. RT): 1.68(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFHpA (Internal Standard)</p> <p>RT (Exp. RT): 1.70(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOA (Internal Standard)</p> <p>RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFOS (Internal Standard)</p> <p>RT (Exp. RT): 1.97(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>MPFNA (Internal Standard)</p> <p>RT (Exp. RT): 2.02(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA IS (Internal Standard)</p> <p>RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)</p>	
<p>N/A (Internal Standard)</p> <p>RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)</p>	<p style="text-align: center;">This image is not available</p>

<p>PFBS 1 (298.900/79.900 Da)</p> <p>RT (Exp. RT): 1.10 (1.15) min</p> <p>Calculated Conc: 27.9 ng/L</p> <p>Area Ratio: 8.12</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHxS 1 (398.900/79.900 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 30.0 ng/L</p> <p>Area Ratio: 8.98</p> <p>Sample Type: (Quality Control)</p>	
<p>PFHpA 1 (363.000/319.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 34.8 ng/L</p> <p>Area Ratio: 4.43</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOA 1 (413.100/369.000 Da)</p> <p>RT (Exp. RT): 1.88 (1.92) min</p> <p>Calculated Conc: 33.5 ng/L</p> <p>Area Ratio: 4.99</p> <p>Sample Type: (Quality Control)</p>	
<p>PFOS 1 (498.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 29.7 ng/L</p> <p>Area Ratio: 5.14</p> <p>Sample Type: (Quality Control)</p>	
<p>PFNA 1 (462.900/419.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 33.4 ng/L</p> <p>Area Ratio: 4.72</p> <p>Sample Type: (Quality Control)</p>	

<p>18O2-PFHxS (402.900/84.000 Da)</p> <p>RT (Exp. RT): 1.68 (1.68) min</p> <p>Calculated Conc: 94.2 ng/L</p> <p>Area Ratio: 0.0668</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFHpA (366.900/322.000 Da)</p> <p>RT (Exp. RT): 1.70 (1.75) min</p> <p>Calculated Conc: 87.6 ng/L</p> <p>Area Ratio: 0.185</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOA (416.900/372.000 Da)</p> <p>RT (Exp. RT): 1.87 (1.88) min</p> <p>Calculated Conc: 93.2 ng/L</p> <p>Area Ratio: 0.170</p> <p>Sample Type: (Quality Control)</p>	
<p>13C4-PFOS (502.900/79.900 Da)</p> <p>RT (Exp. RT): 1.97 (1.97) min</p> <p>Calculated Conc: 97.3 ng/L</p> <p>Area Ratio: 0.0837</p> <p>Sample Type: (Quality Control)</p>	
<p>13C5-PFNA (467.900/423.000 Da)</p> <p>RT (Exp. RT): 2.02 (2.02) min</p> <p>Calculated Conc: 90.8 ng/L</p> <p>Area Ratio: 0.141</p> <p>Sample Type: (Quality Control)</p>	
<p>13C6-PFHxA (318.900/274.000 Da)</p> <p>RT (Exp. RT): 1.43 (1.42) min</p> <p>Calculated Conc: 94.3 ng/L</p> <p>Area Ratio: 0.00</p> <p>Sample Type: (Quality Control)</p>	



This is the last page of the report and is intentionally left blank

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Subcontract Data

Shipping and Receiving Documents

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt 1.7

Drinking Water? Yes No

OTO WE 76

TAL-4124 (1007)

Chain of Custody Record

Client: CH2M HILL
 Address: 5701 Cleveland St Suite 200
 City: Virginia Beach
 State: VA Zip Code: 23462

Project Name and Location (State): OTO WE 76 PFC Sampling
 Contract/Purchase Order/Quote No.: PO# 10006-7-101000

Project Manager: Bill Friedman
 Telephone Number (Area Code)/Fax Number: 757-691-6223
 Site Contact: Lab Contact: Carrier/Maybill Number: FedEx

