



**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 J17185-1**

*Naval Air Station Oceana
Virginia Beach, Virginia*

July 2019

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Tel: (916)373-5600

TestAmerica Job ID: 320-17185-1

TestAmerica SDG: CTO WE7G PFC Sampling

Client Project/Site: CTO WE7G PFC Sampling

For:

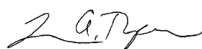
CH2M Hill, Inc.

5701 Cleveland Street

Suite 200

Virginia Beach, Virginia 23462

Attn: Laurie George



Authorized for release by:

2/29/2016 2:26:18 PM

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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.



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Case Narrative

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

TestAmerica Job ID: 320-17185-1
SDG: CTO WE7G PFC Sampling

Job ID: 320-17185-1

Laboratory: TestAmerica Sacramento

Narrative

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17185-1

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 2/5/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° 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.

The DL/LOD/LOQ for samples OF-RW08-0216 (320-17185-2) and OF-RW08P-0216 (320-17185-3) were adjusted by a dilution factor of 10 for PFOS.

Certification Summary

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

TestAmerica Job ID: 320-17185-1
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

Sample Summary

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

TestAmerica Job ID: 320-17185-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17185-1	OF-FB08-0216	Water	02/04/16 09:30	02/05/16 10:00
320-17185-2	OF-RW08-0216	Water	02/04/16 09:35	02/05/16 10:00
320-17185-3	OF-RW08P-0216	Water	02/04/16 09:37	02/05/16 10:00
320-17185-4	OF-FB41-0216	Water	02/04/16 10:05	02/05/16 10:00
320-17185-5	OF-RW41-0216	Water	02/04/16 10:10	02/05/16 10:00
320-17185-6	OF-RW41P-0216	Water	02/04/16 10:12	02/05/16 10:00
320-17185-7	OF-FB56-0216	Water	02/04/16 10:35	02/05/16 10:00
320-17185-8	OF-RW56-0216	Water	02/04/16 10:40	02/05/16 10:00
320-17185-9	OF-FB51-0216	Water	02/04/16 11:00	02/05/16 10:00
320-17185-10	OF-RW51-0216	Water	02/04/16 11:10	02/05/16 10:00
320-17185-11	OF-RW51P-0216	Water	02/04/16 11:12	02/05/16 10:00



Your Project #: 320-17185
Your C.O.C. #: 283597

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/02/29
Report #: R3912208
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B630791

Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	11	2016/02/18	2016/02/19	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) 817-5700

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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.

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX769			BVX770	BVX771			
Sampling Date		2016/02/04 09:30			2016/02/04 09:35	2016/02/04 09:37			
COC Number		283597			283597	283597			
	UNITS	OF-FB08-0216	MDL	QC Batch	OF-RW08-0216	OF-RW08P-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27	4386408	5.0	5.2	0.27	4386408	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39	4386408	2.9	3.0	0.39	4386408	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40	4386408	53	60	0.40	4386408	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39	4386408	13	14	0.39	4386408	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33	4386408	0.43 J	0.39 J	0.33	4386408	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30	4386408	180 (1)	170 (1)	3.0	4394558	2.0
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	72	N/A	4386408	63	61	N/A	4386408	N/A
13C4-Perfluorooctanesulfonate	%	90	N/A	4386408	89	88	N/A	4394558	N/A
13C4-Perfluorooctanoic acid	%	79	N/A	4386408	70	68	N/A	4386408	N/A
13C5-Perfluorononanoic acid	%	86	N/A	4386408	83	80	N/A	4386408	N/A
18O2-Perfluorohexanesulfonate	%	79	N/A	4386408	87	78	N/A	4386408	N/A
QC Batch = Quality Control Batch									
N/A = Not Applicable									
(1) Due to high concentration of the target analyte, sample required dilution. Detection limit was adjusted accordingly.									

Maxxam ID		BVX772	BVX773	BVX774	BVX775	BVX776			
Sampling Date		2016/02/04 10:05	2016/02/04 10:10	2016/02/04 10:12	2016/02/04 10:35	2016/02/04 10:40			
COC Number		283597	283597	283597	283597	283597			
	UNITS	OF-FB41-0216	OF-RW41-0216	OF-RW41P-0216	OF-FB56-0216	OF-RW56-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27 U	0.67 J	0.27 U	0.81 J	0.27	4386408	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39	4386408	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.69 J	0.69 J	0.40 U	0.40 U	0.40	4386408	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	4386408	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33	4386408	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30	4386408	2.0
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	65	59	55	53	60	N/A	4386408	N/A
13C4-Perfluorooctanesulfonate	%	78	68	61	59	66	N/A	4386408	N/A
13C4-Perfluorooctanoic acid	%	68	65	60	61	66	N/A	4386408	N/A
13C5-Perfluorononanoic acid	%	78	66	64	63	74	N/A	4386408	N/A
18O2-Perfluorohexanesulfonate	%	72	62	62	62	70	N/A	4386408	N/A
QC Batch = Quality Control Batch									
N/A = Not Applicable									

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX779	BVX780	BVX781			
Sampling Date		2016/02/04 11:00	2016/02/04 11:10	2016/02/04 11:12			
COC Number		283597	283597	283597			
	UNITS	OF-FB51-0216	OF-RW51-0216	OF-RW51P-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.63 J	0.27 U	0.27 U	0.27	4386408	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	6.6	4.2	0.39	4386408	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	0.40	4386408	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	0.39	4386408	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.33	4386408	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	0.30	4386408	2.0
Surrogate Recovery (%)							
13C4-Perfluoroheptanoic acid	%	76	51	53	N/A	4386408	N/A
13C4-Perfluorooctanesulfonate	%	87	64	59	N/A	4386408	N/A
13C4-Perfluorooctanoic acid	%	81	57	57	N/A	4386408	N/A
13C5-Perfluorononanoic acid	%	89	63	62	N/A	4386408	N/A
18O2-Perfluorohexanesulfonate	%	77	65	62	N/A	4386408	N/A
QC Batch = Quality Control Batch							
N/A = Not Applicable							

TEST SUMMARY

Maxxam ID: BVX769
Sample ID: OF-FB08-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX770
Sample ID: OF-RW08-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX771
Sample ID: OF-RW08P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX772
Sample ID: OF-FB41-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX773
Sample ID: OF-RW41-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX774
Sample ID: OF-RW41P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX775
Sample ID: OF-FB56-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam Job #: B630791
Report Date: 2016/02/29

TestAmerica
Client Project #: 320-17185

TEST SUMMARY

Maxxam ID: BVX776
Sample ID: OF-RW56-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX779
Sample ID: OF-FB51-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX780
Sample ID: OF-RW51-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX781
Sample ID: OF-RW51P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

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
Sample BVX770, Low level PFOS and PFOA in water: Test repeated.
Sample BVX771, Low level PFOS and PFOA in water: Test repeated.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4386408	CM5	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/19		50	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		59	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		58	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		61	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		53	%	50 - 130
4386408	CM5	Matrix Spike DUP	13C4-Perfluoroheptanoic acid	2016/02/19		52	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		64	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		66	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		70	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		58	%	50 - 130
4386408	CM5	Matrix Spike(BVX776)	Perfluorobutane Sulfonate (PFBS)	2016/02/19		157 (1)	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19		133 (1)	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19		148 (1)	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/19		120	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19		125	%	70 - 130
4386408	CM5	Matrix Spike DUP(BVX776)	Perfluorooctane Sulfonate (PFOS)	2016/02/19		116	%	70 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19		150 (1)	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19		125	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19		133 (1)	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/19		104	%	70 - 130
4386408	CM5	MS/MSD RPD	Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19		114	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/19		109	%	70 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19	4.2		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19	6.2		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19	11		%	30
4386408	CM5	Spiked Blank	Perfluorononanoic Acid (PFNA)	2016/02/19	14		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19	8.5		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/19	6.4		%	30
			13C4-Perfluoroheptanoic acid	2016/02/19		67	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		77	%	50 - 130
4386408	CM5	Method Blank	13C4-Perfluorooctanoic acid	2016/02/19		70	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		73	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		83	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19		107	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19		121	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19		115	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/19		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19		124	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/19		112	%	70 - 130
			13C4-Perfluoroheptanoic acid	2016/02/19		74	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		82	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		74	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		76	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		86	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/19	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19	0.39 U, MDL=0.39		ng/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2016/02/19	0.30 U, MDL=0.30		ng/L	
4394558	SCH	Matrix Spike	13C4-Perfluorooctanesulfonate	2016/02/29		95	%	50 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		126	%	70 - 130
4394558	SCH	Matrix Spike DUP	13C4-Perfluorooctanesulfonate	2016/02/29		101	%	50 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		111	%	70 - 130
4394558	SCH	MS/MSD RPD	Perfluorooctane Sulfonate (PFOS)	2016/02/29	12		%	30
4394558	SCH	Spiked Blank	13C4-Perfluorooctanesulfonate	2016/02/29		99	%	50 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
4394558	SCH	Method Blank	13C4-Perfluorooctanesulfonate	2016/02/29		83	%	50 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	0.30 U, MDL=0.30		ng/L	

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

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.

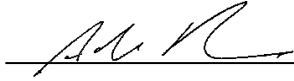
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

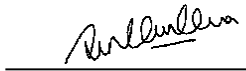
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

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



Adam Robinson, Supervisor, LC/MS/MS



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.

Chain of Custody Record

TAL-4124 (1007)

Client: **Charm Hill** Project Manager: **Bill Friedmann** Chain of Custody Number: **283597**

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

City: **Virginia Beach** State: **VA** Zip Code: **23462** Date: **02/04/16** Lab Number: **2**

Project Name and Location (State): **CTD WE76 PFC Sampling** Carrier/Waybill Number: **FedEx** Page: **1** of **2**

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
			Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH		
OF-FB48-0216	02/04/16	0930	✓			✓							Selected PFCs	
OF-RW08-0216		0935											2	
OF-RW08P-0216		0937											2	
OF-FB41-0216		1005											2	
OF-RW41-0216		1010											2	
OF-RW41P-0216		1012											2	
OF-FB56-0216		1035											2	
OF-RW56-0216		1040											2	
OF-RW56-0216-M8		1040											2	
OF-RW56-0216-SD		1040											2	
OF-FB51-0216		1100											2	
OF-RW51-0216		1110											2	

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

QC Requirements (Specify):

1. Relinquished By: **John D. Smith** Date: **02/04/16** Time: **10:30**

2. Relinquished By: **John D. Smith** Date: **02/04/16** Time: **10:00**

3. Relinquished By: **John D. Smith** Date: **02/04/16** Time: **10:00**

Comments:



Temperature on Receipt **34**

Drinking Water? Yes ☒ No ☐

320-17185 Chain of Custody

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-17185-1

SDG Number: CTO WE7G PFC Sampling

Login Number: 17185

List Number: 1

Creator: Alltucker, David R

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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 $<6\text{mm}$ (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: 320-17185-1
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
3/9/2016 8:35 AM

Laura Turpen, Project Manager I
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4414
laura.turpen@testamericainc.com
03/09/2016

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



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Definitions/Glossary

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

TestAmerica Job ID: 320-17185-1
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)

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17185-1

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 2/5/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° 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 267 of the subcontract report; page 15 of 280 of the entire report).

The DL/LOD/LOQ for samples OF-RW08-0216 (320-17185-2) and OF-RW08P-0216 (320-17185-3) were adjusted by a dilution factor of 10 for PFOS.

Certification Summary

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

TestAmerica Job ID: 320-17185-1
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

Sample Summary

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

TestAmerica Job ID: 320-17185-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17185-1	OF-FB08-0216	Water	02/04/16 09:30	02/05/16 10:00
320-17185-2	OF-RW08-0216	Water	02/04/16 09:35	02/05/16 10:00
320-17185-3	OF-RW08P-0216	Water	02/04/16 09:37	02/05/16 10:00
320-17185-4	OF-FB41-0216	Water	02/04/16 10:05	02/05/16 10:00
320-17185-5	OF-RW41-0216	Water	02/04/16 10:10	02/05/16 10:00
320-17185-6	OF-RW41P-0216	Water	02/04/16 10:12	02/05/16 10:00
320-17185-7	OF-FB56-0216	Water	02/04/16 10:35	02/05/16 10:00
320-17185-8	OF-RW56-0216	Water	02/04/16 10:40	02/05/16 10:00
320-17185-9	OF-FB51-0216	Water	02/04/16 11:00	02/05/16 10:00
320-17185-10	OF-RW51-0216	Water	02/04/16 11:10	02/05/16 10:00
320-17185-11	OF-RW51P-0216	Water	02/04/16 11:12	02/05/16 10:00

Subcontract Data



Prepared for: Test America

Project: 320-17185

Analytical Data Package (Level IV)

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

Maxxam Job #: B630791

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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:

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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 access 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

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Sample Analysis

All samples were initially analyzed on QC batch 4386408 (2016/02/19). Recoveries of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) were above the upper control limit for Perfluorobutanesulfonate (PFBS), Perfluorohexanesulfonate (PFHxS) and Perfluoroheptanoic acid (PFHpA). 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.

The concentrations of Perfluorooctanesulfonate (PFOS) exceeded the upper calibration range for the following samples originally analyzed on QC batch 4386408 (2016/02/19):

BVX770 *OF-RW08-0216*

BVX771 *OF-RW08P-0216*

These samples were re-analyzed with appropriate dilutions for this analyte on QC batch 4394558 (2016/02/29). Detection limits were adjusted accordingly. Re-analysis was performed after hold time had passed for these samples. Due to the chemical stability of perfluorinated compounds, the hold time exceedance is not expected to have a significant impact on data quality.

Internal Standard Responses

Isotopically labeled $^{13}\text{C}_4$ -Perfluoroheptanoic acid (MPFHpA) is used as an internal standard to quantify native Perfluoroheptanoic acid (PFHpA). The instrument response observed for this labeled compound was below the defined lower control limit (LCL) for the following sample:

BVX775 *OF-FB56-0216*

The instrument response for the injection standard ($^{13}\text{C}_6$ -Perfluorohexanoic acid, $^{13}\text{C}_6$ -PFHxA) fell within the required tolerance limits. This indicates that the response observed for this isotopically labeled internal standard was not a result of poor or inconsistent sample introduction into the liquid chromatograph/tandem mass spectrometer (LC/MS/MS).

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 #: 320-17185



Client: TestAmerica
Client Project: 320-17185

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						
BVX769	OF-FB08-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX770	OF-RW08-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/29
BVX771	OF-RW08P-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/29
BVX772	OF-FB41-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX773	OF-RW41-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX774	OF-RW41P-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX775	OF-FB56-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX776	OF-RW56-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX779	OF-FB51-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX780	OF-RW51-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19
BVX781	OF-RW51P-0216	2016/02/04	2016/02/13	2016/02/18	2016/02/19	2016/02/19

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 is 2.
Only 1 container received for each sample.

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis

a) Hold Times: See case narrative

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 integration(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

2016/03/09

Date



2. Sample Management Records

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2.1 Sample Custody

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Chain of Custody Record

Due 2/22

13-Feb-16 13:40

Hongmei Zhao (Grace)



B630791

AKP ENV-997



320-17185 Chain of Custody

Temperature on Receipt 3.4

Drinking Water? Yes ☒ No ☐

C70 WE 76

Project Manager		Date	Chain of Custody Number		
[Redacted]		02/04/16	283597		
Telephone Number (Area Code) / Fax Number		Lab Number	Page 1 of 2		
[Redacted]					
Site Contact		Analysis (Attach list if more space is needed)			
[Redacted]					
Carrier/Waybill Number		Special Instructions/Conditions of Receipt			
FedEx					
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	Containers & Preservatives	Analysis
OF-FB08-0216	02/04/16	0930	Air	Unpres.	2
OF-RW08-0216		0935	Soil	Unpres.	2
OF-RW08P-0216		0937	Soil	Unpres.	2
OF-FB41-0216		1005	Soil	Unpres.	2
OF-RW41-0216		1010	Soil	Unpres.	2
OF-RW41P-0216		1012	Soil	Unpres.	2
OF-FB56-0216		1035	Soil	Unpres.	2
OF-RW56-0216		1040	Soil	Unpres.	2
OF-RW56-0216-M8		1040	Soil	Unpres.	2
OF-RW56-0216-SD		1040	Soil	Unpres.	2
OF-FB51-0216		1100	Soil	Unpres.	2
OF-RW51-0216		1110	Soil	Unpres.	2
Sample Disposal					
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
QC Requirements (Specify)					
1. Received By _____ Date 02/04/16 Time 09:30 2. Received By _____ Date _____ Time _____ 3. Received By _____ Date _____ Time _____					
Comments					

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

Chain of Custody Record

Due 2/22

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt 3.7

Drinking Water? Yes ☒ No ☐

CTD WE 7G

Project Manager		Date		Chain of Custody Number	
		02/04/16		283598	
Telephone Number (Area Code) Fax Number		Lab Number		Page 2 of 2	
Site Contact		Lab Contact		Analysis (Attach list if more space is needed)	
Carrier Worksheet Number		Lab Contact		Special Instructions/ Conditions of Receipt	
FCELE6					
Matrix		Containers & Preservatives			
Air		H2SO4			
Aqueous		HNO3			
Soil		HCl			
Sed		NaOH			
Solid		ZnCl2			
Date		Time			
02/04/16		11:12			
Sample I.D. No. and Description		Date		Time	
(Containers for each sample may be combined on one line)		02/04/16		11:12	
05-PW510-0216					
Possible Hazard Identification		Sample Disposal		QC Requirements (Specify)	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Other		☐ Return To Client ☐ Disposal By Lab ☐ Archive For		(A fee may be assessed if samples are retained longer than 1 month)	
Turn Around Time Required		1. Received By		Date	
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days		Date		Time	
1. Relinquished By		Date		Time	
2. Relinquished By		Date		Time	
3. Relinquished By		Date		Time	
Comments		Date		Time	
		02/04/16		19:30	
		02/04/16		10:00	
		02/04/16		13:40	

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



3. Analytical Results

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3.1 Summary Report

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Your Project #: 320-17185
Your C.O.C. #: 283597

Attention: PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/03/09
Report #: R3921827
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630791

Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	11	2016/02/18	2016/02/19	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) 817-5700

=====

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RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX769				BVX770	BVX771			
Sampling Date		2016/02/04 09:30				2016/02/04 09:35	2016/02/04 09:37			
COC Number		283597				283597	283597			
	UNITS	OF-FB08-0216	RDL	MDL	QC Batch	OF-RW08-0216	OF-RW08P-0216	RDL	MDL	QC Batch
Miscellaneous Parameters										
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	2.0	0.27	4386408	5.0	5.2	2.0	0.27	4386408
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	2.0	0.39	4386408	2.9	3.0	2.0	0.39	4386408
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	2.0	0.40	4386408	53	60	2.0	0.40	4386408
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	2.0	0.39	4386408	13	14	2.0	0.39	4386408
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	2.0	0.33	4386408	0.43 J	0.39 J	2.0	0.33	4386408
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	2.0	0.30	4386408	180 (1)	170 (1)	20	3.0	4394558
Surrogate Recovery (%)										
13C4-Perfluoroheptanoic acid	%	72	N/A	N/A	4386408	63	61	N/A	N/A	4386408
13C4-Perfluorooctanesulfonate	%	90	N/A	N/A	4386408	89	88	N/A	N/A	4394558
13C4-Perfluorooctanoic acid	%	79	N/A	N/A	4386408	70	68	N/A	N/A	4386408
13C5-Perfluorononanoic acid	%	86	N/A	N/A	4386408	83	80	N/A	N/A	4386408
18O2-Perfluorohexanesulfonate	%	79	N/A	N/A	4386408	87	78	N/A	N/A	4386408
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
N/A = Not Applicable										
(1) Due to high concentration of the target analyte, sample required 10x dilution. Detection limit was adjusted accordingly.										

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX772	BVX773	BVX774	BVX775	BVX776			
Sampling Date		2016/02/04 10:05	2016/02/04 10:10	2016/02/04 10:12	2016/02/04 10:35	2016/02/04 10:40			
COC Number		283597	283597	283597	283597	283597			
	UNITS	OF-FB41-0216	OF-RW41-0216	OF-RW41P-0216	OF-FB56-0216	OF-RW56-0216	RDL	MDL	QC Batch

Miscellaneous Parameters

Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27 U	0.67 J	0.27 U	0.81 J	2.0	0.27	4386408
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	2.0	0.39	4386408
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.69 J	0.69 J	0.40 U	0.40 U	2.0	0.40	4386408
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	4386408
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	2.0	0.33	4386408
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	2.0	0.30	4386408

Surrogate Recovery (%)

13C4-Perfluoroheptanoic acid	%	65	59	55	53	60	N/A	N/A	4386408
13C4-Perfluorooctanesulfonate	%	78	68	61	59	66	N/A	N/A	4386408
13C4-Perfluorooctanoic acid	%	68	65	60	61	66	N/A	N/A	4386408
13C5-Perfluorononanoic acid	%	78	66	64	63	74	N/A	N/A	4386408
18O2-Perfluorohexanesulfonate	%	72	62	62	62	70	N/A	N/A	4386408

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

Maxxam ID		BVX779	BVX780	BVX781			
Sampling Date		2016/02/04 11:00	2016/02/04 11:10	2016/02/04 11:12			
COC Number		283597	283597	283597			
	UNITS	OF-FB51-0216	OF-RW51-0216	OF-RW51P-0216	RDL	MDL	QC Batch

Miscellaneous Parameters

Perfluorobutane Sulfonate (PFBS)	ng/L	0.63 J	0.27 U	0.27 U	2.0	0.27	4386408
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	6.6	4.2	2.0	0.39	4386408
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	2.0	0.40	4386408
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	2.0	0.39	4386408
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	2.0	0.33	4386408
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30 U	0.30 U	2.0	0.30	4386408

Surrogate Recovery (%)

13C4-Perfluoroheptanoic acid	%	76	51	53	N/A	N/A	4386408
13C4-Perfluorooctanesulfonate	%	87	64	59	N/A	N/A	4386408
13C4-Perfluorooctanoic acid	%	81	57	57	N/A	N/A	4386408
13C5-Perfluorononanoic acid	%	89	63	62	N/A	N/A	4386408
18O2-Perfluorohexanesulfonate	%	77	65	62	N/A	N/A	4386408

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

TEST SUMMARY

Maxxam ID: BVX769
Sample ID: OF-FB08-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX770
Sample ID: OF-RW08-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX771
Sample ID: OF-RW08P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX772
Sample ID: OF-FB41-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX773
Sample ID: OF-RW41-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX774
Sample ID: OF-RW41P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX775
Sample ID: OF-FB56-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

TEST SUMMARY

Maxxam ID: BVX776
Sample ID: OF-RW56-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX779
Sample ID: OF-FB51-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX780
Sample ID: OF-RW51-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

Maxxam ID: BVX781
Sample ID: OF-RW51P-0216
Matrix: Water

Collected: 2016/02/04
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4386408	2016/02/18	2016/02/19	Colm McNamara

GENERAL COMMENTS

Report revised to reflect updated remarks and DLs for dilutions

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

Sample BVX770, Low level PFOS and PFOA in water: Test repeated.