Date: 02/08/16
 Lab Number: 283621
 Page: 1 of 1

Analysis (Attach list if more space is needed): Select PFCs

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives					Special Instructions/ Conditions of Receipt	
			Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH		ZnAc
0F-EB47-0216	02/08/16	1610	✓									
0F-RW47-0216		1615										
0F- FB 47A-0216		1635										
0F-RW47A-0216		1640										
0F-FB48-0216		1740										
0F-RW48-0216		1748										

Barcode: 320-17219 Chain of Custody

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Archive For Return To Client Months (A fee may be assessed if samples are retained longer than 1 month)

Sample Disposal:
 Return To Client Unknown Poison B Skin Irritant 7 Days 14 Days 21 Days Other

Turn Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

QC Requirements (Specify):

1. Relinquished By: *[Signature]* Date: 02/08/16 Time: 1930
 2. Relinquished By: *[Signature]* Date: 02/08/16 Time: 945
 3. Relinquished By: *[Signature]* Date: _____ Time: _____

Comments: 03/10/2016

Chain of Custody Record

Due 2/22

Temperature on Receipt: 107

Drinking Water? Yes No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CTD WE 76

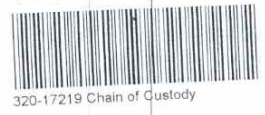
Project Manager [Redacted]	Date 02/08/16	Chain of Custody Number 283621
Telephone Number (Area Code)/Fax Number [Redacted]	Lab Number	
Site Contact	Lab Contact	Page 1 of 1

Carrier/Waybill Number: FedEx

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix						Containers & Preservatives						Select PFS	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Soil	Slurries	ASPCA	ANCO	HCl	NaOH	NaOH	NaOH					
OF-FB47-0216	02/08/16	1610															
OF-RW47-0216		1615															
OF-FB47A-0216		1635															
OF-RW47A-0216		1640															
OF-FB48-0216		1740															
OF-RW48-0216		1748															

13-Feb-16 13:40
Hongmei Zhao (Grace)
B630794
RGN ENV-951



Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

1. Relinquished By [Signature]	Date 02/08/16	Time 19:30	1. Received By [Signature]	Date 2/9/16	Time 9:45
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By PENKUN CHAI	Date 2/6/2016	Time 13:40

Comments: REFER TO ACTR

DISTRIBUTION: WHITE - Returned to Client with Report, CANARY - Stays with the Sample, PINK - Field Copy

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-17219-1
SDG Number: CTO WE7G PFC Sampling

Login Number: 17219
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Data Validation Summary

Oceana CTO-WE44, NALF Fentress

TO: Juliana Dean/VBO
Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: March 18, 2016

Introduction

The following data validation report discusses the data validation process and findings for TestAmerica Laboratories and Maxxam Laboratories in the Sample Delivery Groups (SDGs) listed in the table below.

Samples were analyzed using the following analytical methods:

- WS-LC-0025 & 537 MOD Perfluorinated Hydrocarbons

The samples included in these SDGs are listed in the table below.

SDG	Sample Name	Matrix
320-17150	OF-RW42B-0216	Water
320-17150	OF-RW39-0216	Water
320-17150	OF-FB40-0216	Water
320-17150	OF-RW40-0216	Water
320-17150	OF-FB43-0216	Water
320-17150	OF-RW43-0216	Water
320-17150	OF-FB42B-0216	Water
320-17150	OF-RW42A-0216	Water
320-17150	OF-FB42A-0216	Water
320-17150	OF-RW35-0216	Water
320-17150	OF-FB35-0216	Water