Sample BVX771, Low level PFOS and PFOA in water: Test repeated.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

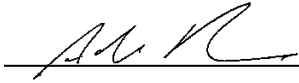
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4386408	CM5	Matrix Spike [BVX776-01]	13C4-Perfluoroheptanoic acid	2016/02/19		50	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		59	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		58	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		61	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		53	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19		157 (1)	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19		133 (1)	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19		148 (1)	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/19		120	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19		125	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/19		116	%	70 - 130
4386408	CM5	RPD [BVX776-01]	Perfluorobutane Sulfonate (PFBS)	2016/02/19	4.2		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19	6.2		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19	11		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/19	14		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19	8.5		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/19	6.4		%	30
4386408	CM5	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/19		67	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		77	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		70	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		73	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		83	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19		107	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19		121	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19		115	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/19		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19		124	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/19		112	%	70 - 130
4386408	CM5	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/19		74	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/19		82	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/19		74	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/19		76	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/19		86	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/19	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/19	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/19	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/19	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/19	0.39 U, MDL=0.39		ng/L	
			Perfluorooctane Sulfonate (PFOS)	2016/02/19	0.30 U, MDL=0.30		ng/L	
			13C4-Perfluorooctanesulfonate	2016/02/29		95	%	50 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		126	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	12		%	30
4394558	SCH	Matrix Spike	13C4-Perfluorooctanesulfonate	2016/02/29		99	%	50 - 130
4394558	SCH	RPD	Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
4394558	SCH	Spiked Blank	13C4-Perfluorooctanesulfonate	2016/02/29		83	%	50 - 130
4394558	SCH	Method Blank	13C4-Perfluorooctanesulfonate	2016/02/29				

QUALITY ASSURANCE REPORT(CONT'D)

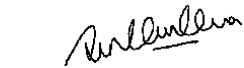
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	0.30 U, MDL=0.30		ng/L	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. 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. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								

VALIDATION SIGNATURE PAGE

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



Adam Robinson, Supervisor, LC/MS/MS



Sin Chii Chia, Scientific Services

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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



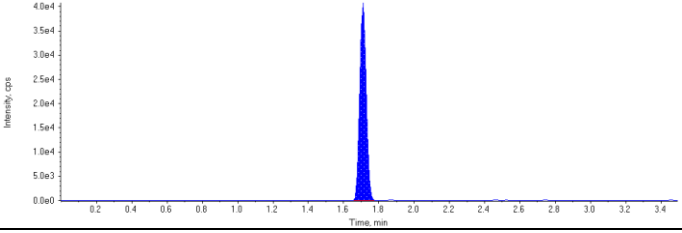
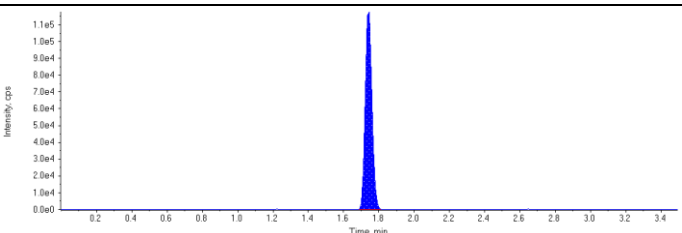
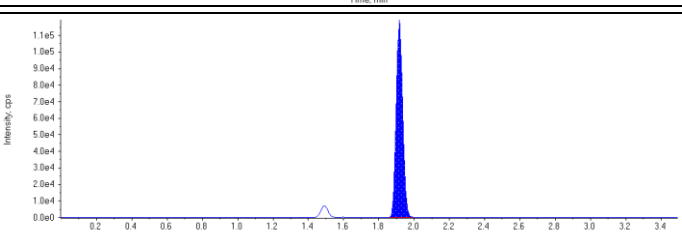
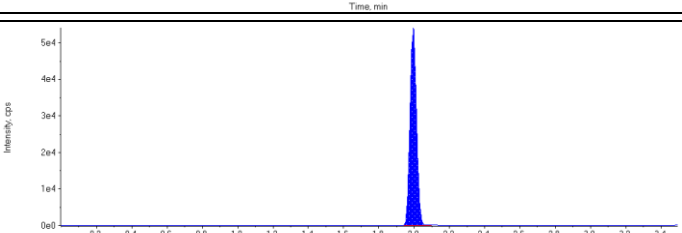
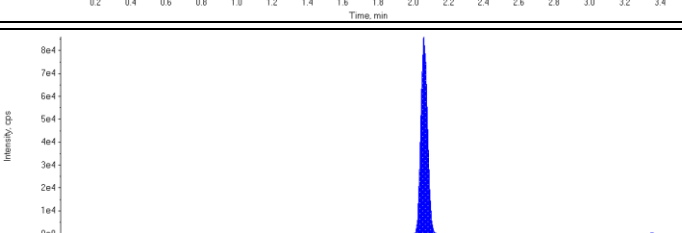
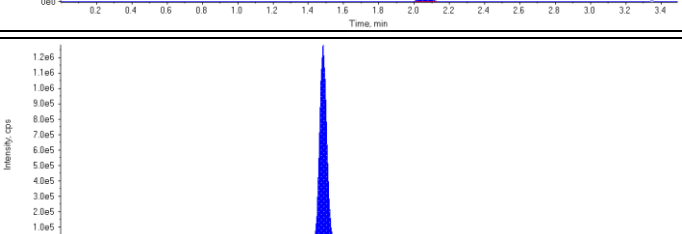
3.2 Sample Chromatograms

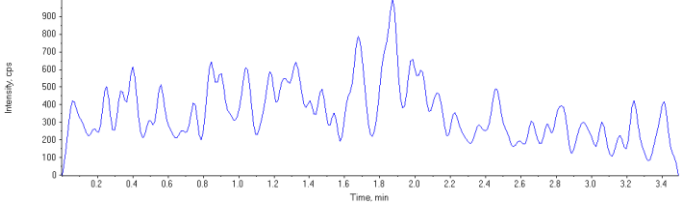
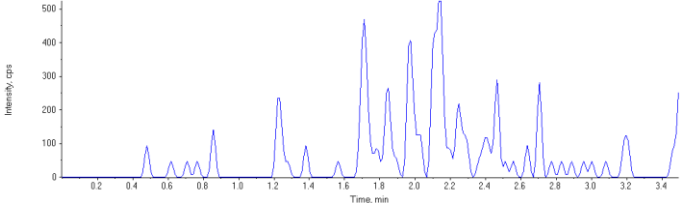
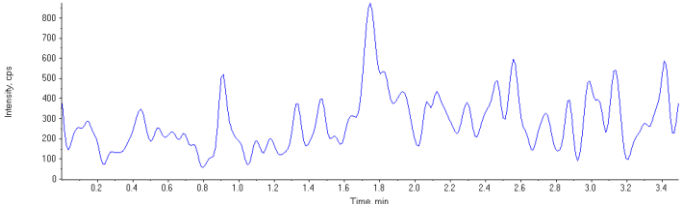
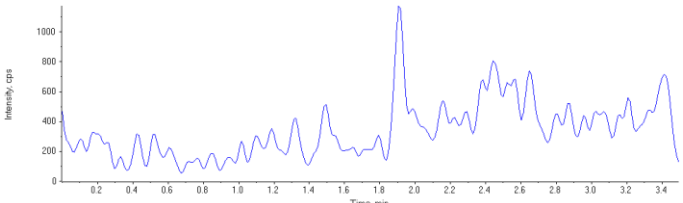
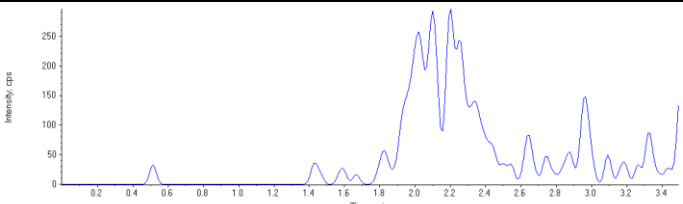
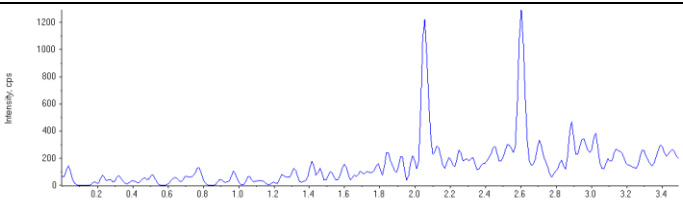
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

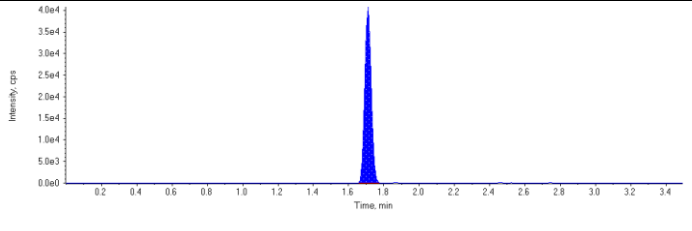
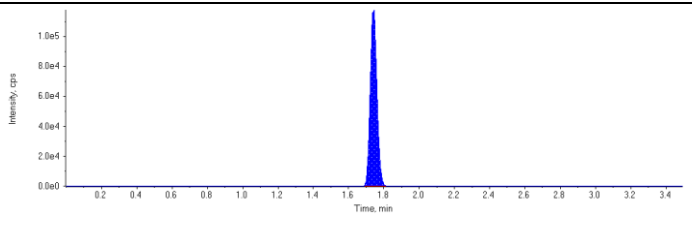
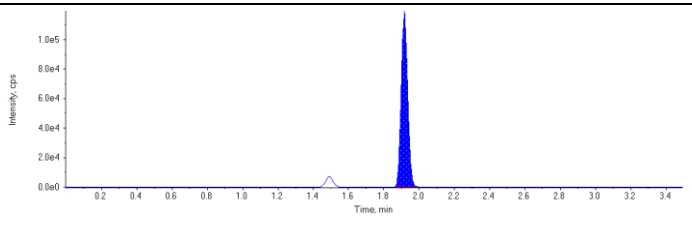
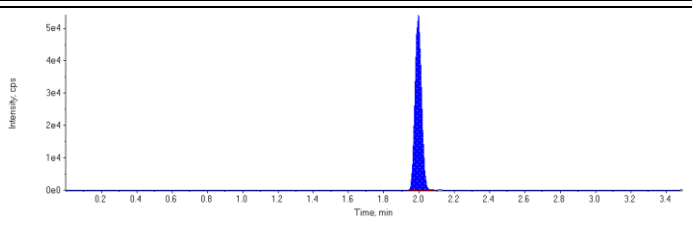
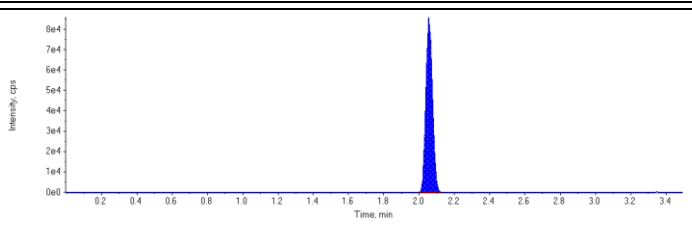
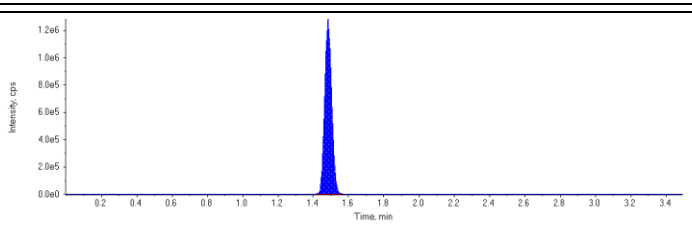
Sample Name	4386408~BVX769-01	Injection Vial	17
Sample ID	4386408~BVX769-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:11:43 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	103000.	1.71	1.00	-
MPFHpA	315000.	1.74	1.00	-
MPFOA	302000.	1.92	1.00	-
MPFOS	137000.	1.99	1.00	-
MPFNA	225000.	2.06	1.00	-
13C6-PFHxA IS	3540000.	1.48	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	103000	1.71	N/A	79.4	N/A
13C4-PFHpA	315000	1.74	N/A	71.9	N/A
13C4-PFOA	302000	1.92	N/A	79.1	N/A
13C4-PFOS	137000	1.99	N/A	89.8	N/A
13C5-PFNA	225000	2.06	N/A	86.2	N/A
13C6-PFHxA	3540000	1.48	N/A	88.7	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

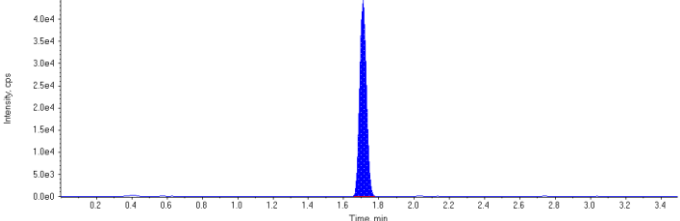
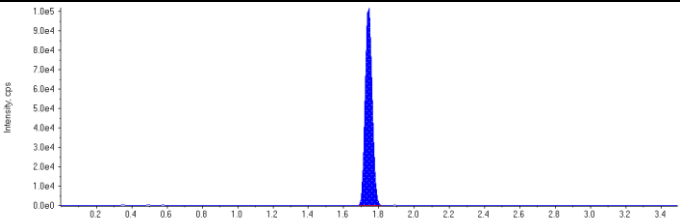
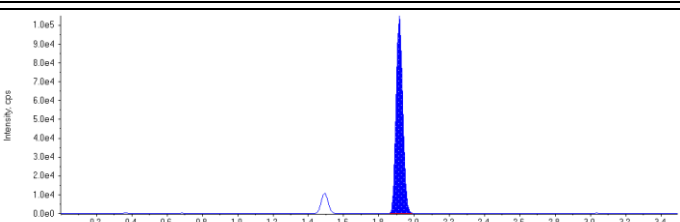
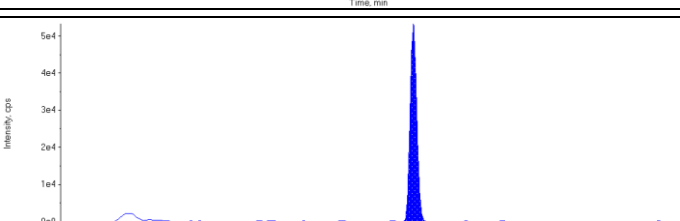
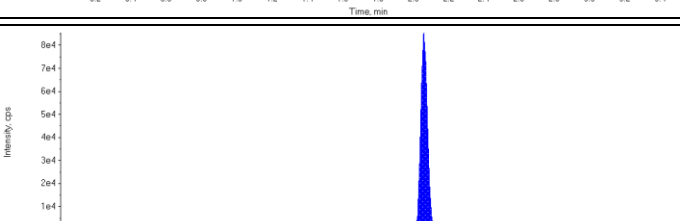
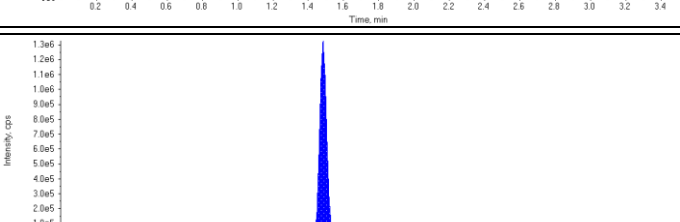
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75)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

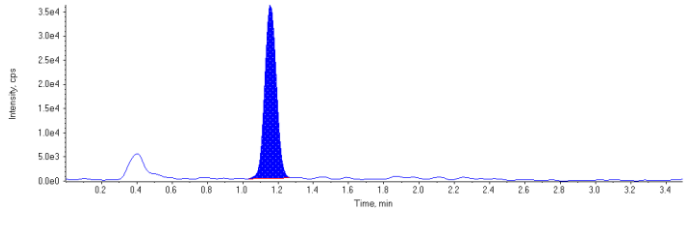
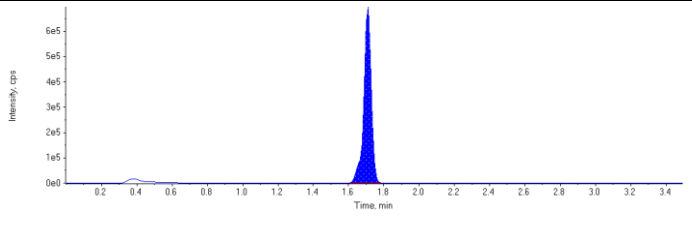
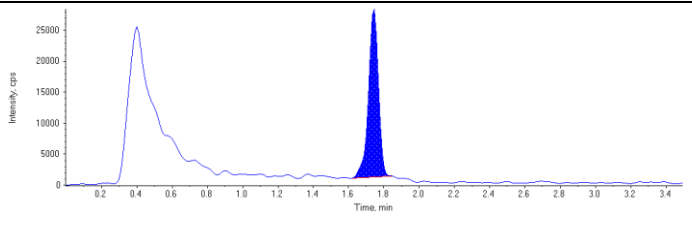
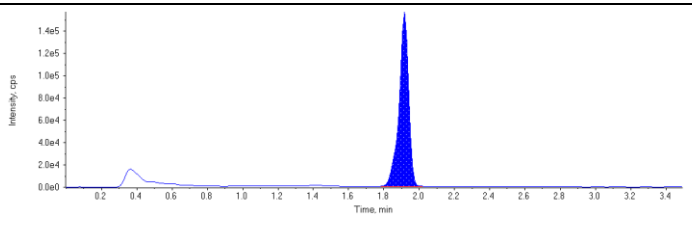
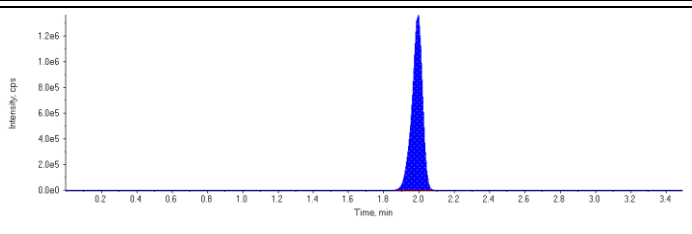
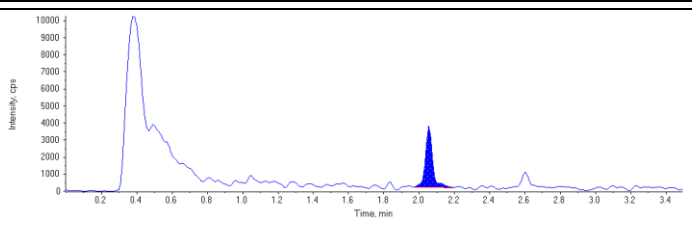
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 79.4 ng/L Area Ratio: 0.0292 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 71.9 ng/L Area Ratio: 0.0889 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 79.1 ng/L Area Ratio: 0.0853 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 89.8 ng/L Area Ratio: 0.0388 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 86.2 ng/L Area Ratio: 0.0635 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 88.7 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

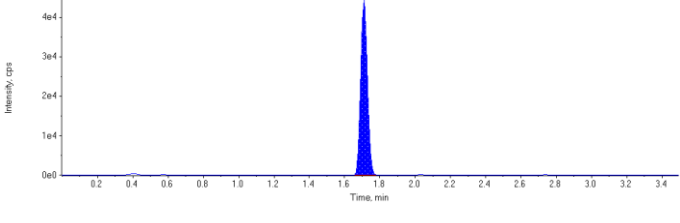
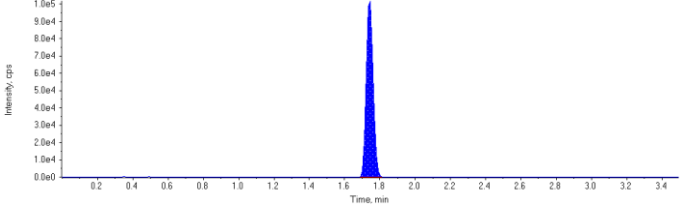
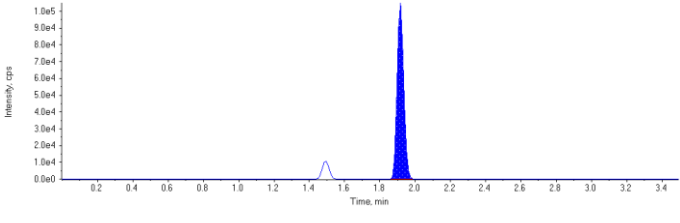
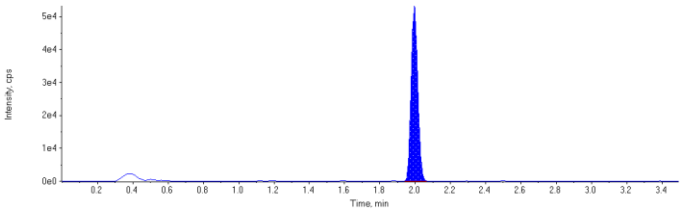
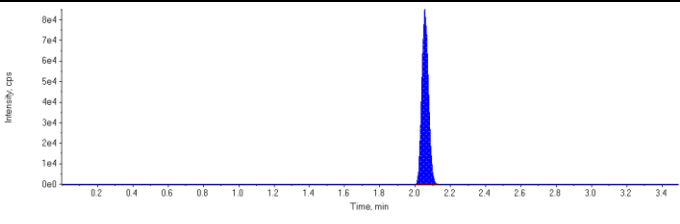
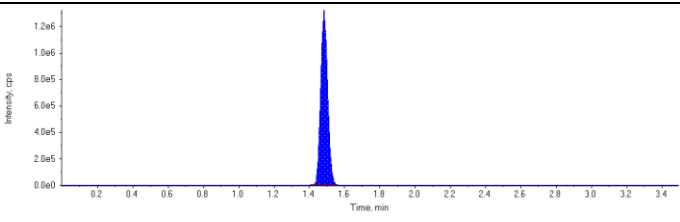
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Sample ID	4386408~BVX770-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:16:48 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	116000.	1.71	1.00	-
MPFHpA	281000.	1.74	1.00	-
MPFOA	273000.	1.92	1.00	-
MPFOS	138000.	2.00	1.00	-
MPFNA	222000.	2.06	1.00	-
13C6-PFHxA IS	3630000.	1.48	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	162000	1.16	N/A	5.03	N/A
PFHxS 1	2040000	1.71	N/A	53.3	N/A
PFHpA 1	106000	1.74	N/A	2.88	N/A
PFOA 1	585000	1.92	N/A	13.2	N/A
PFOS 1	5590000	1.99	N/A	223.	N/A
PFNA 1	10100	2.06	N/A	0.429	N/A
18O2-PFHxS	116000	1.71	N/A	87.0	N/A
13C4-PFHpA	281000	1.74	N/A	62.5	N/A
13C4-PFOA	273000	1.92	N/A	69.6	N/A
13C4-PFOS	138000	2.00	N/A	87.8	N/A
13C5-PFNA	222000	2.06	N/A	83.1	N/A
13C6-PFHxA	3630000	1.48	N/A	91.0	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