SDG	Sample Name	Matrix
320-17150	OF-RW58-0216	Water
320-17150	OF-FB58-0216	Water
320-17150	OF-FB39-0216	Water
320-17154	OF-FB09-0216	Water
320-17154	OF-FB67-0216	Water
320-17154	OF-RW09-0216	Water
320-17154	OF-FB37-0216	Water
320-17154	OF-RW37-0216	Water
320-17154	OF-RW11-0216	Water
320-17154	OF-FB11-0216	Water
320-17154	OF-RW28-0216	Water
320-17154	OF-FB28-0216	Water
320-17154	OF-RW67-0216	Water
320-17183	OF-RW66-0216	Water
320-17183	OF-FB27-0216	Water
320-17183	OF-FB66-0216	Water
320-17183	OF-RW49-0216	Water
320-17183	OF-FB49-0216	Water
320-17183	OF-RW36A-0216	Water
320-17183	OF-FB36A-0216	Water
320-17183	OF-RW51A-0216	Water
320-17183	OF-FB51A-0216	Water
320-17183	OF-RW27-0216	Water
320-17184	OF-RW20-0216	Water
320-17184	OF-FB30-0216	Water
320-17184	OF-FB69-0216	Water
320-17184	OF-RW69-0216	Water
320-17184	OF-FB26-0216	Water
320-17184	OF-RW26-0216	Water
320-17184	OF-FB20-0216	Water
320-17184	OF-RW55-0216	Water
320-17184	OF-FB55-0216	Water
320-17184	OF-RW54-0216	Water
320-17184	OF-FB54-0216	Water
320-17184	OF-RW68-0216	Water
320-17184	OF-FB68-0216	Water
320-17184	OF-RW30-0216	Water
320-17185	OF-FB08-0216	Water
320-17185	OF-RW51-0216	Water
320-17185	OF-RW51P-0216	Water

SDG	Sample Name	Matrix
320-17185	OF-RW08-0216	Water
320-17185	OF-RW08P-0216	Water
320-17185	OF-FB41-0216	Water
320-17185	OF-RW41-0216	Water
320-17185	OF-RW41P-0216	Water
320-17185	OF-FB56-0216	Water
320-17185	OF-RW56-0216	Water
320-17185	OF-FB51-0216	Water
320-17190	OF-FB12-0216	Water
320-17190	OF-RW12-0216	Water
320-17190	OF-FB57-0216	Water
320-17190	OF-RW57-0216	Water
320-17190	OF-RW57P-0216	Water
320-17190	OF-FB25-0216	Water
320-17190	OF-RW25-0216	Water
320-17190	OF-FB16-0216	Water
320-17190	OF-RW16-0216	Water
320-17219	OF-FB47-0216	Water
320-17219	OF-RW47-0216	Water
320-17219	OF-FB47A-0216	Water
320-17219	OF-RW47A-0216	Water
320-17219	OF-FB48-0216	Water
320-17219	OF-RW48-0216	Water
320-17236	OF-FB70-0216	Water
320-17236	OF-RW70-0216	Water
320-17236	OF-FB44-0216	Water
320-17236	OF-RW44-0216	Water
320-17236	OF-RW44P-0216	Water
320-17236	OF-FB65-0216	Water
320-17236	OF-RW65-0216	Water
320-17236	OF-FB21-0216	Water
320-17236	OF-RW21-0216	Water
320-17241	OF-FB62-0216	Water
320-17241	OF-RW34-0216	Water
320-17241	OF-FB38-0216	Water
320-17241	OF-RW38-0216	Water
320-17241	OF-RW62-0216	Water
320-17241	OF-FB63-0216	Water
320-17241	OF-RW63-0216	Water
320-17241	OF-FB59-0216	Water

SDG	Sample Name	Matrix
320-17241	OF-RW59-0216	Water
320-17241	OF-FB50-0216	Water
320-17241	OF-RW50-0216	Water
320-17241	OF-FB34-0216	Water
320-17278	OF-FB24-0216	Water
320-17278	OF-RW24-0216	Water
320-17278	OF-FB31-0216	Water
320-17278	OF-RW31-0216	Water
320-17278	OF-FB60-0216	Water
320-17278	OF-RW60-0216	Water
320-17278	OF-RW60P-0216	Water
320-17278	OF-FB46-0216	Water
320-17278	OF-RW46-0216	Water
320-17321	OF-FB02-0216	Water
320-17321	OF-RW02-0216	Water
320-17321	OF-FB15-0216	Water
320-17321	OF-RW15-0216	Water
320-17321	OF-FB18-0216	Water
320-17321	OF-RW18-0216	Water
320-17859	OF-FB07-0316	Water
320-17859	OF-RW07-0316	Water
320-17859	OF-HPFB01-0316	Water
320-17859	OF-HP01-0316	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Perfluorinated Compound Investigation, Naval Auxiliary Landing Field Fentress, Chesapeake, Virginia Contract Task Order WE44 (December 2015) and National Functional Guidelines for Organic Data Review (August 2014) with Region 3 Modification (Use of 'B' qualifier) as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Tuning Instrument
- Initial/Continuing Calibrations
- Blanks