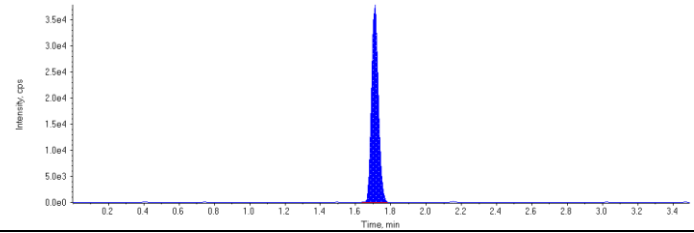
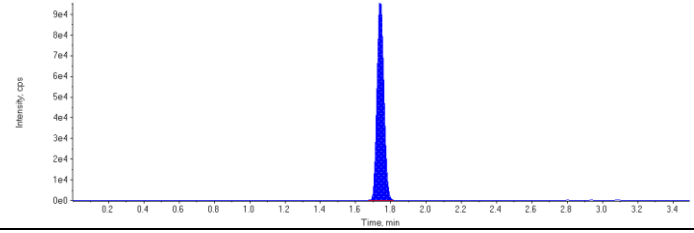
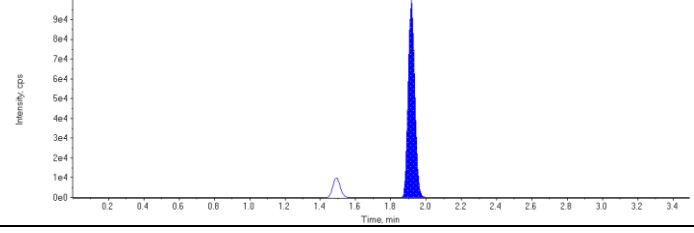
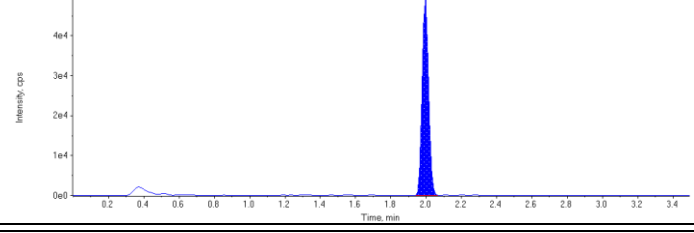
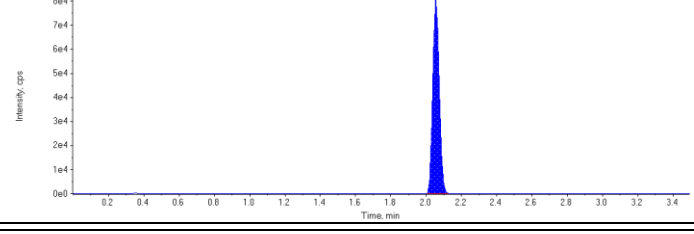
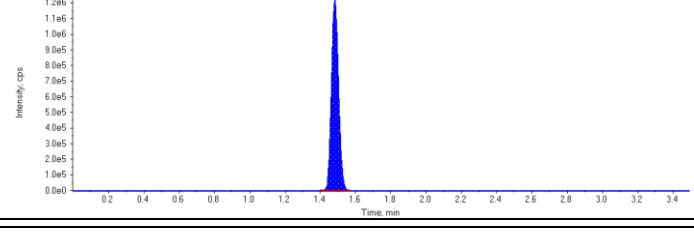
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 5.03 ng/L Area Ratio: 1.40 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 53.3 ng/L Area Ratio: 17.5 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 2.88 ng/L Area Ratio: 0.378 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 13.2 ng/L Area Ratio: 2.14 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 223. ng/L Area Ratio: 40.6 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 0.429 ng/L Area Ratio: 0.0453 Sample Type: (Unknown)	

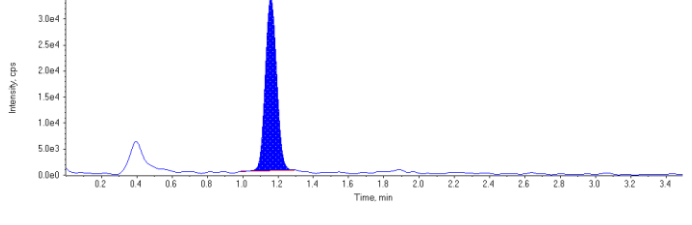
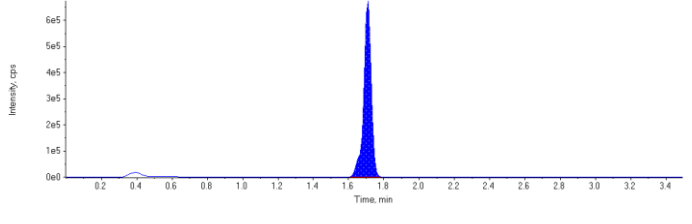
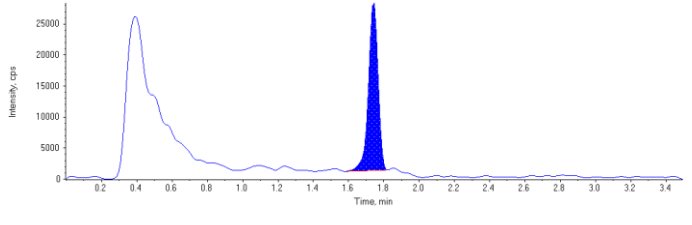
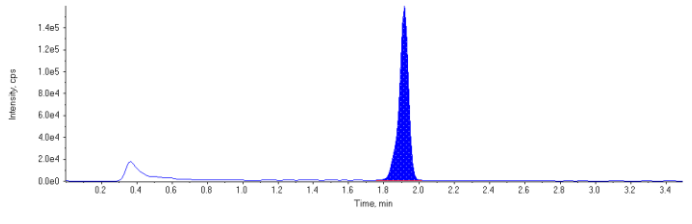
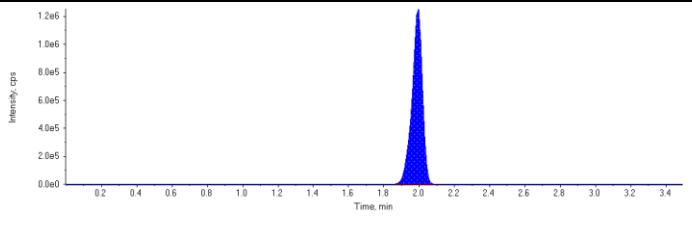
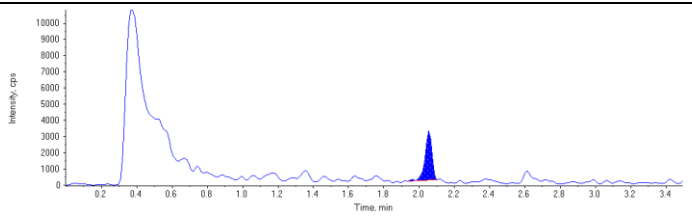
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 87.0 ng/L Area Ratio: 0.0320 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 62.5 ng/L Area Ratio: 0.0773 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 69.6 ng/L Area Ratio: 0.0751 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 87.8 ng/L Area Ratio: 0.0380 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 83.1 ng/L Area Ratio: 0.0611 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 91.0 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

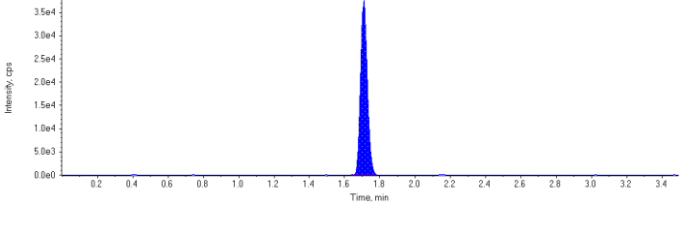
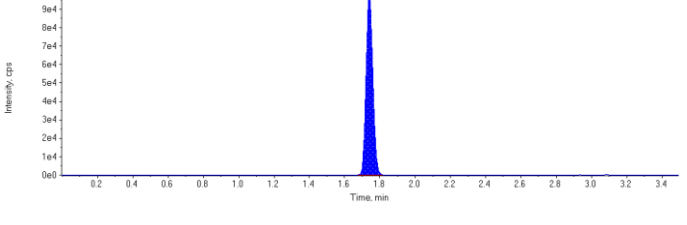
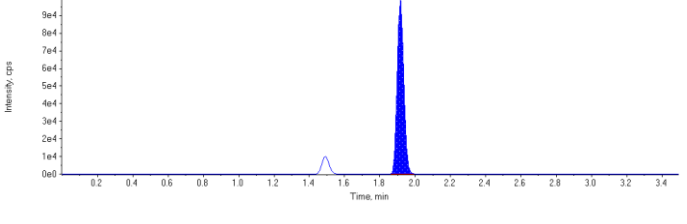
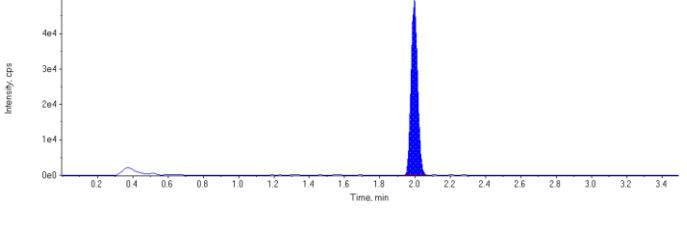
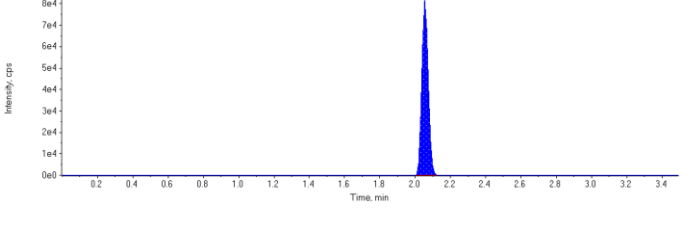
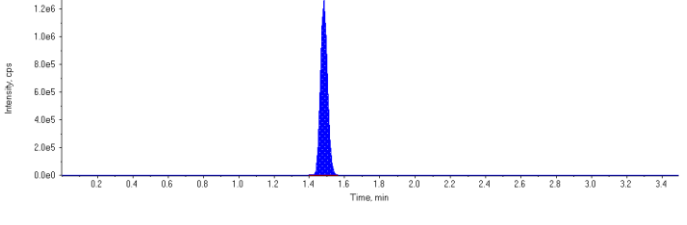
Sample Name	4386408~BVX771-01	Injection Vial	19
Sample ID	4386408~BVX771-01	Injection Volume (μL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:21:58 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	101000.	1.71	1.00	-
MPFHpA	263000.	1.74	1.00	-
MPFOA	257000.	1.92	1.00	-
MPFOS	126000.	2.00	1.00	-
MPFNA	208000.	2.06	1.00	-
13C6-PFHxA IS	3510000.	1.48	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	148000	1.16	N/A	5.24	N/A
PFHxS 1	1990000	1.71	N/A	59.7	N/A
PFHpA 1	102000	1.74	N/A	2.95	N/A
PFOA 1	582000	1.92	N/A	13.9	N/A
PFOS 1	5150000	1.99	N/A	225.	N/A
PFNA 1	8130	2.06	N/A	0.392	N/A
18O2-PFHxS	101000	1.71	N/A	78.1	N/A
13C4-PFHpA	263000	1.74	N/A	60.5	N/A
13C4-PFOA	257000	1.92	N/A	67.8	N/A
13C4-PFOS	126000	2.00	N/A	82.8	N/A
13C5-PFNA	208000	2.06	N/A	80.3	N/A
13C6-PFHxA	3510000	1.48	N/A	88.0	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

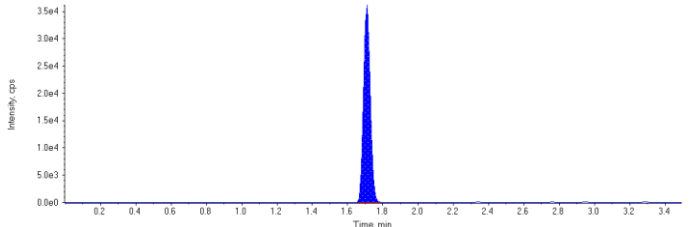
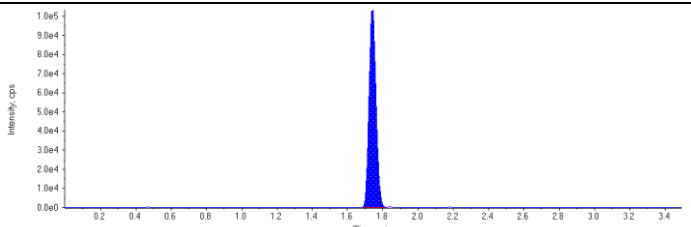
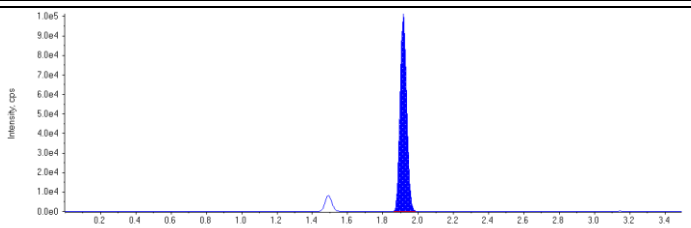
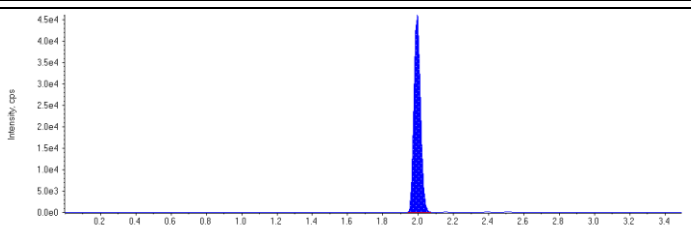
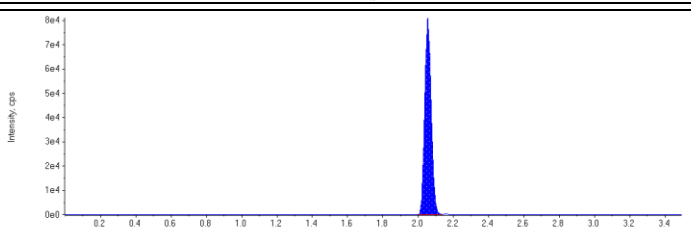
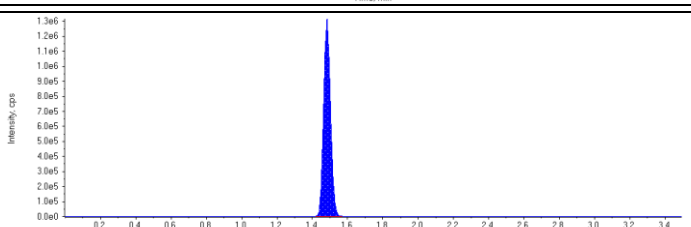
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 5.24 ng/L Area Ratio: 1.46 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 59.7 ng/L Area Ratio: 19.7 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 2.95 ng/L Area Ratio: 0.388 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 13.9 ng/L Area Ratio: 2.26 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 225. ng/L Area Ratio: 41.0 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 0.392 ng/L Area Ratio: 0.0391 Sample Type: (Unknown)	

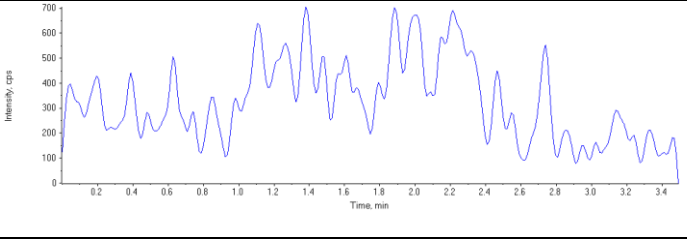
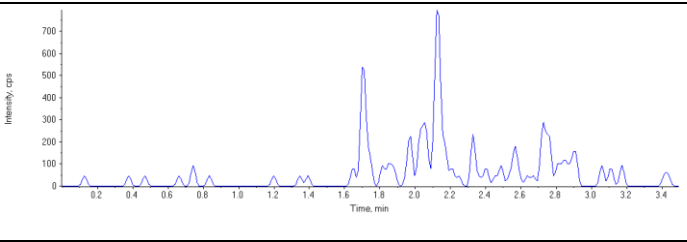
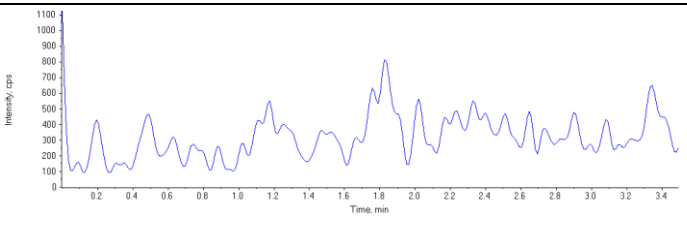
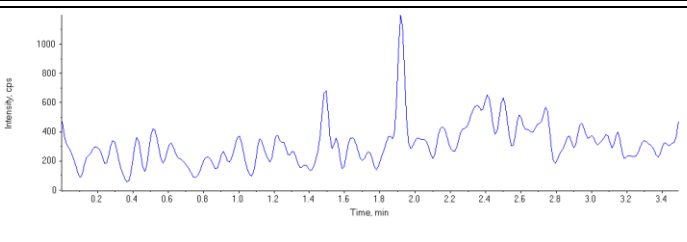
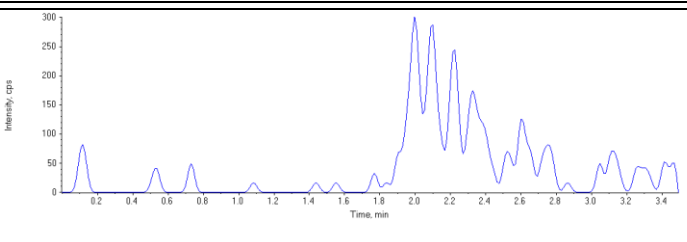
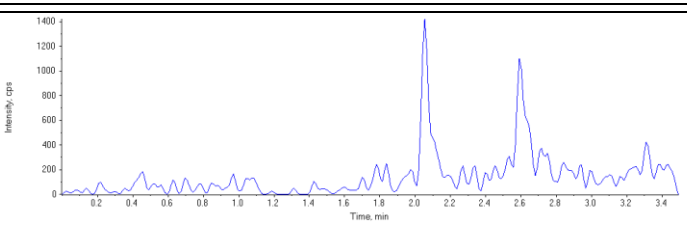
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 78.1 ng/L Area Ratio: 0.0288 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 60.5 ng/L Area Ratio: 0.0748 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 67.8 ng/L Area Ratio: 0.0731 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 82.8 ng/L Area Ratio: 0.0358 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 80.3 ng/L Area Ratio: 0.0591 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 88.0 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

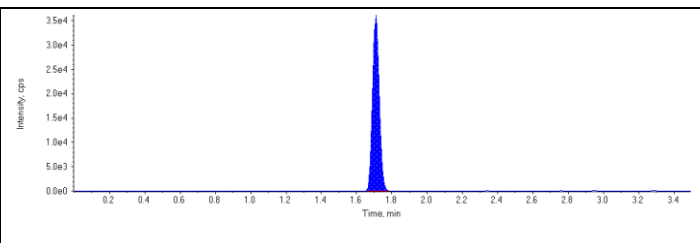
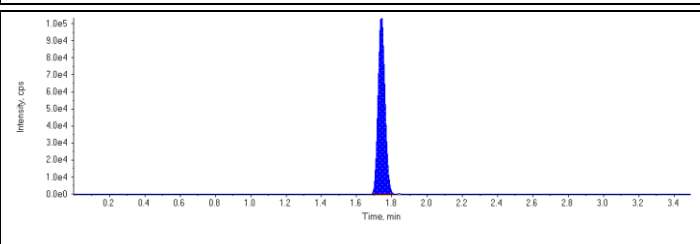
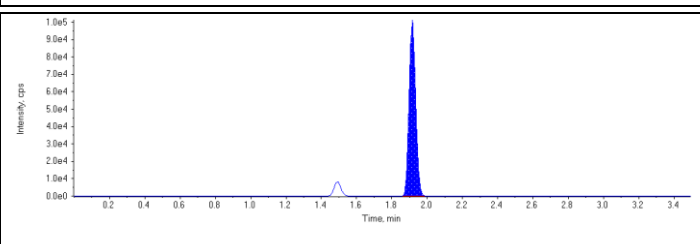
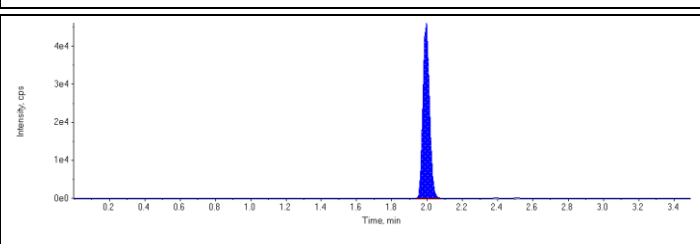
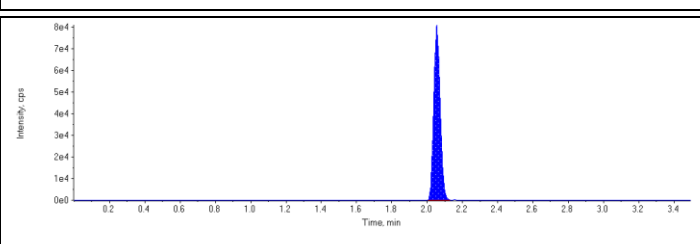
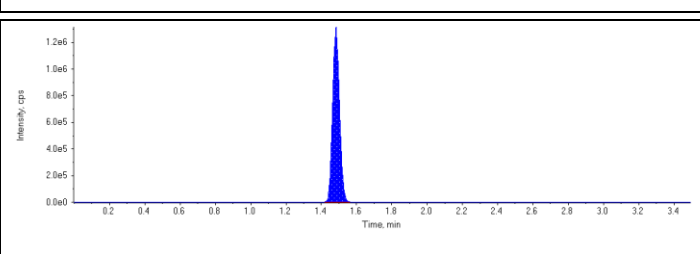
Sample Name	4386408~BVX772-01	Injection Vial	20
Sample ID	4386408~BVX772-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:27:04 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	95400.	1.71	1.00	-
MPFHpA	287000.	1.74	1.00	-
MPFOA	261000.	1.92	1.00	-
MPFOS	120000.	1.99	1.00	-
MPFNA	205000.	2.05	1.00	-
13C6-PFHxA IS	3590000.	1.48	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	95400	1.71	N/A	72.2	N/A
13C4-PFHpA	287000	1.74	N/A	64.8	N/A
13C4-PFOA	261000	1.92	N/A	67.5	N/A
13C4-PFOS	120000	1.99	N/A	77.6	N/A
13C5-PFNA	205000	2.05	N/A	77.7	N/A
13C6-PFHxA	3590000	1.48	N/A	89.9	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