- Internal Standards
- Laboratory Control Samples
- Isotope Dilution Analyte
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 2/3/16 through 2/16/16. Samples were received at the laboratory 2/4/16 through 2/17/16. All sample preparation and analyses were performed within holding time requirements with the exception of the samples listed below. Affected data are summarized in **Attachment 1**.

Sample Name	SDG
OF-RW42B-0216	320-17150
OF-RW08-0216	320-17185
OF-RW08P-0216	320-17185
OF-FB62-0216	320-17241
OF-RW34-0216	320-17241
OF-FB38-0216	320-17241
OF-RW38-0216	320-17241
OF-RW62-0216	320-17241
OF-FB63-0216	320-17241
OF-RW63-0216	320-17241
OF-FB59-0216	320-17241

Sample Name	SDG
OF-RW59-0216	320-17241
OF-FB50-0216	320-17241
OF-RW50-0216	320-17241
OF-FB34-0216	320-17241

Blanks

Several compounds were detected in the field blanks and method blanks as listed below. Affected data are summarized in **Attachment 1**.

SDG	Blank ID	Compound	Conc.	Units
320-17183	OF-FB49-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00068	UG_L
320-17183	OF-FB36A-0216	Perfluorooctane Sulfonate (PFOS)	0.00042	UG_L
320-17185	OF-FB51-0216	Perfluorobutanesulfonic acid (PFBS)	0.00063	UG_L
320-17190	OF-FB12-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00079	UG_L
320-17190	OF-FB57-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00083	UG_L
320-17190	OF-FB25-0216	Perfluorobutanesulfonic acid (PFBS)	0.00092	UG_L
320-17190	OF-FB16-0216	Perfluorobutanesulfonic acid (PFBS)	0.0011	UG_L
320-17190	MB 320-100277/1-A	Perfluorobutanesulfonic acid (PFBS)	0.00103	UG_L
320-17190	MB 320-100277/1-A	Perfluorohexanesulfonic acid (PFHxS)	0.00102	UG_L
320-17190	MB 320-100277/1-A	Perfluorooctane Sulfonate (PFOS)	0.00144	UG_L
320-17859	MB 320-104553/1-A	Perfluorooctanoic acid (PFOA)	0.00217	UG_L

Field Duplicate Precision

Perfluoroheptanoic acid (PFHpA) did not meet required precision criteria in native sample OF-RW51-0216 and field duplicate OF-RW51P-0216. Affected data are summarized in **Attachment 1**.

Matrix Spike/Spike Duplicate

For spiked sample OF-RW56-0216 in SDG 320-17185, perfluorobutanesulfonic acid (PFBS) exhibited high recoveries in the MS/MSD. Affected data are summarized in **Attachment 1**.

Surrogates

Surrogates for the samples listed below exhibited low recoveries. Affected data are summarized in **Attachment 1**.

Sample Name	SDG
OF-RW67-0216	320-17154
OF-RW47-0216	320-17219
OF-RW70-0216	320-17236

Sample Name	SDG
OF-RW24-0216	320-17278

Internal Standards

Internal standards exhibited low recoveries for the samples listed below. Affected data are summarized in **Attachment 1**.