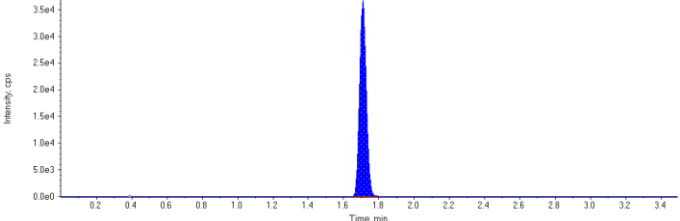
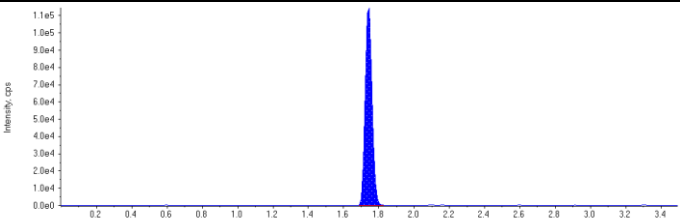
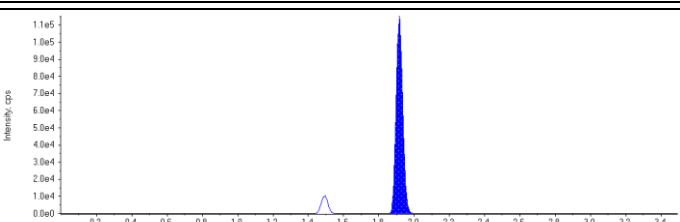
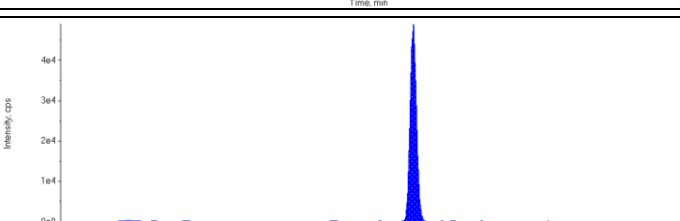
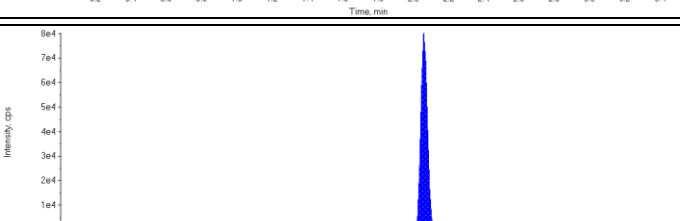
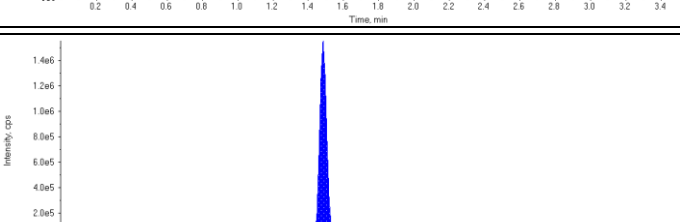
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75)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

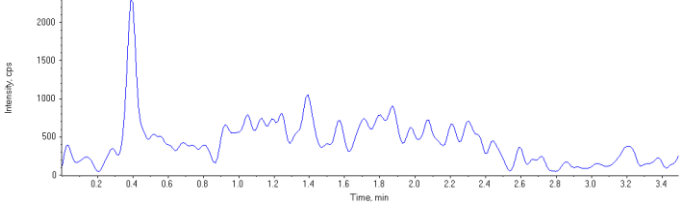
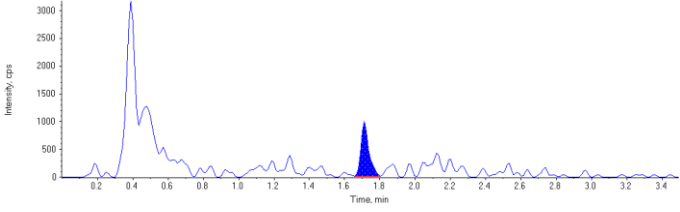
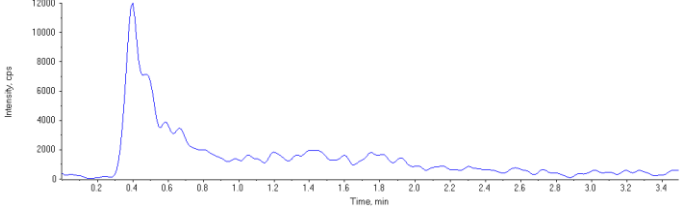
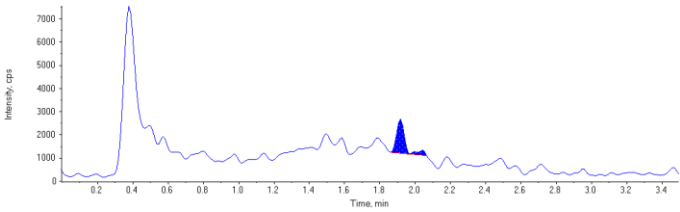
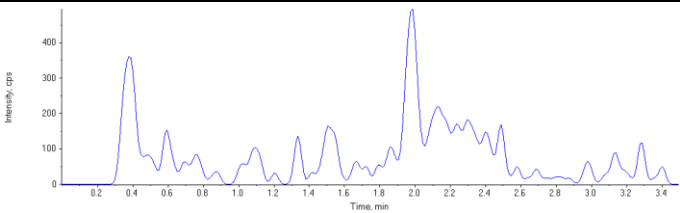
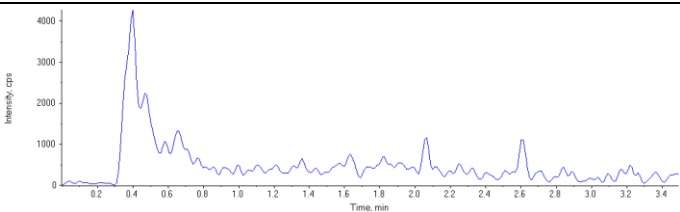
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 72.2 ng/L Area Ratio: 0.0266 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 64.8 ng/L Area Ratio: 0.0801 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 67.5 ng/L Area Ratio: 0.0728 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 77.6 ng/L Area Ratio: 0.0335 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 77.7 ng/L Area Ratio: 0.0572 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 89.9 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

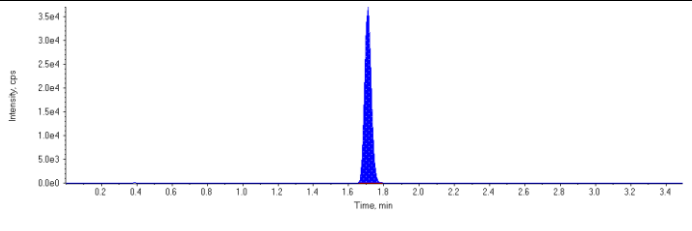
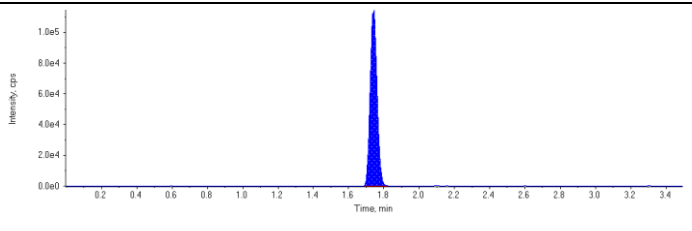
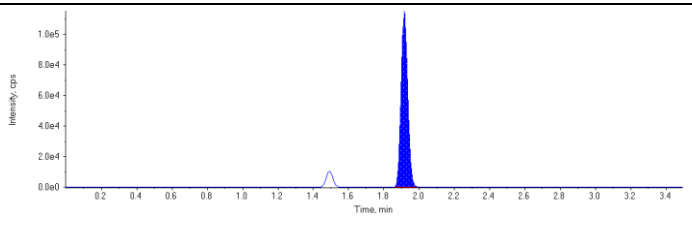
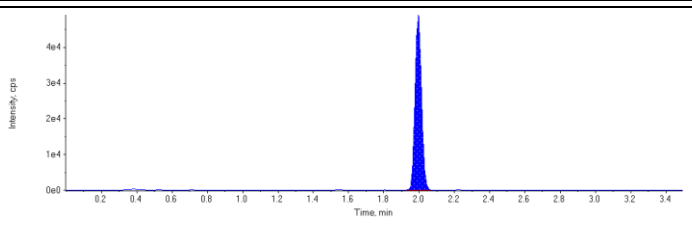
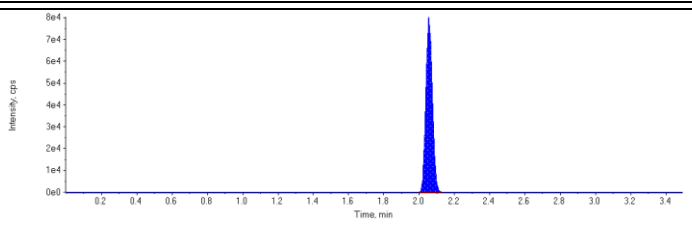
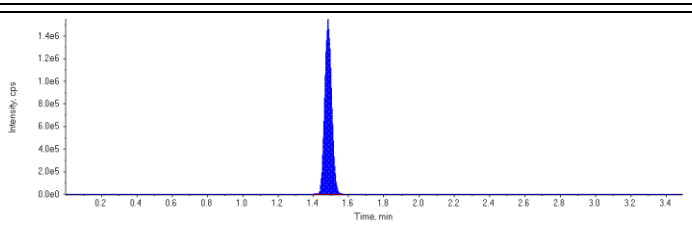
Sample Name	4386408~BVX773-01	Injection Vial	21
Sample ID	4386408~BVX773-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:32:10 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	97200.	1.71	1.00	-
MPFHpA	312000.	1.74	1.00	-
MPFOA	297000.	1.92	1.00	-
MPFOS	124000.	1.99	1.00	-
MPFNA	206000.	2.06	1.00	-
13C6-PFHxA IS	4250000.	1.48	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	3030	1.71	N/A	0.687	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	4970	1.92	N/A	0.298	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	97200	1.71	N/A	62.2	N/A
13C4-PFHpA	312000	1.74	N/A	59.4	N/A
13C4-PFOA	297000	1.92	N/A	64.8	N/A
13C4-PFOS	124000	1.99	N/A	67.7	N/A
13C5-PFNA	206000	2.06	N/A	66.0	N/A
13C6-PFHxA	4250000	1.48	N/A	106.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

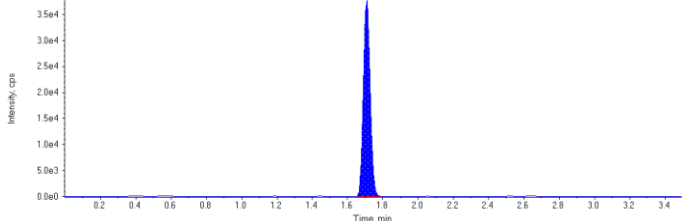
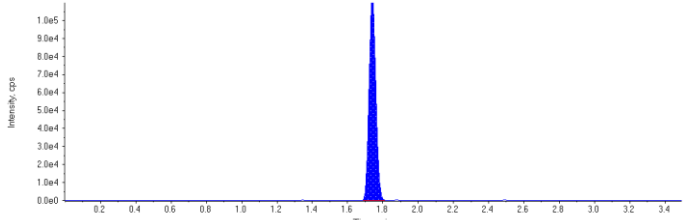
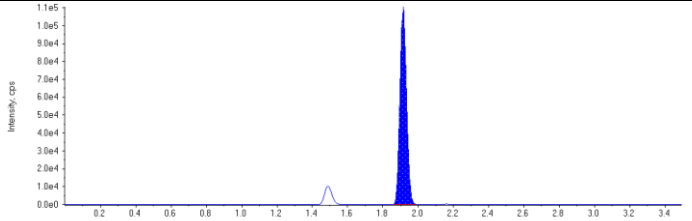
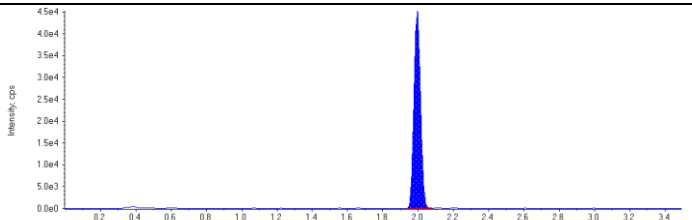
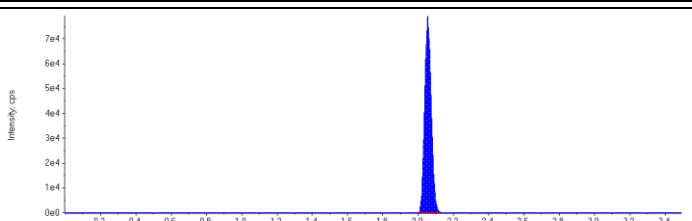
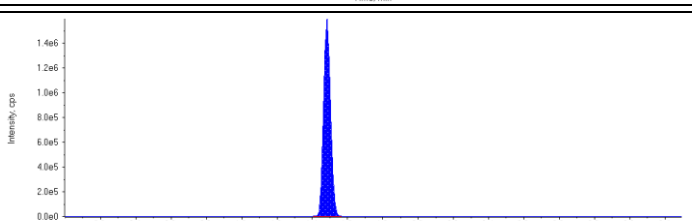
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 0.687 ng/L Area Ratio: 0.0312 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 0.298 ng/L Area Ratio: 0.0168 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

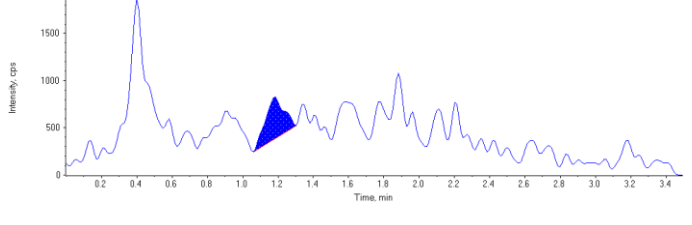
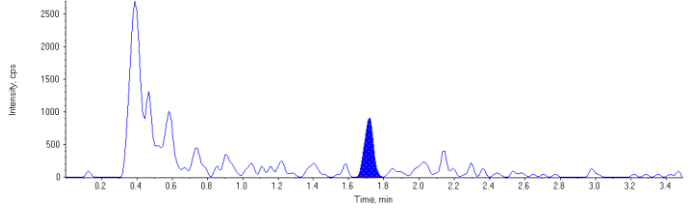
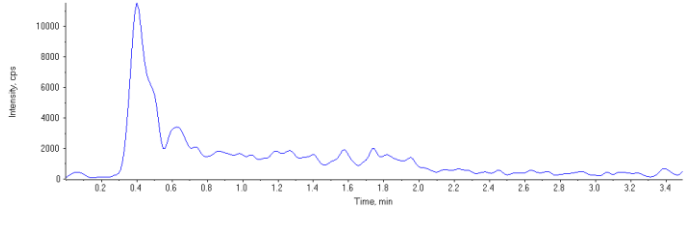
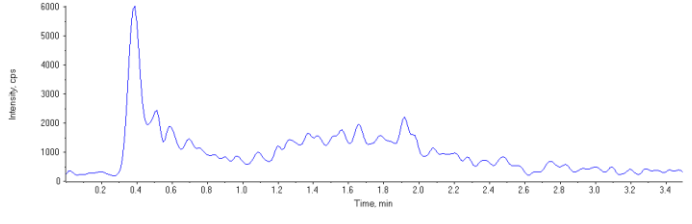
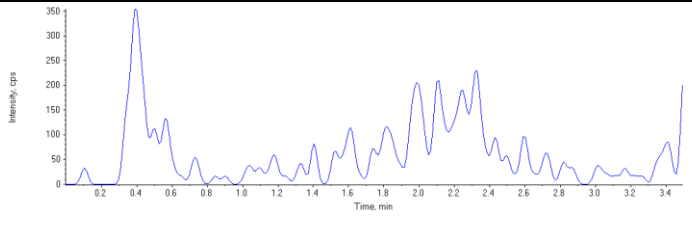
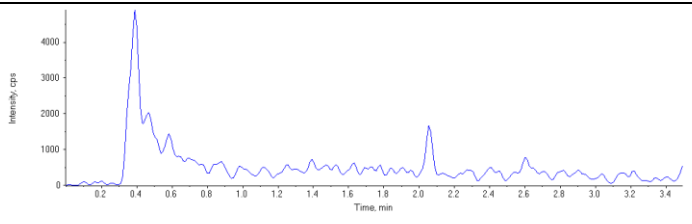
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 62.2 ng/L Area Ratio: 0.0229 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 59.4 ng/L Area Ratio: 0.0735 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 64.8 ng/L Area Ratio: 0.0699 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 67.7 ng/L Area Ratio: 0.0292 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 66.0 ng/L Area Ratio: 0.0486 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 106. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

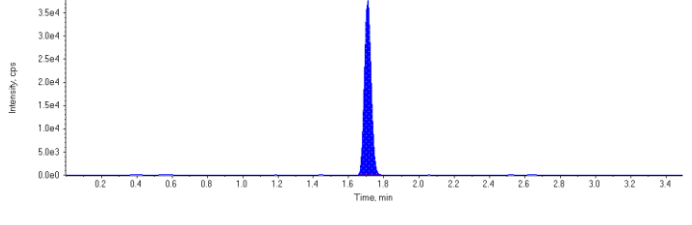
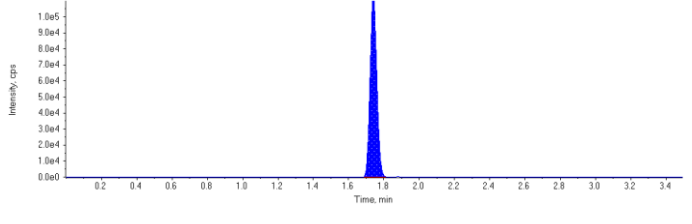
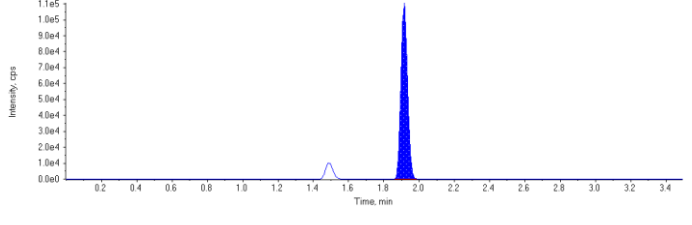
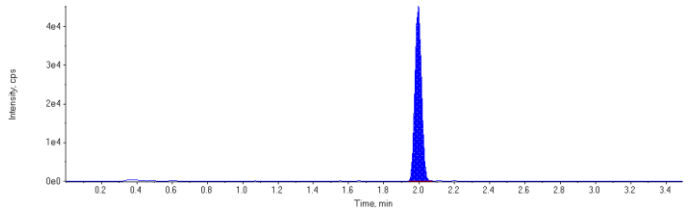
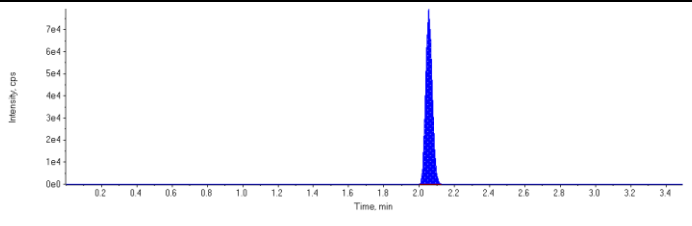
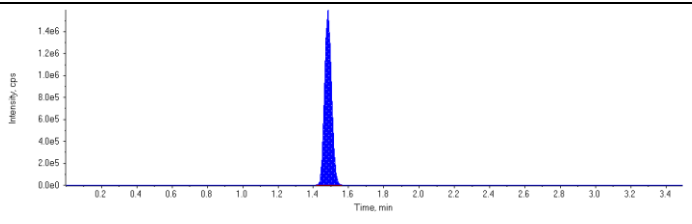
Sample Name	4386408~BVX774-01	Injection Vial	22
Sample ID	4386408~BVX774-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:37:16 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	101000.	1.71	1.00	-
MPFHpA	301000.	1.74	1.00	-
MPFOA	286000.	1.91	1.00	-
MPFOS	117000.	1.99	1.00	-
MPFNA	207000.	2.05	1.00	-
13C6-PFHxA IS	4420000.	1.48	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	3240	1.18	N/A	0.674	N/A
PFHxS 1	3170	1.72	N/A	0.687	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	101000	1.71	N/A	62.2	N/A
13C4-PFHpA	301000	1.74	N/A	54.9	N/A
13C4-PFOA	286000	1.91	N/A	60.0	N/A
13C4-PFOS	117000	1.99	N/A	61.0	N/A
13C5-PFNA	207000	2.05	N/A	63.5	N/A
13C6-PFHxA	4420000	1.48	N/A	111.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.91(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

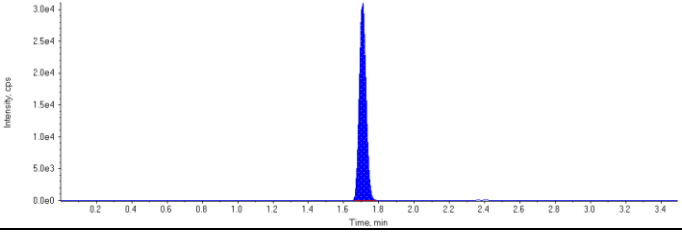
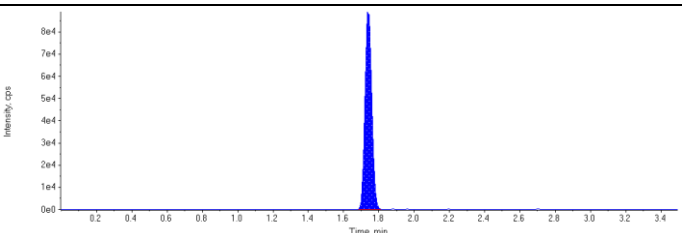
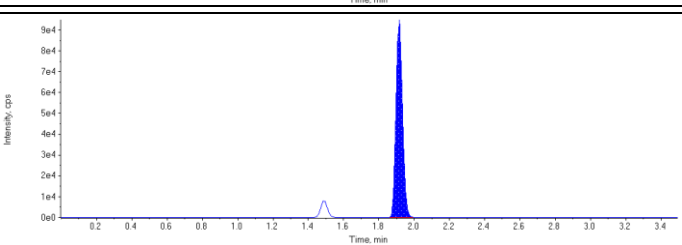
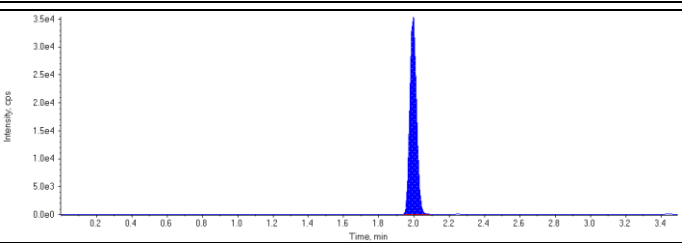
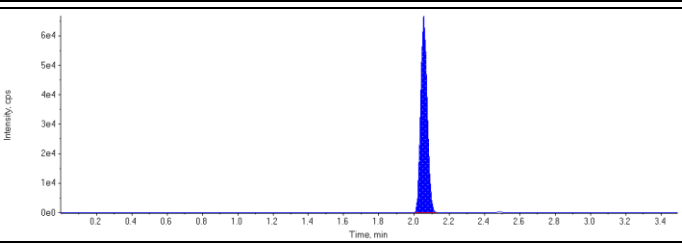
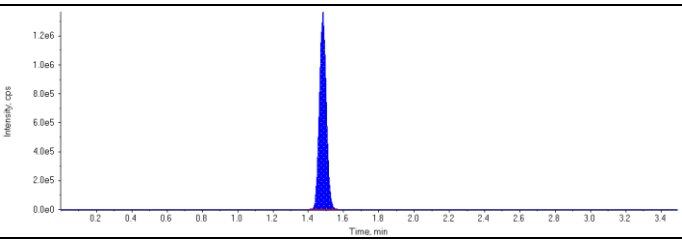
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.18 (1.15) min Calculated Conc: 0.674 ng/L Area Ratio: 0.0320 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.72 (1.68) min Calculated Conc: 0.687 ng/L Area Ratio: 0.0312 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

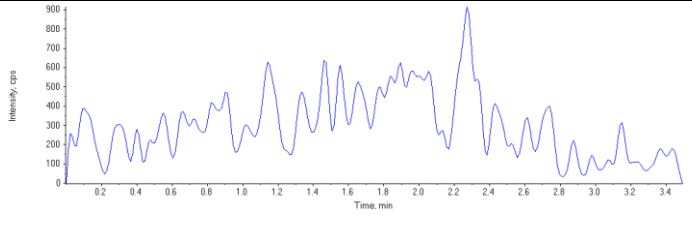
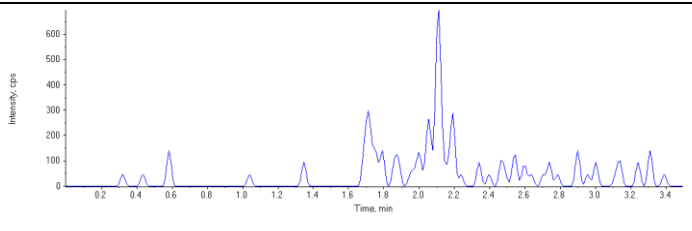
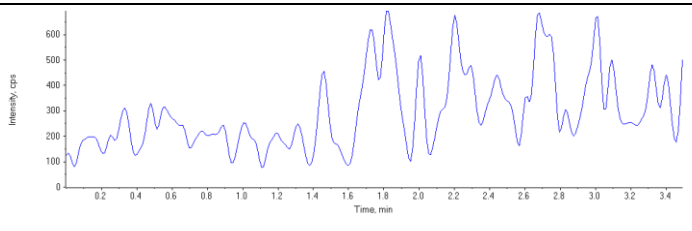
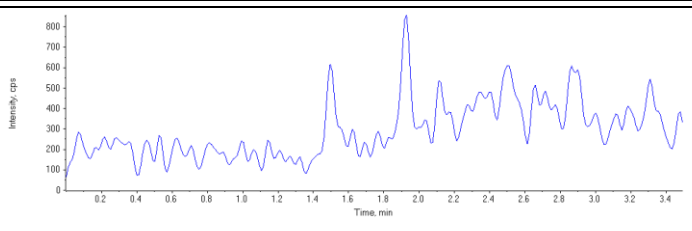
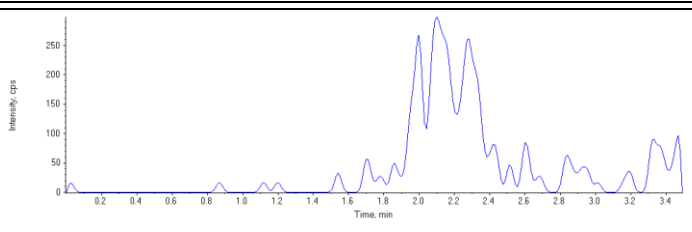
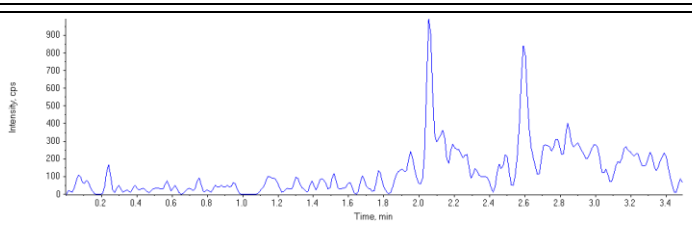
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 62.2 ng/L Area Ratio: 0.0229 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 54.9 ng/L Area Ratio: 0.0680 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.91 (1.88) min Calculated Conc: 60.0 ng/L Area Ratio: 0.0647 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 61.0 ng/L Area Ratio: 0.0264 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 63.5 ng/L Area Ratio: 0.0467 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 111. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

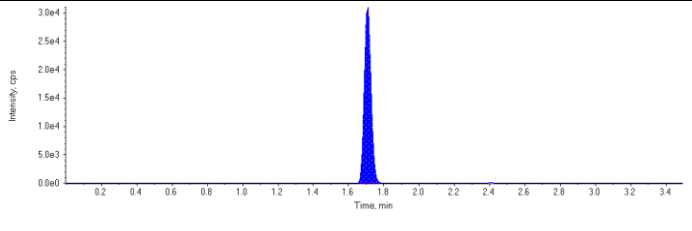
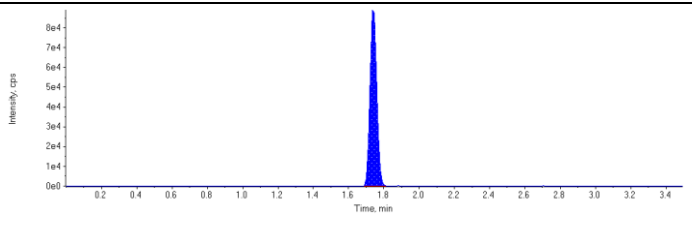
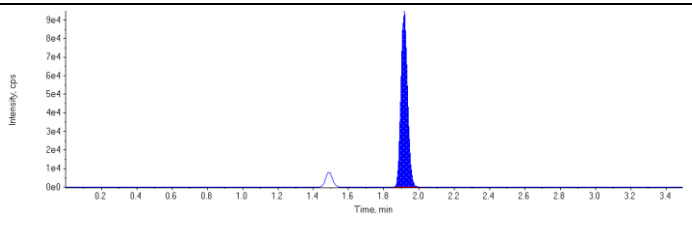
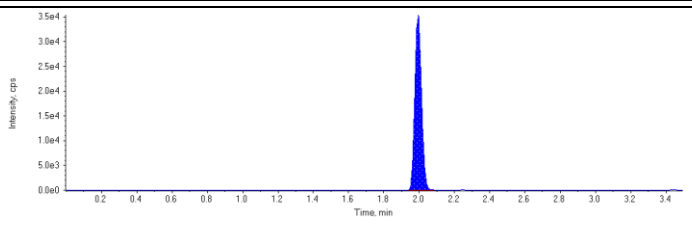
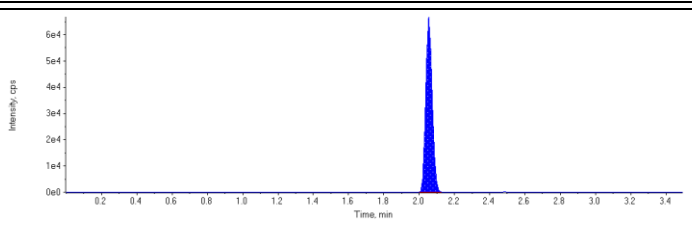
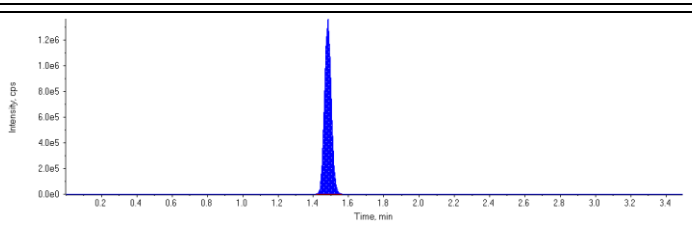
Sample Name	4386408~BVX775-01	Injection Vial	23
Sample ID	4386408~BVX775-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:52:33 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	83400.	1.71	1.00	-
MPFHpA	241000.	1.74	1.00	-
MPFOA	243000.	1.91	1.00	-
MPFOS	93300.	1.99	1.00	-
MPFNA	170000.	2.05	1.00	-
13C6-PFHxA IS	3680000.	1.48	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	83400	1.71	N/A	61.5	N/A
13C4-PFHpA	241000	1.74	N/A	53.0	N/A
13C4-PFOA	243000	1.91	N/A	61.3	N/A
13C4-PFOS	93300	1.99	N/A	58.7	N/A
13C5-PFNA	170000	2.05	N/A	62.9	N/A
13C6-PFHxA	3680000	1.48	N/A	92.2	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.91(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

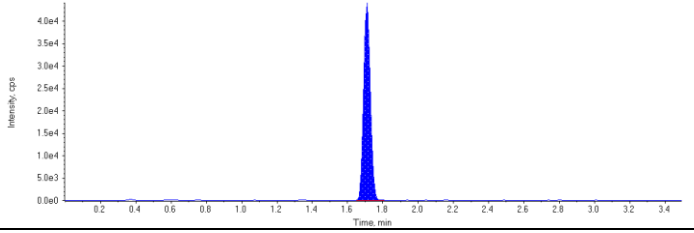
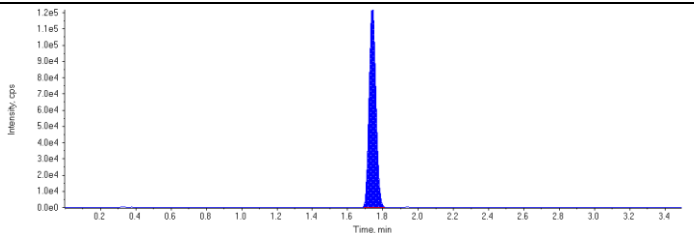
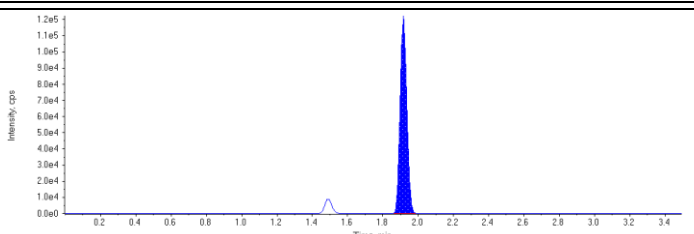
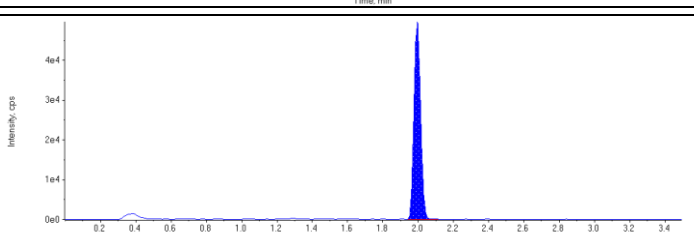
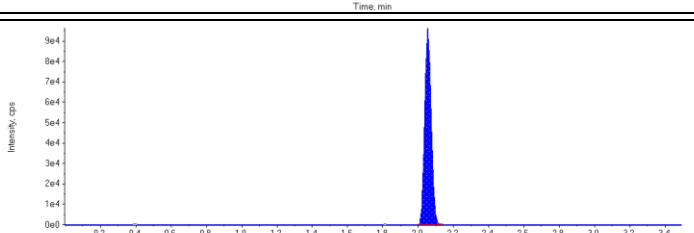
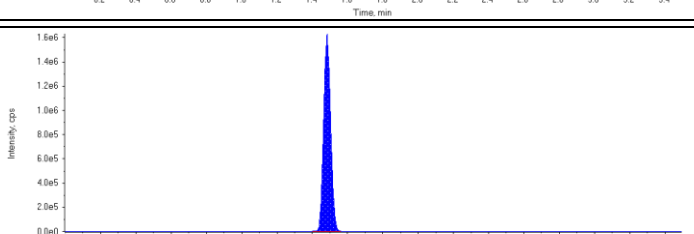
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75)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

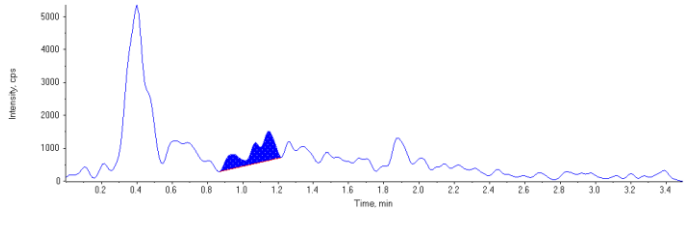
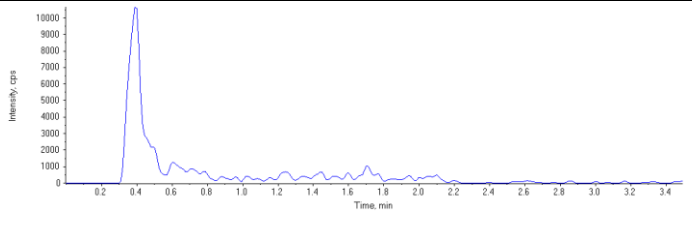
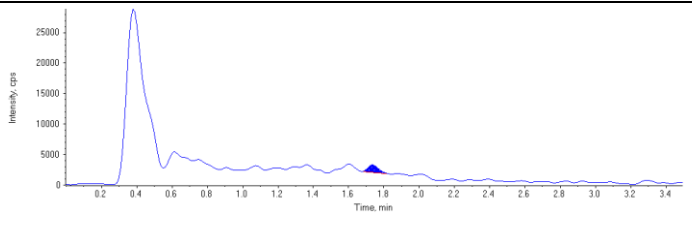
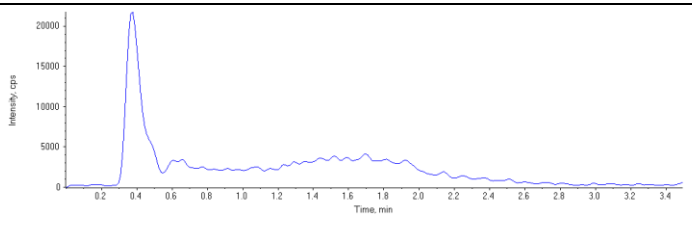
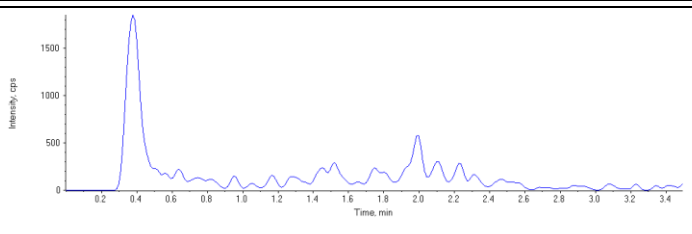
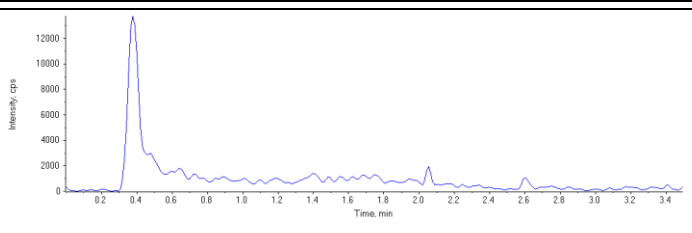
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 61.5 ng/L Area Ratio: 0.0227 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 53.0 ng/L Area Ratio: 0.0656 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.91 (1.88) min Calculated Conc: 61.3 ng/L Area Ratio: 0.0661 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 58.7 ng/L Area Ratio: 0.0254 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 62.9 ng/L Area Ratio: 0.0463 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 92.2 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

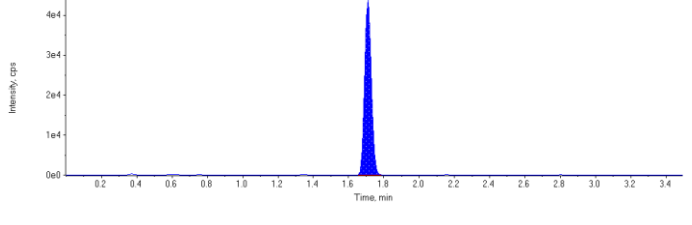
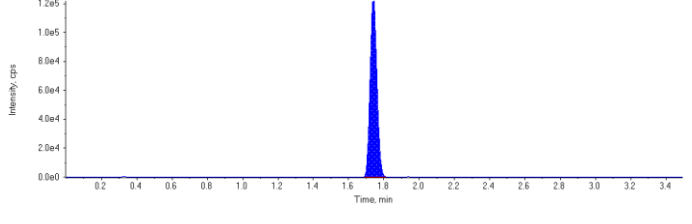
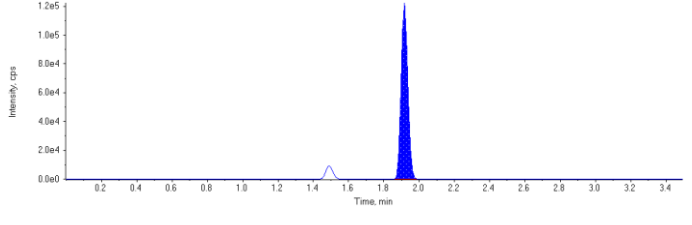
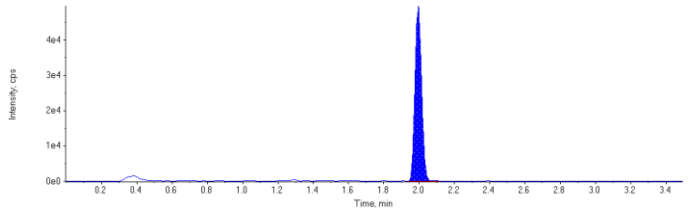
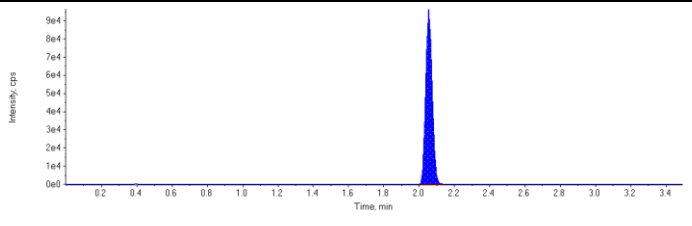
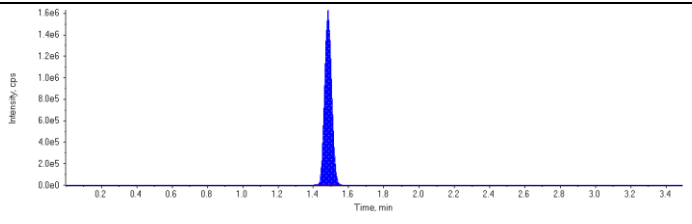
Sample Name	4386408~BVX776-01	Injection Vial	24
Sample ID	4386408~BVX776-01	Injection Volume (μL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:57:39 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	116000.	1.71	1.00	-
MPFHpA	334000.	1.74	1.00	-
MPFOA	322000.	1.92	1.00	-
MPFOS	129000.	1.99	1.00	-
MPFNA	248000.	2.05	1.00	-
13C6-PFHxA IS	4520000.	1.48	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	8520	1.15	N/A	0.807	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	5260	1.74	N/A	0.190	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	1.71	N/A	69.7	N/A
13C4-PFHpA	334000	1.74	N/A	59.7	N/A
13C4-PFOA	322000	1.92	N/A	66.0	N/A
13C4-PFOS	129000	1.99	N/A	66.2	N/A
13C5-PFNA	248000	2.05	N/A	74.4	N/A
13C6-PFHxA	4520000	1.48	N/A	113.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

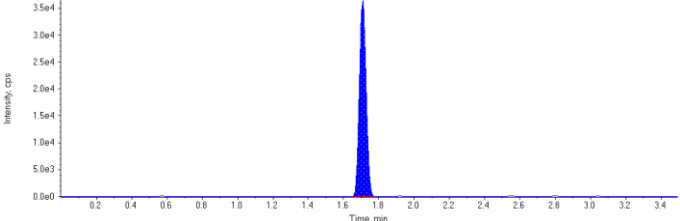
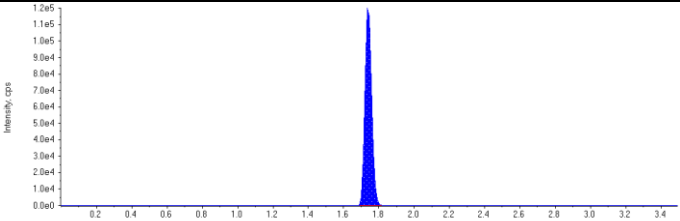
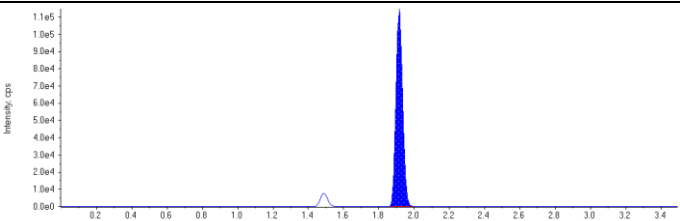
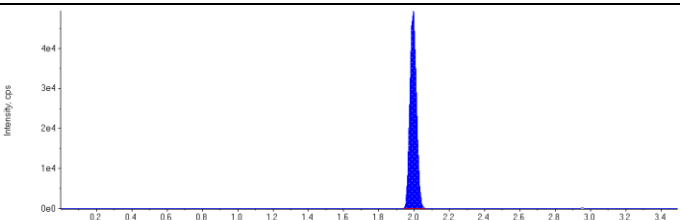
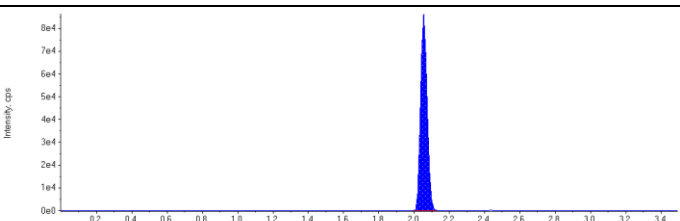
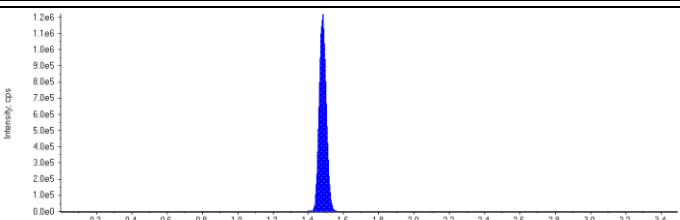
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.15 (1.15) min Calculated Conc: 0.807 ng/L Area Ratio: 0.0734 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 0.190 ng/L Area Ratio: 0.0158 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