Sample Name	SDG
OF-RW37-0216	320-17154
OF-FB56-0216	320-17185

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

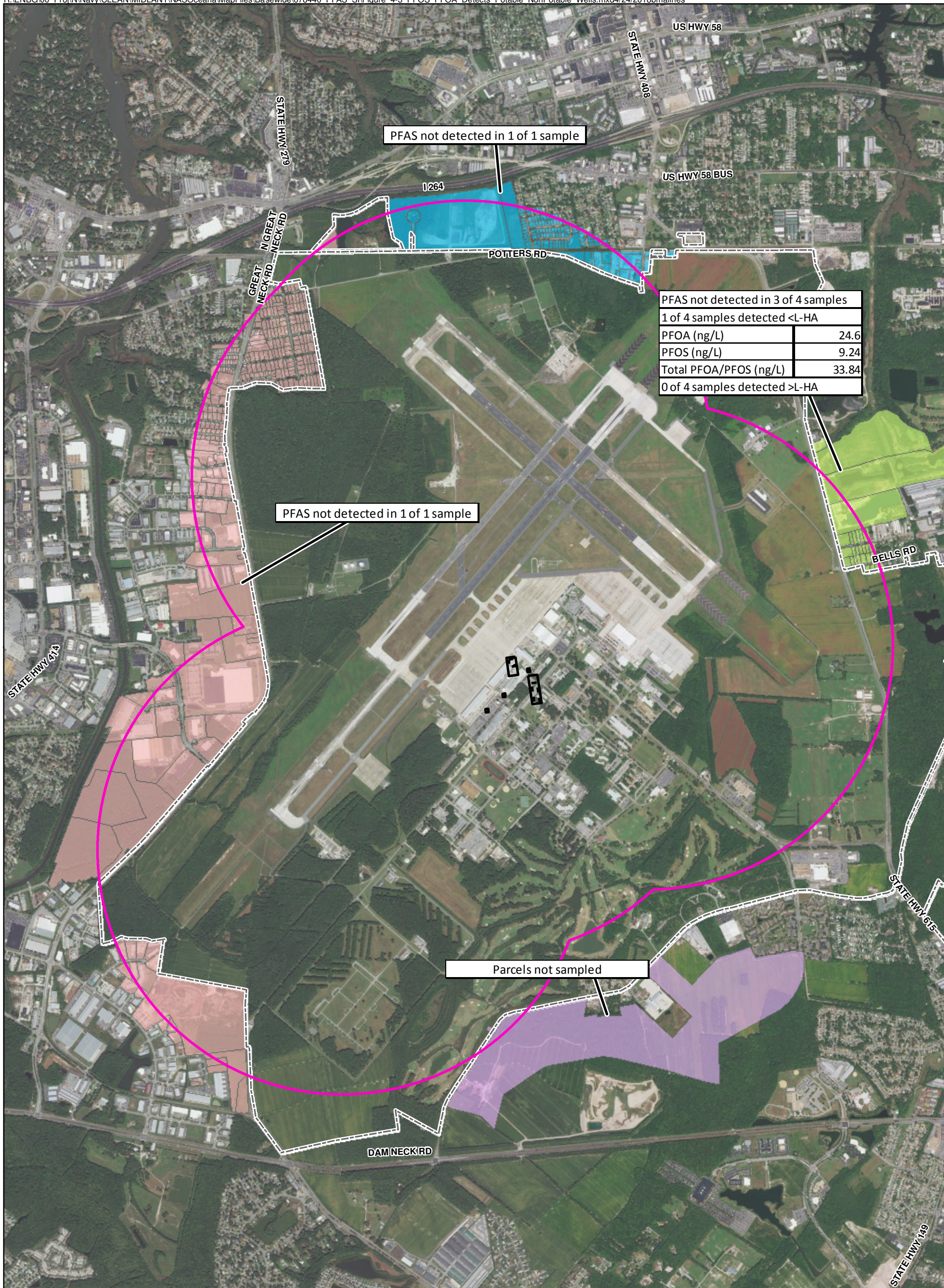
Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

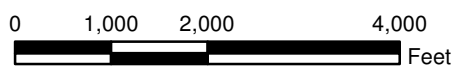
Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

Value	Description
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune



Legend

- Non-Core Target Treatment Area (2004)
- - Core Target Treatment Area (2004) (Core)
- ▭ Sampling Area
- ▭ Installation Boundary
- Off-Base Parcels**
- ▭ East
- ▭ North
- ▭ South
- ▭ West



Imagery Source: ©2017 Esri

Figure 4-3
COCs Detections in Potable Wells Sampled from Parcels Located Off-Base
Basewide Per- and Polyfluoroalkyl Substances Site Inspection Report
NAS Oceana, Virginia Beach, Virginia