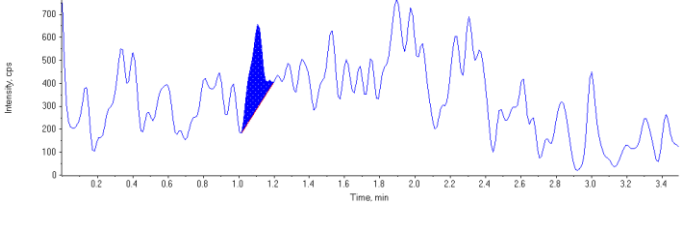
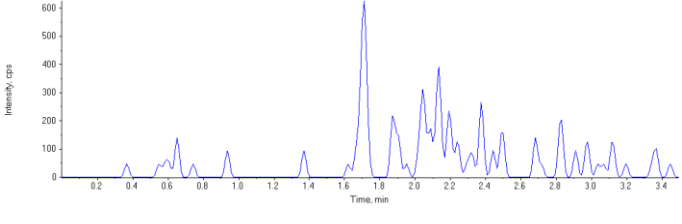
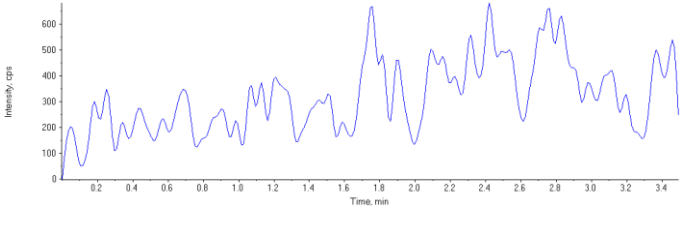
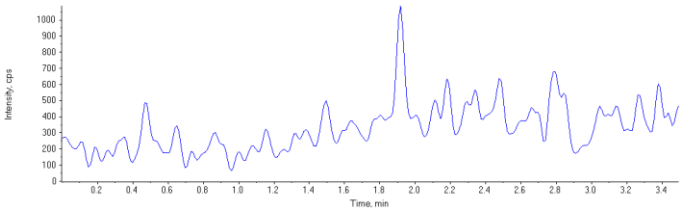
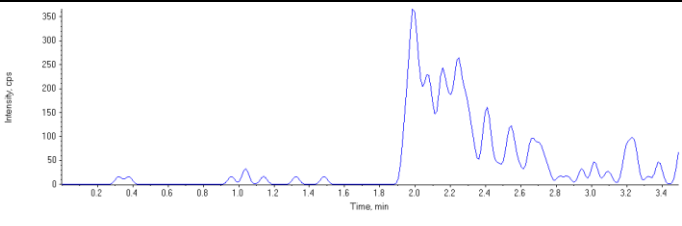
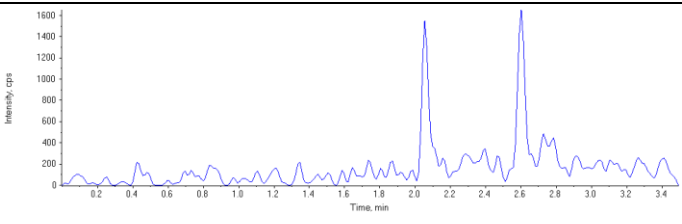
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 69.7 ng/L Area Ratio: 0.0257 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 59.7 ng/L Area Ratio: 0.0738 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 66.0 ng/L Area Ratio: 0.0712 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 66.2 ng/L Area Ratio: 0.0286 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 74.4 ng/L Area Ratio: 0.0548 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 113. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

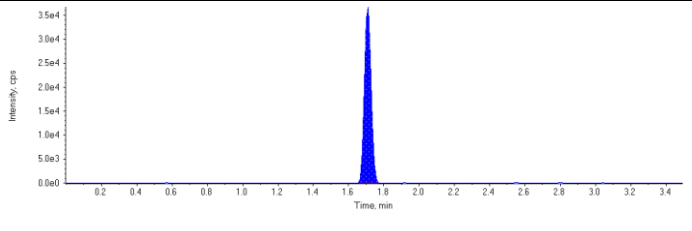
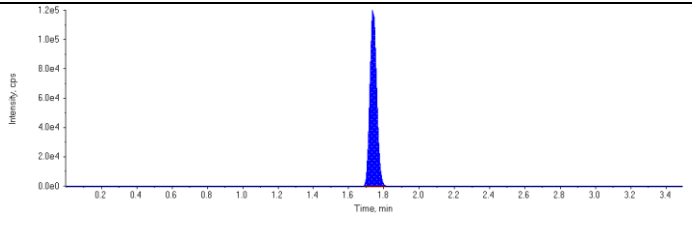
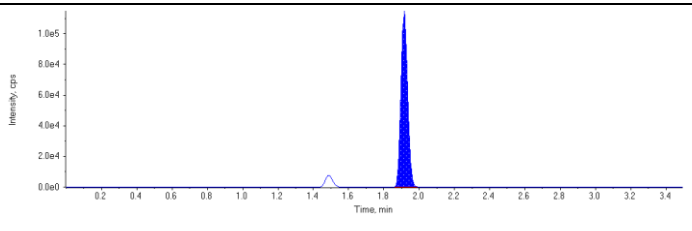
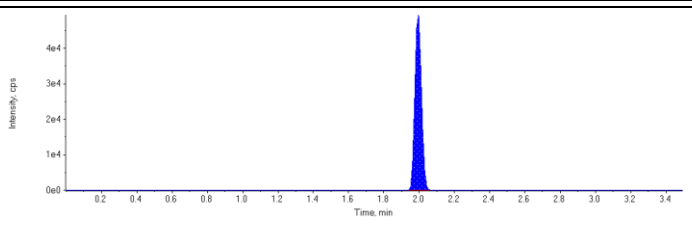
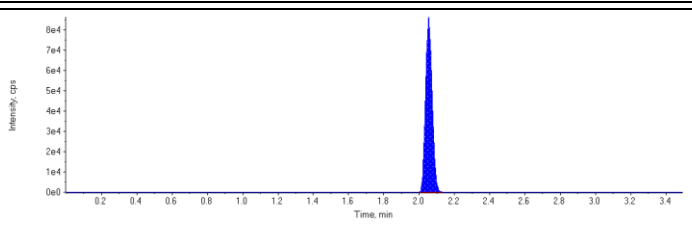
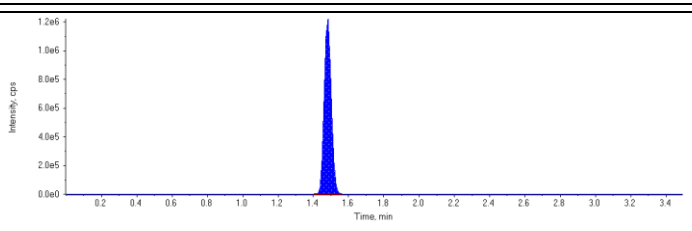
Sample Name	4386408~BVX779-01	Injection Vial	25
Sample ID	4386408~BVX779-01	Injection Volume (μL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 10:02:45 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	97700.	1.71	1.00	-
MPFHpA	321000.	1.74	1.00	-
MPFOA	300000.	1.92	1.00	-
MPFOS	129000.	1.99	1.00	-
MPFNA	224000.	2.05	1.00	-
13C6-PFHxA IS	3430000.	1.48	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	1780	1.11	N/A	0.630	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	97700	1.71	N/A	77.4	N/A
13C4-PFHpA	321000	1.74	N/A	75.7	N/A
13C4-PFOA	300000	1.92	N/A	81.1	N/A
13C4-PFOS	129000	1.99	N/A	87.1	N/A
13C5-PFNA	224000	2.05	N/A	88.7	N/A
13C6-PFHxA	3430000	1.48	N/A	85.9	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

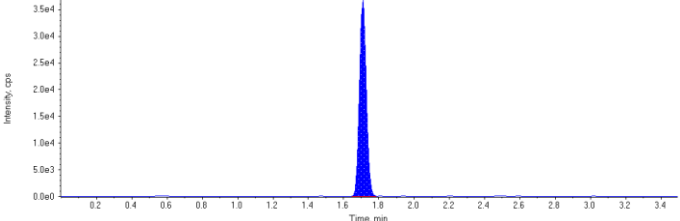
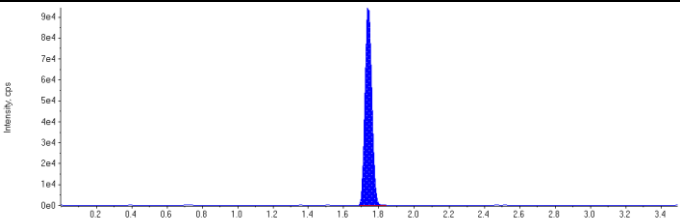
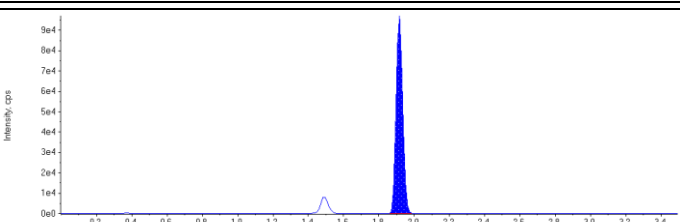
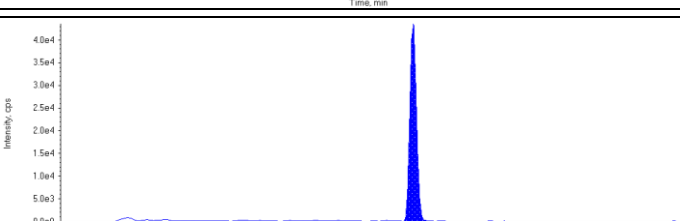
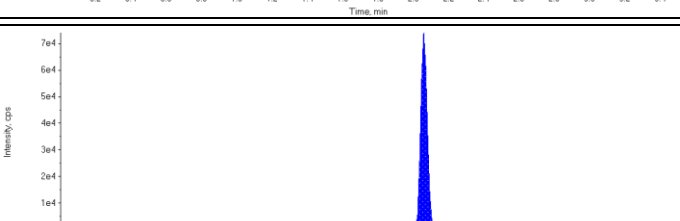
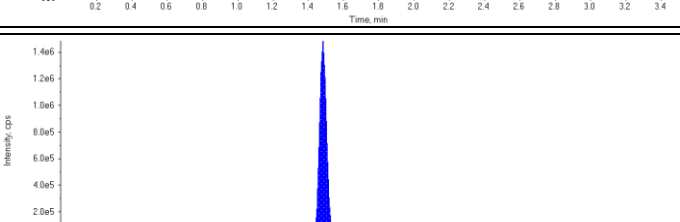
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.11 (1.15) min Calculated Conc: 0.630 ng/L Area Ratio: 0.0182 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

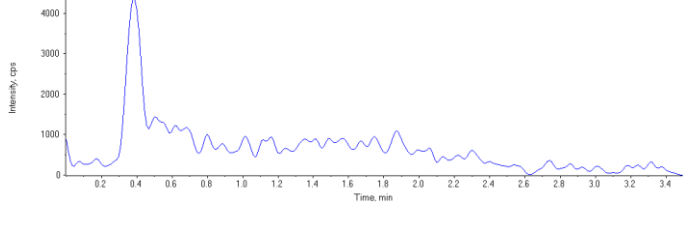
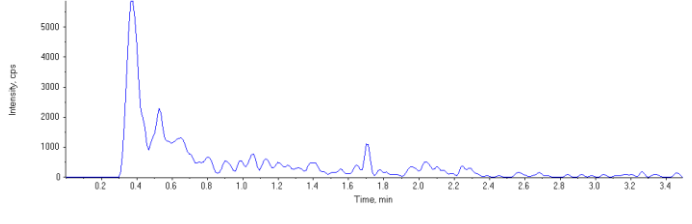
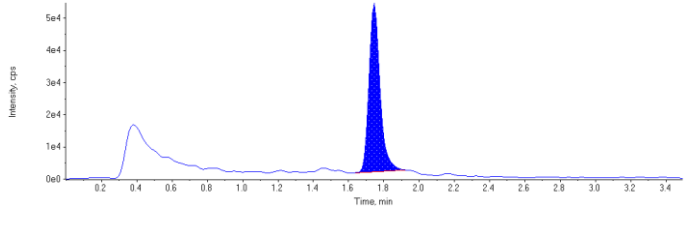
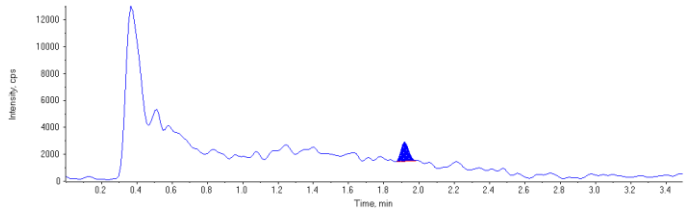
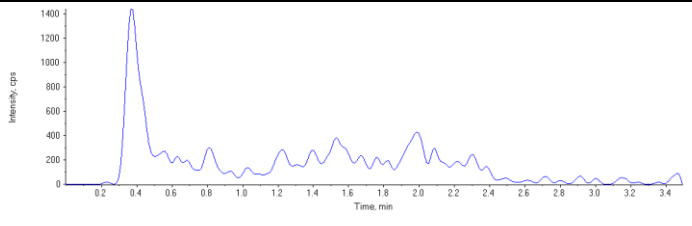
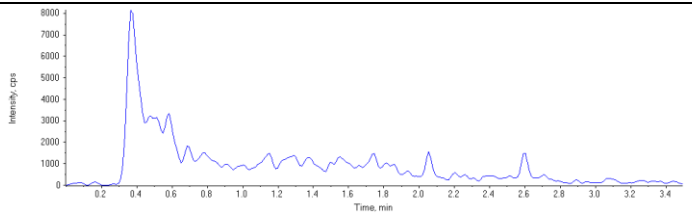
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 77.4 ng/L Area Ratio: 0.0285 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 75.7 ng/L Area Ratio: 0.0936 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 81.1 ng/L Area Ratio: 0.0875 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 87.1 ng/L Area Ratio: 0.0376 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 88.7 ng/L Area Ratio: 0.0653 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 85.9 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

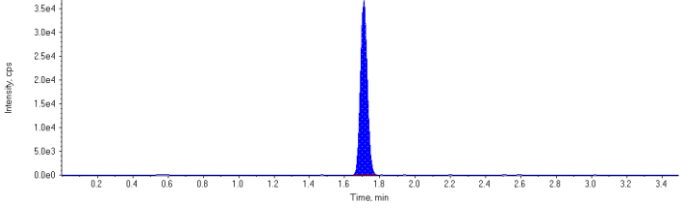
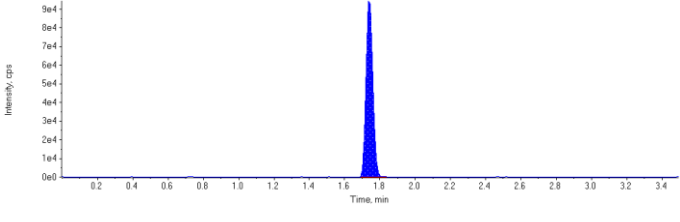
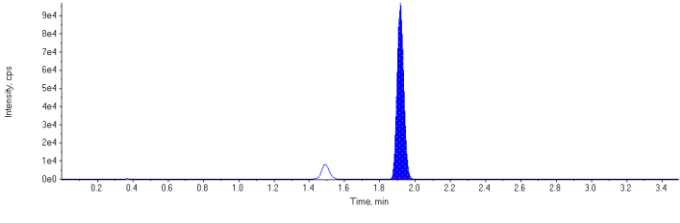
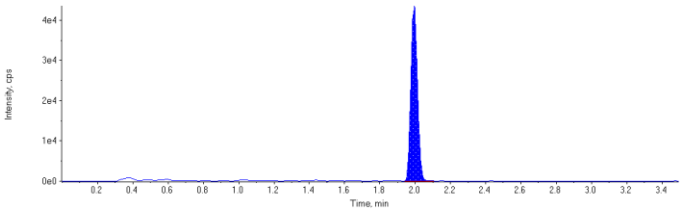
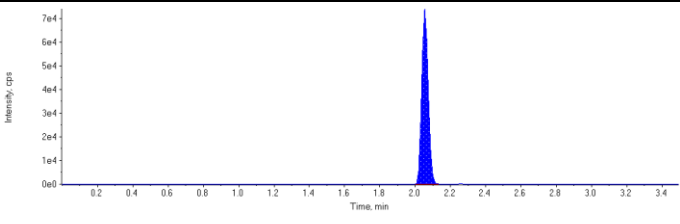
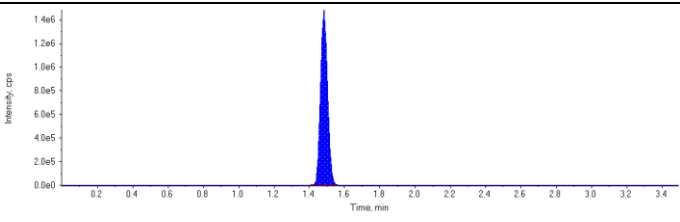
Sample Name	4386408~BVX780-01	Injection Vial	26
Sample ID	4386408~BVX780-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 10:07:51 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	98900.	1.71	1.00	-
MPFHpA	257000.	1.74	1.00	-
MPFOA	252000.	1.92	1.00	-
MPFOS	113000.	1.99	1.00	-
MPFNA	190000.	2.05	1.00	-
13C6-PFHxA IS	4120000.	1.48	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	227000	1.74	N/A	6.61	N/A
PFOA 1	4310	1.92	N/A	0.300	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	98900	1.71	N/A	65.2	N/A
13C4-PFHpA	257000	1.74	N/A	50.5	N/A
13C4-PFOA	252000	1.92	N/A	56.6	N/A
13C4-PFOS	113000	1.99	N/A	63.7	N/A
13C5-PFNA	190000	2.05	N/A	62.6	N/A
13C6-PFHxA	4120000	1.48	N/A	103.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

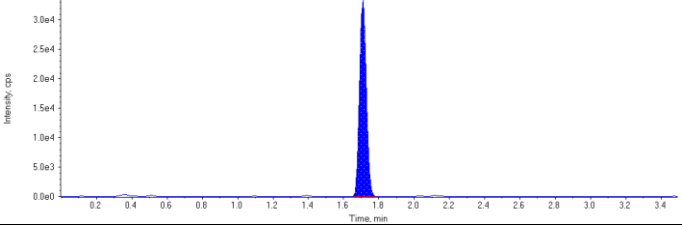
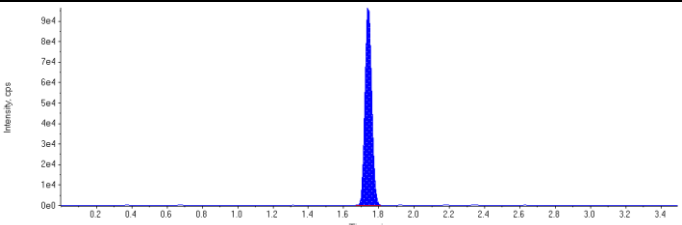
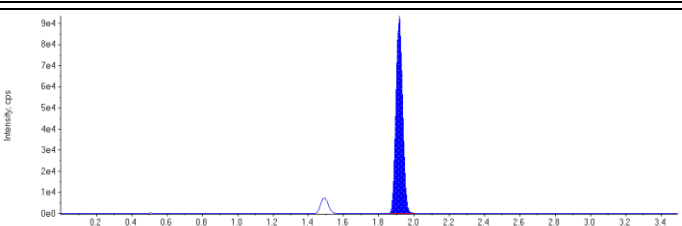
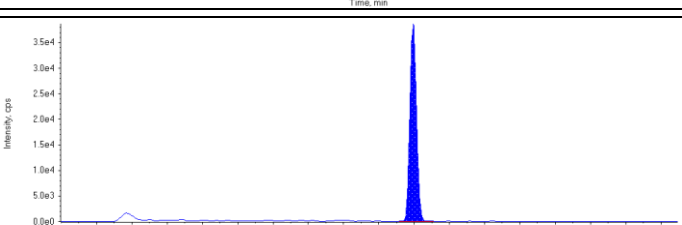
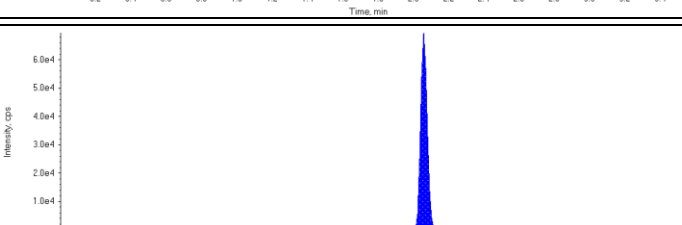
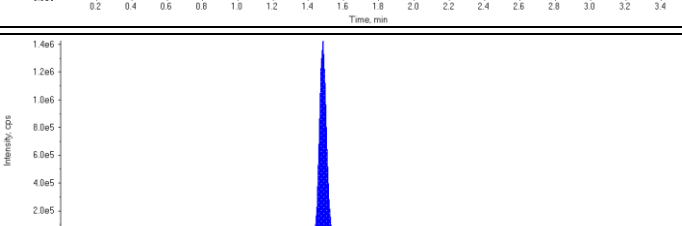
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 6.61 ng/L Area Ratio: 0.880 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 0.300 ng/L Area Ratio: 0.0171 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

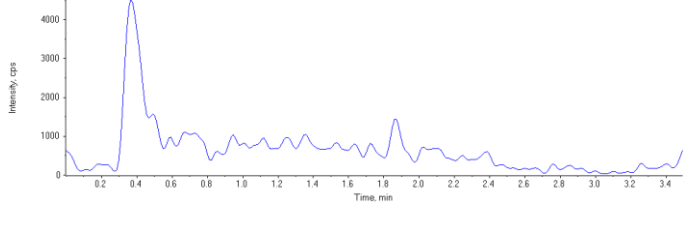
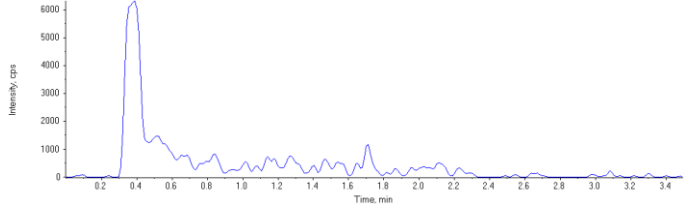
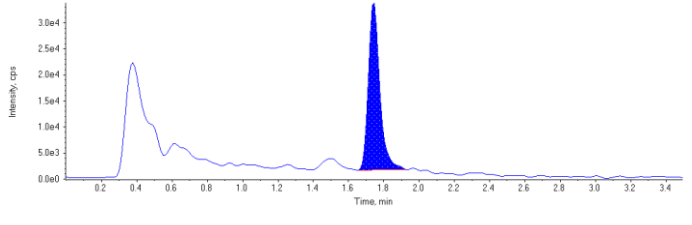
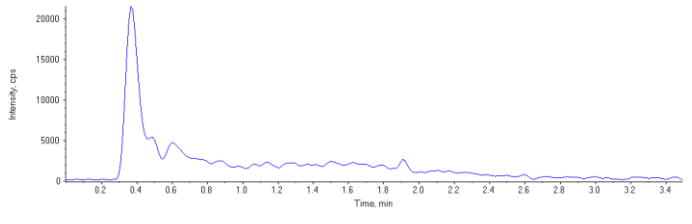
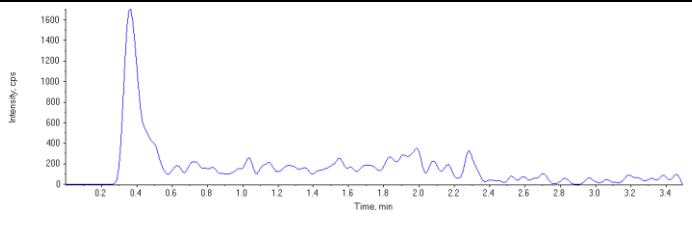
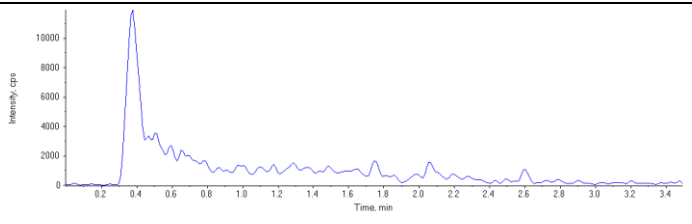
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 65.2 ng/L Area Ratio: 0.0240 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 50.5 ng/L Area Ratio: 0.0625 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 56.6 ng/L Area Ratio: 0.0611 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 63.7 ng/L Area Ratio: 0.0275 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 62.6 ng/L Area Ratio: 0.0461 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

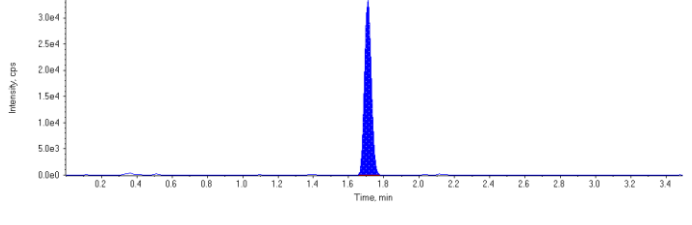
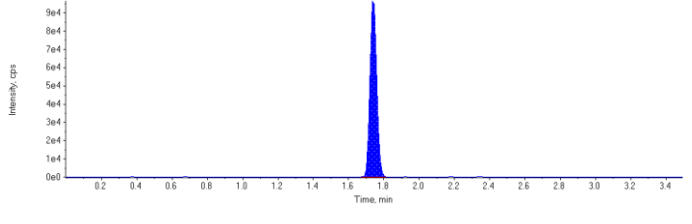
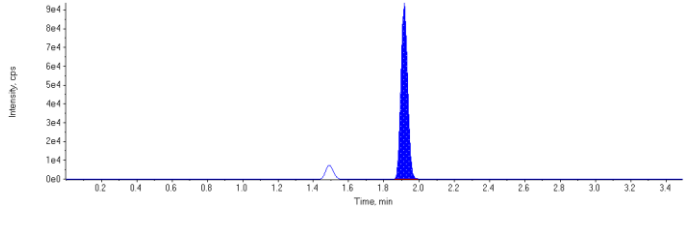
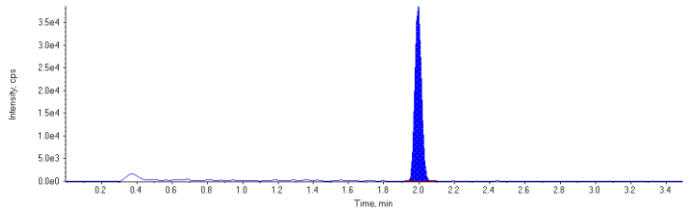
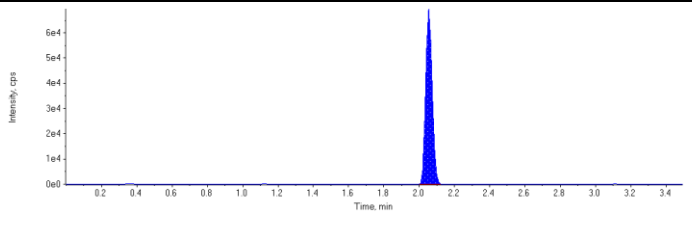
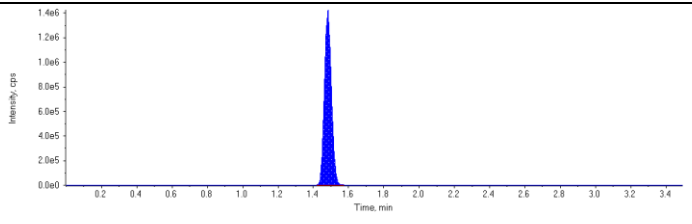
Sample Name	4386408~BVX781-01	Injection Vial	27
Sample ID	4386408~BVX781-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 10:12:57 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	89500.	1.71	1.00	-
MPFHpA	261000.	1.74	1.00	-
MPFOA	244000.	1.92	1.00	-
MPFOS	101000.	1.99	1.00	-
MPFNA	179000.	2.05	1.00	-
13C6-PFHxA IS	3940000.	1.48	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	145000	1.74	N/A	4.19	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	89500	1.71	N/A	61.7	N/A
13C4-PFHpA	261000	1.74	N/A	53.4	N/A
13C4-PFOA	244000	1.92	N/A	57.3	N/A
13C4-PFOS	101000	1.99	N/A	59.1	N/A
13C5-PFNA	179000	2.05	N/A	61.6	N/A
13C6-PFHxA	3940000	1.48	N/A	98.8	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

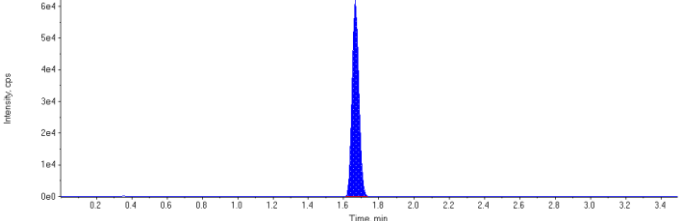
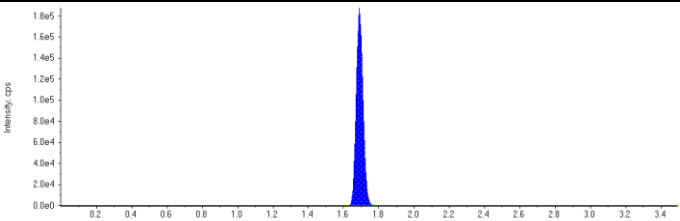
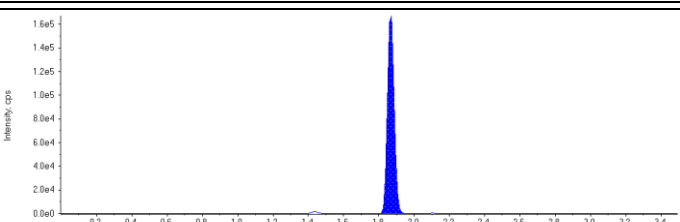
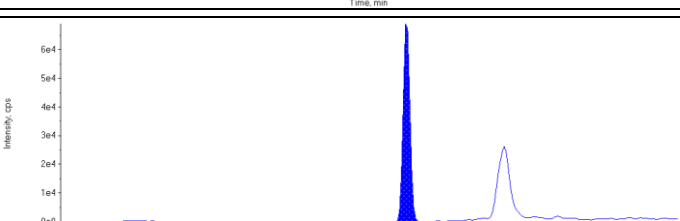
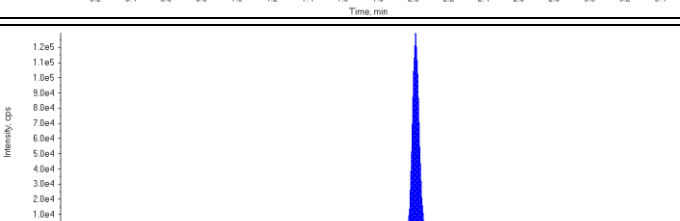
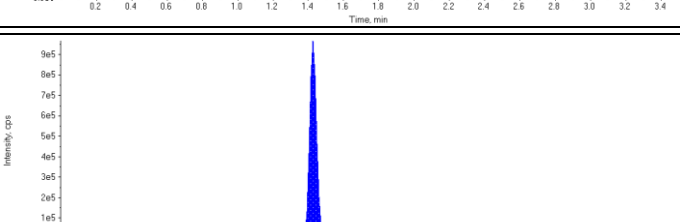
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 4.19 ng/L Area Ratio: 0.555 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

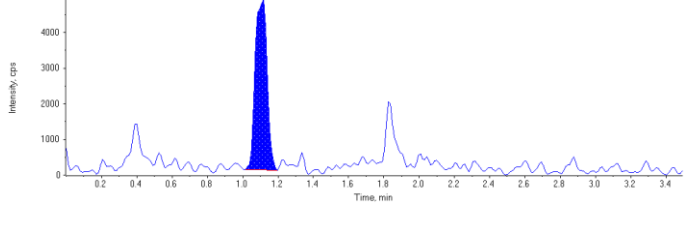
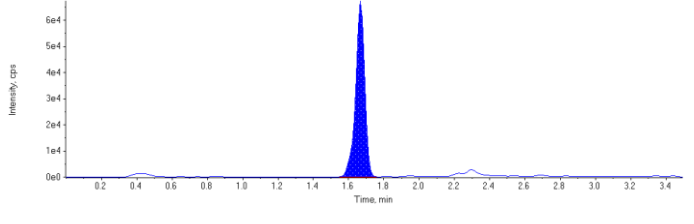
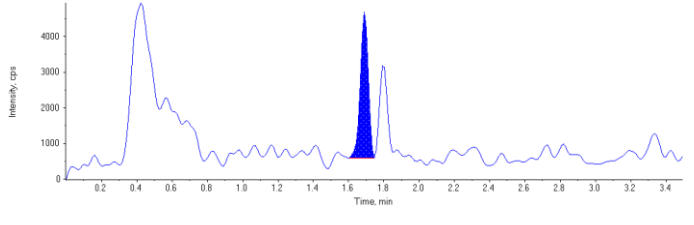
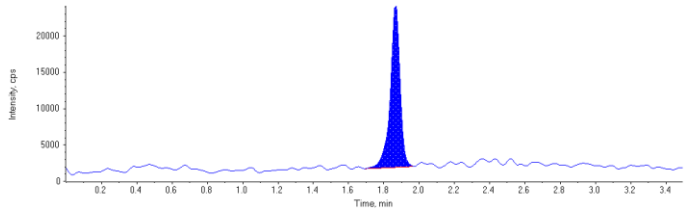
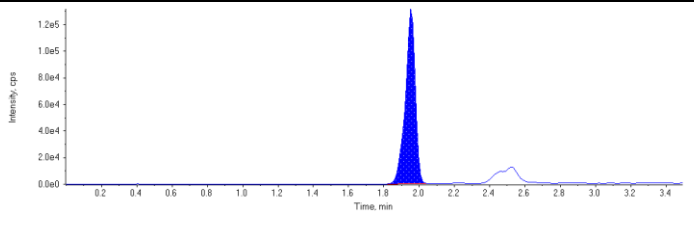
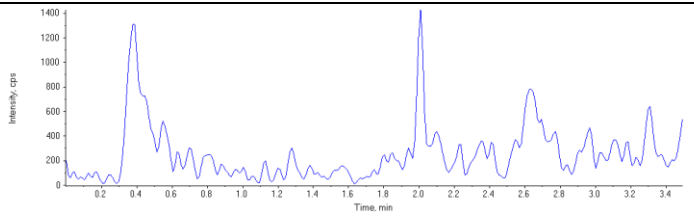
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 61.7 ng/L Area Ratio: 0.0227 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 53.4 ng/L Area Ratio: 0.0661 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 57.3 ng/L Area Ratio: 0.0618 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 59.1 ng/L Area Ratio: 0.0255 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 61.6 ng/L Area Ratio: 0.0453 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 98.8 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

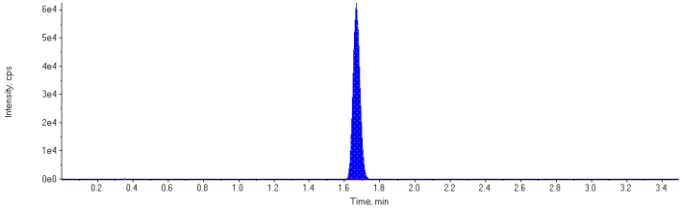
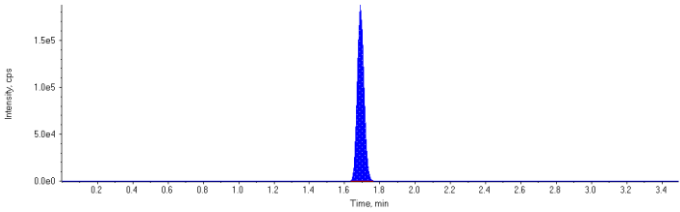
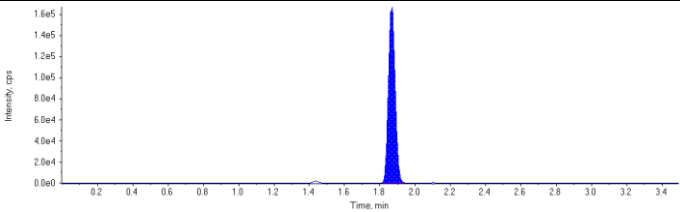
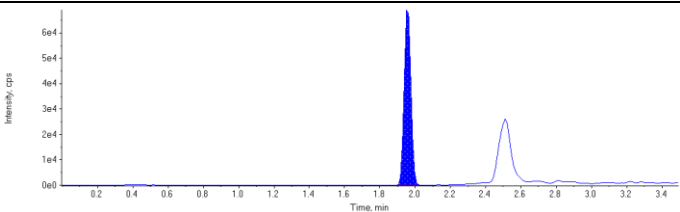
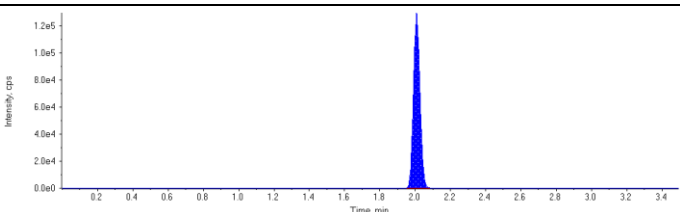
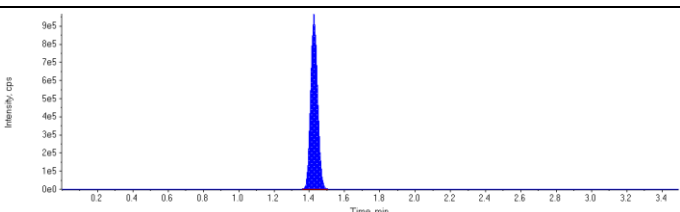
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Sample ID	4394558~BVX770-01(10X)	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 10:55:45 AM	Dilution Factor	10.0
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	164000.	1.67	1.00	-
MPFHpA	486000.	1.69	1.00	-
MPFOA	443000.	1.87	1.00	-
MPFOS	185000.	1.96	1.00	-
MPFNA	332000.	2.01	1.00	-
13C6-PFHxA IS	2640000.	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	22600	1.11	N/A	9.09	N/A
PFHxS 1	242000	1.67	N/A	53.0	N/A
PFHpA 1	12700	1.69	N/A	3.17	N/A
PFOA 1	86100	1.87	N/A	13.9	N/A
PFOS 1	512000	1.95	N/A	181.	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	164000	1.67	N/A	962.	N/A
13C4-PFHpA	486000	1.69	N/A	958.	N/A
13C4-PFOA	443000	1.87	N/A	1000.	N/A
13C4-PFOS	185000	1.96	N/A	888.	N/A
13C5-PFNA	332000	2.01	N/A	939.	N/A
13C6-PFHxA	2640000	1.43	N/A	1070.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

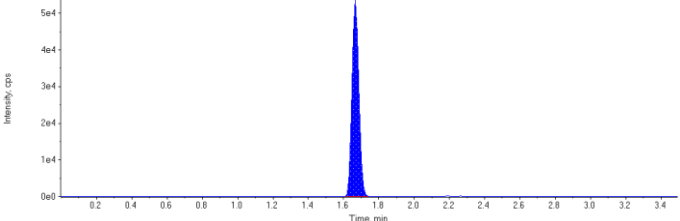
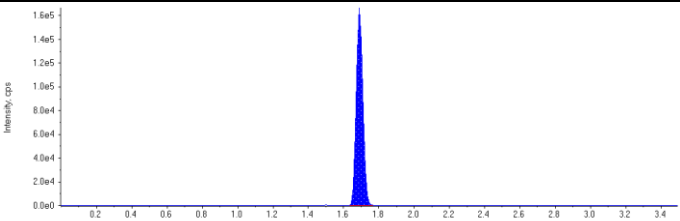
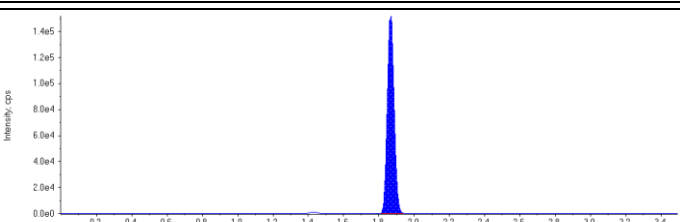
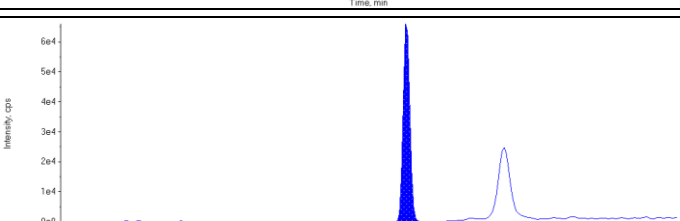
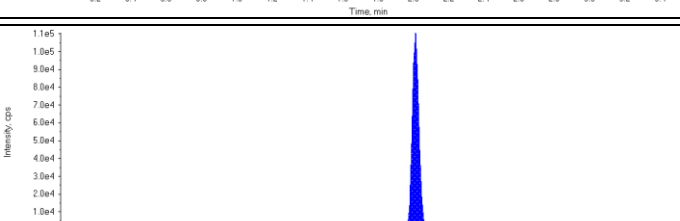
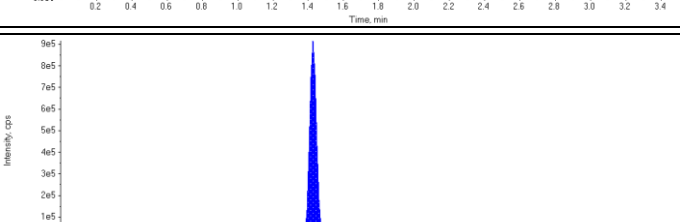
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.11 (1.09) min Calculated Conc: 9.09 ng/L Area Ratio: 0.137 Sample Type: (Unknown)	 Intensity, cps Time, min
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 53.0 ng/L Area Ratio: 1.47 Sample Type: (Unknown)	 Intensity, cps Time, min
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 3.17 ng/L Area Ratio: 0.0262 Sample Type: (Unknown)	 Intensity, cps Time, min
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 13.9 ng/L Area Ratio: 0.194 Sample Type: (Unknown)	 Intensity, cps Time, min
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 181. ng/L Area Ratio: 2.77 Sample Type: (Unknown)	 Intensity, cps Time, min
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	 Intensity, cps Time, min

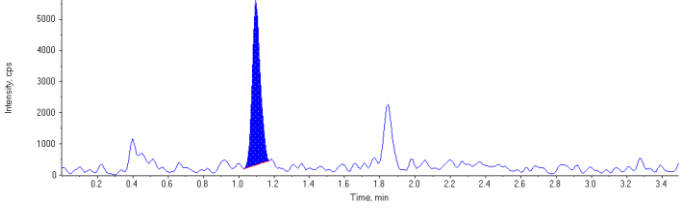
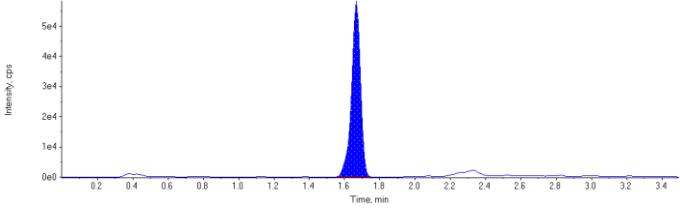
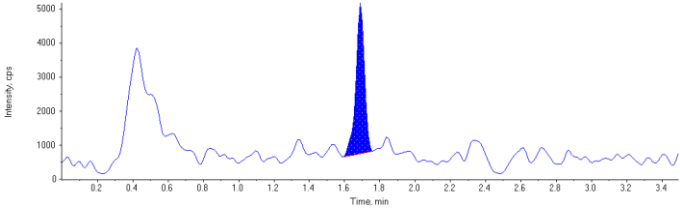
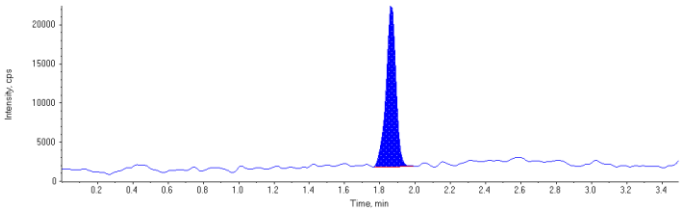
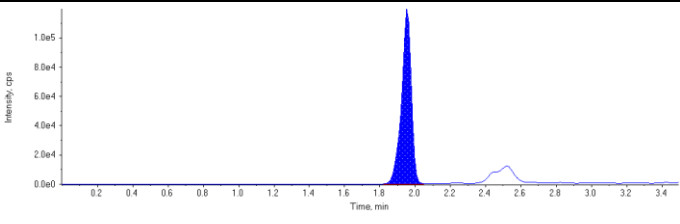
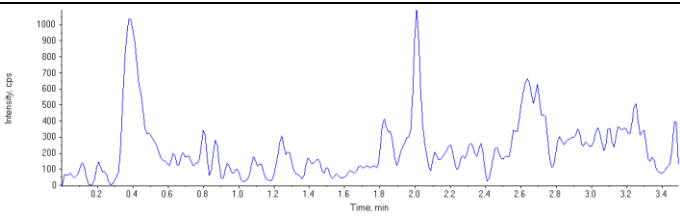
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 962. ng/L Area Ratio: 0.0621 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 958. ng/L Area Ratio: 0.184 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 1000. ng/L Area Ratio: 0.168 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 888. ng/L Area Ratio: 0.0700 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 939. ng/L Area Ratio: 0.126 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 1070. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

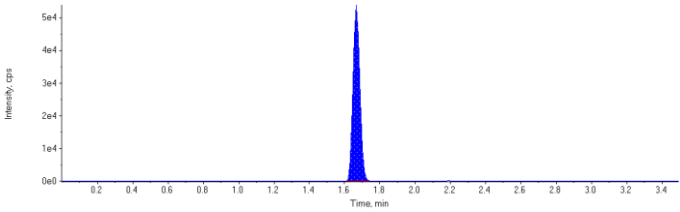
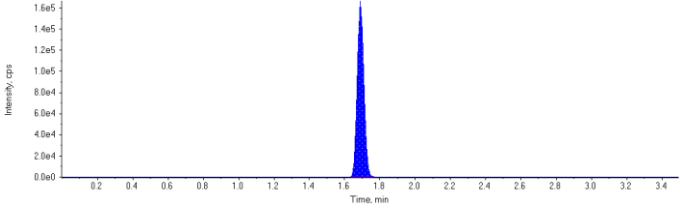
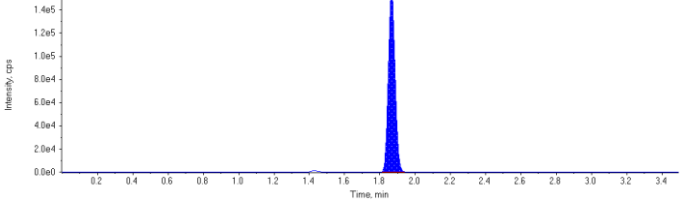
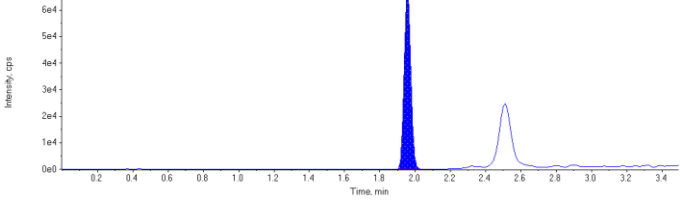
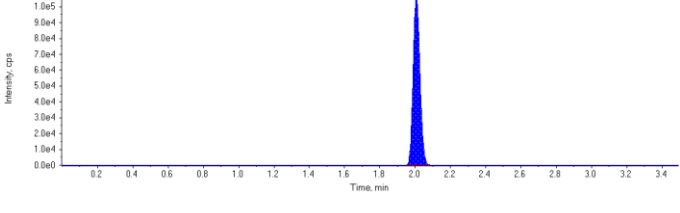
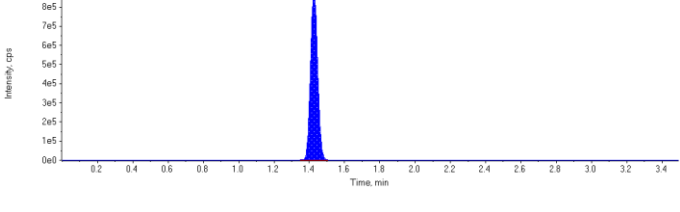
Sample Name	4394558~BVX771-01(10X)	Injection Vial	38
Sample ID	4394558~BVX771-01(10X)	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 11:00:50 AM	Dilution Factor	10.0
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	144000.	1.67	1.00	-
MPFHpA	430000.	1.69	1.00	-
MPFOA	410000.	1.87	1.00	-
MPFOS	174000.	1.96	1.00	-
MPFNA	288000.	2.01	1.00	-
13C6-PFHxA IS	2500000.	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	16500	1.10	N/A	8.27	N/A
PFHxS 1	205000	1.67	N/A	51.2	N/A
PFHpA 1	14800	1.69	N/A	3.85	N/A
PFOA 1	79400	1.87	N/A	13.9	N/A
PFOS 1	460000	1.95	N/A	173.	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	144000	1.67	N/A	894.	N/A
13C4-PFHpA	430000	1.69	N/A	897.	N/A
13C4-PFOA	410000	1.87	N/A	981.	N/A
13C4-PFOS	174000	1.96	N/A	883.	N/A
13C5-PFNA	288000	2.01	N/A	862.	N/A
13C6-PFHxA	2500000	1.43	N/A	1010.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Unknown)	This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 8.27 ng/L Area Ratio: 0.114 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 51.2 ng/L Area Ratio: 1.42 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 3.85 ng/L Area Ratio: 0.0343 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 13.9 ng/L Area Ratio: 0.194 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 173. ng/L Area Ratio: 2.65 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 894. ng/L Area Ratio: 0.0577 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 897. ng/L Area Ratio: 0.172 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 981. ng/L Area Ratio: 0.164 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 883. ng/L Area Ratio: 0.0696 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 862. ng/L Area Ratio: 0.115 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 1010. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	



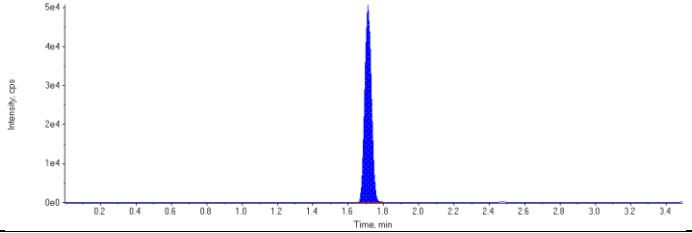
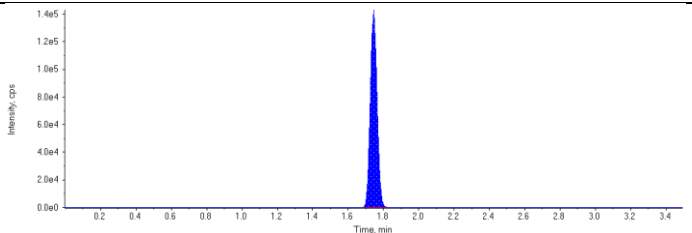
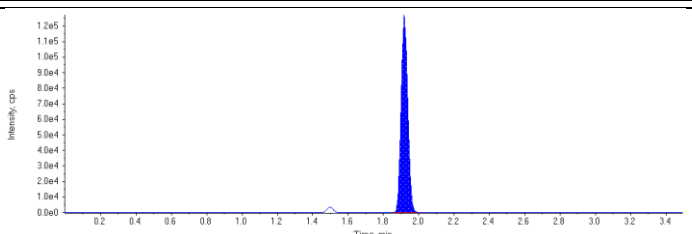
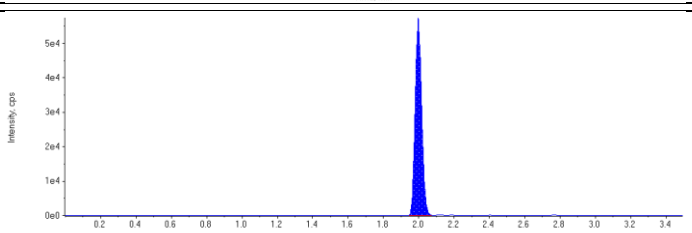
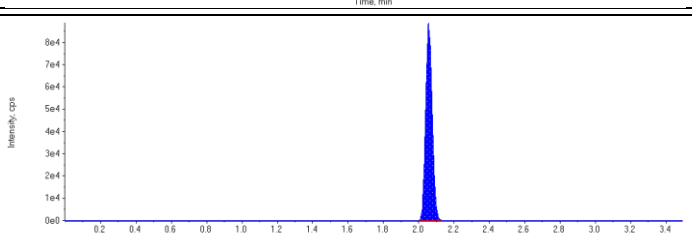
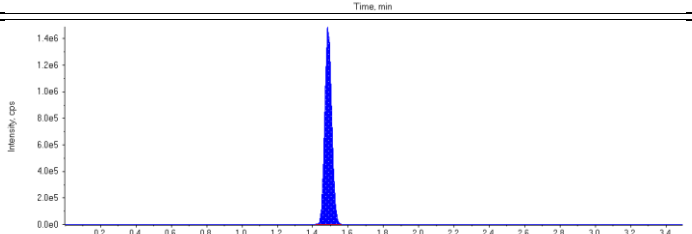
4. QA/QC Data

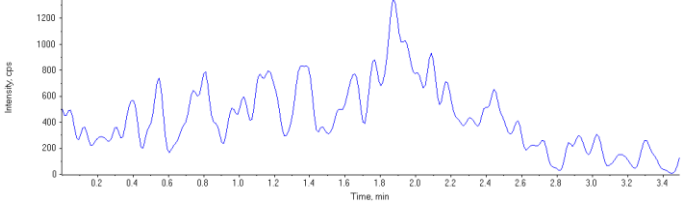
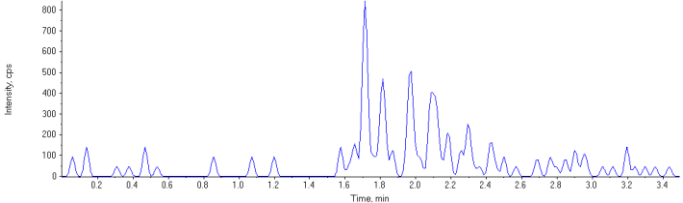
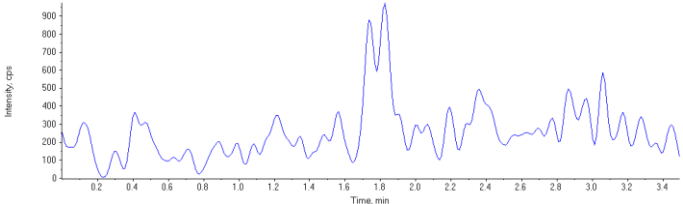
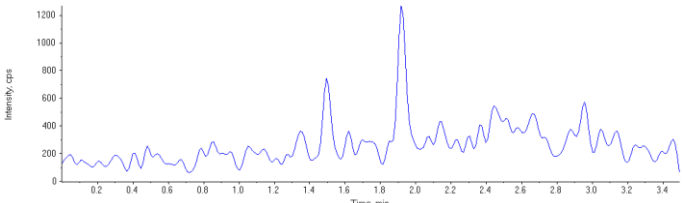
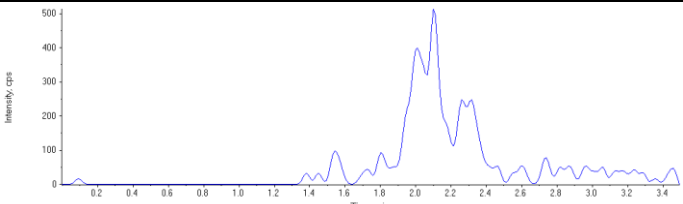
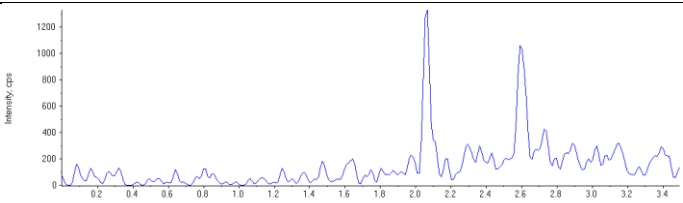
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Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
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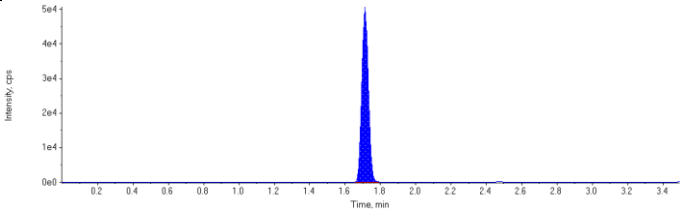
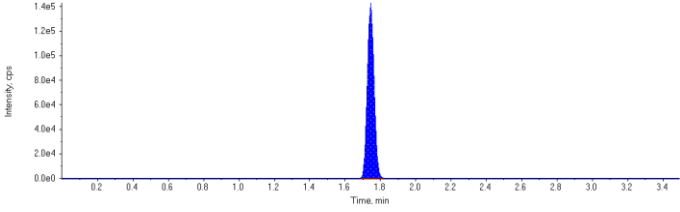
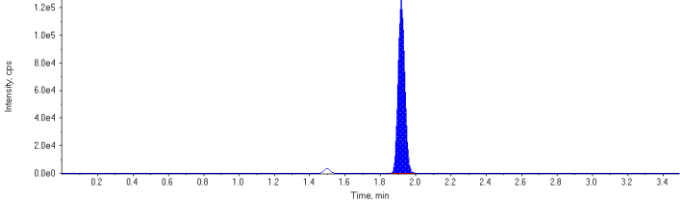
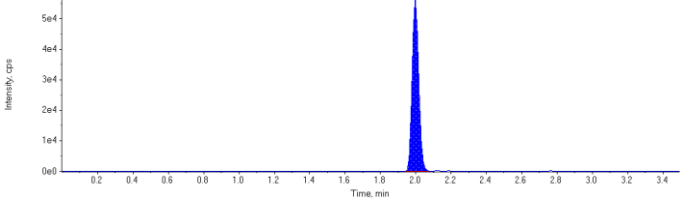
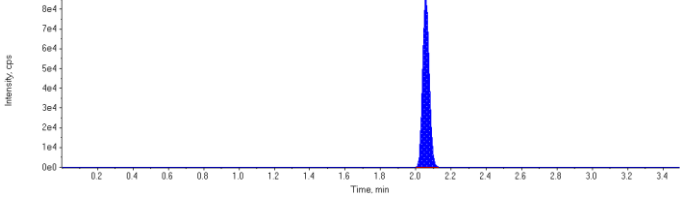
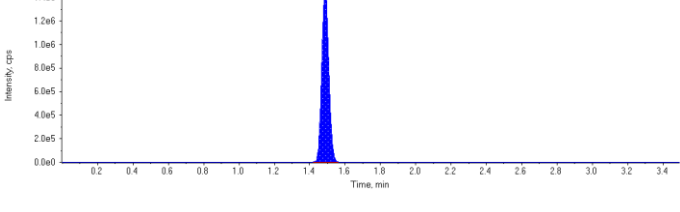
Sample Name	4386408~BLANK	Injection Vial	2
Sample ID	4386408~BLANK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 7:39:53 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	130000.	1.71	1.00	-
MPFHpA	375000.	1.74	1.00	-
MPFOA	327000.	1.92	1.00	-
MPFOS	146000.	2.00	1.00	-
MPFNA	228000.	2.06	1.00	-
13C6-PFHxA IS	4100000.	1.49	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	130000	1.71	100.	86.2	86.2
13C4-PFHpA	375000	1.74	100.	73.9	73.9
13C4-PFOA	327000	1.92	100.	73.9	73.9
13C4-PFOS	146000	2.00	100.	82.4	82.4
13C5-PFNA	228000	2.06	100.	75.7	75.7
13C6-PFHxA	4100000	1.49	100.	103.	103.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

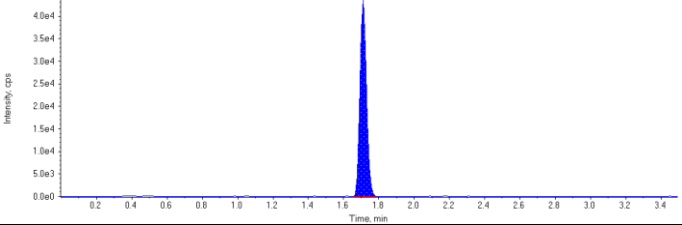
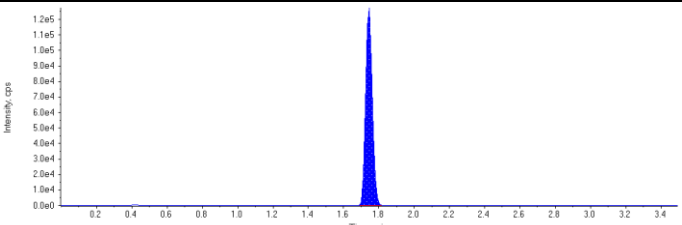
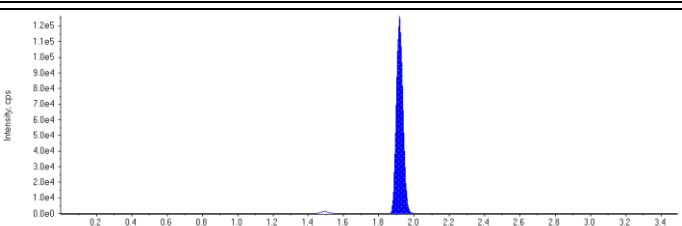
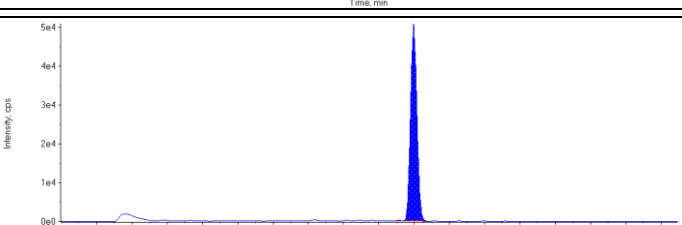
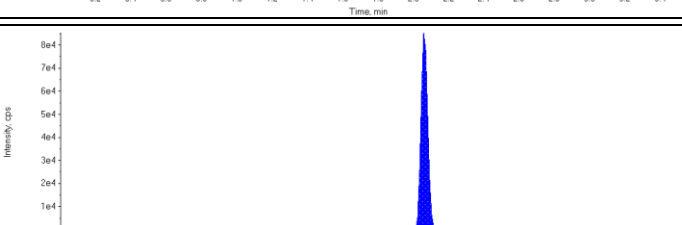
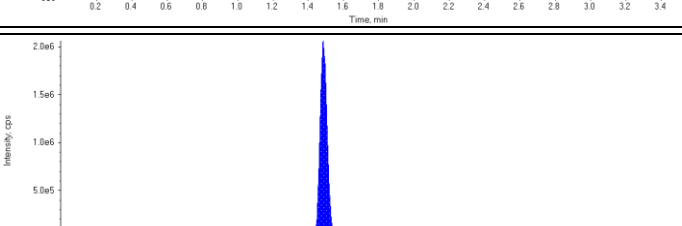
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp.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

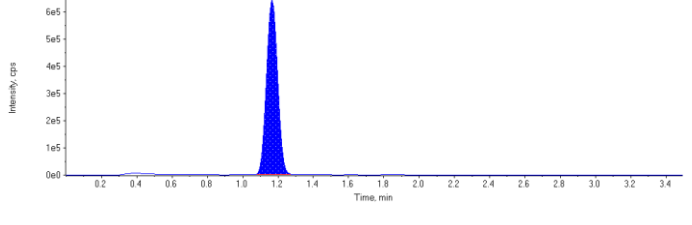
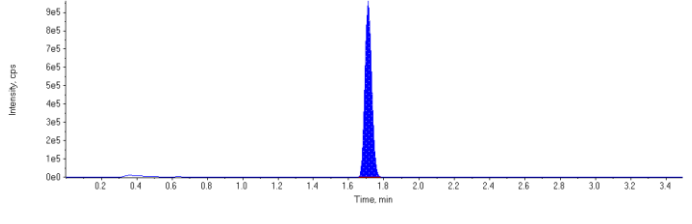
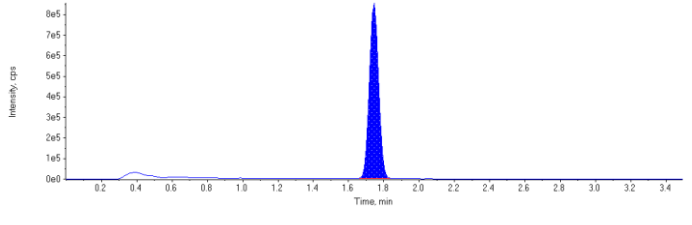
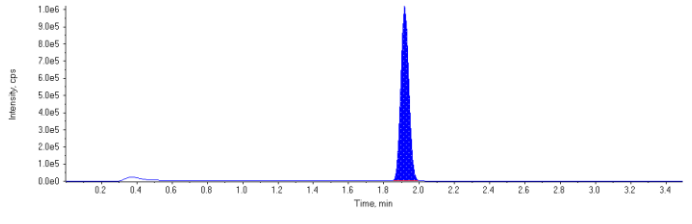
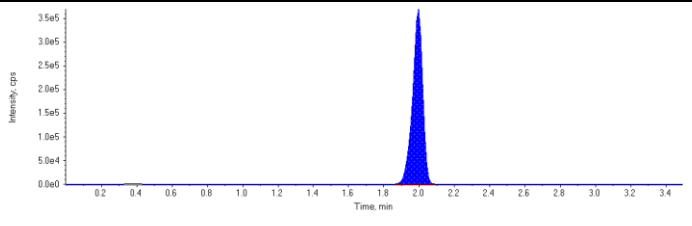
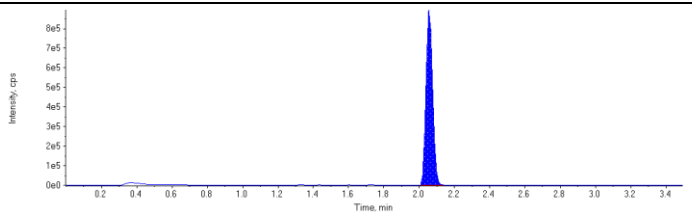
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 86.2 ng/L Area Ratio: 0.0317 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 73.9 ng/L Area Ratio: 0.0914 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 73.9 ng/L Area Ratio: 0.0798 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 82.4 ng/L Area Ratio: 0.0356 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 75.7 ng/L Area Ratio: 0.0557 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

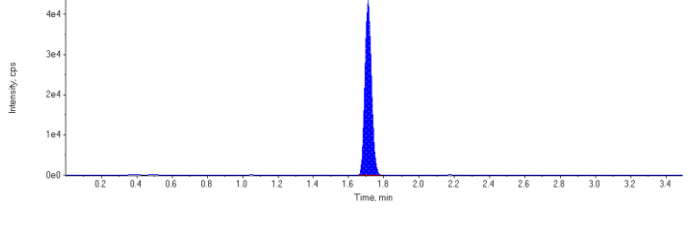
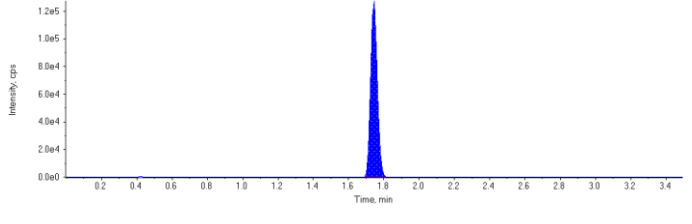
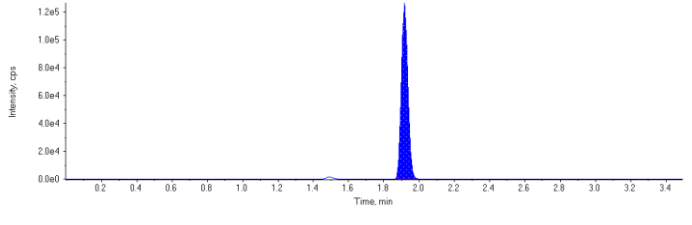
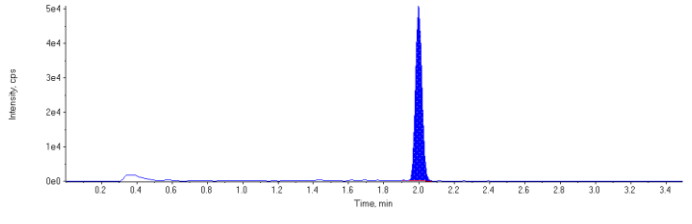
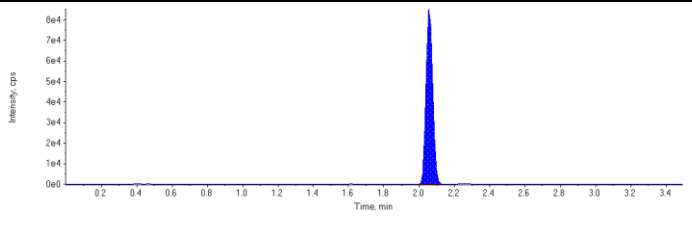
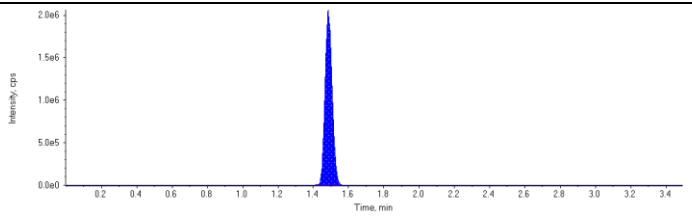
Sample Name	4386408~MTRX SPK	Injection Vial	10
Sample ID	4386408~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:25:52 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	112000.	1.71	1.00	-
MPFHpA	335000.	1.74	1.00	-
MPFOA	321000.	1.92	1.00	-
MPFOS	127000.	2.00	1.00	-
MPFNA	227000.	2.06	1.00	-
13C6-PFHxA IS	5760000.	1.49	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	2820000	1.17	50.0	81.2	162.0
PFHxS 1	2500000	1.71	50.0	68.1	136.0
PFHpA 1	3080000	1.74	50.0	68.3	137.0
PFOA 1	3200000	1.92	50.0	60.5	121.0
PFOS 1	1470000	1.99	50.0	64.1	128.0
PFNA 1	2340000	2.06	50.0	62.0	124.0
18O2-PFHxS	112000	1.71	100.	52.6	52.6
13C4-PFHpA	335000	1.74	100.	47.1	47.1
13C4-PFOA	321000	1.92	100.	51.7	51.7
13C4-PFOS	127000	2.00	100.	51.0	51.0
13C5-PFNA	227000	2.06	100.	53.5	53.5
13C6-PFHxA	5760000	1.49	100.	144.	144.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

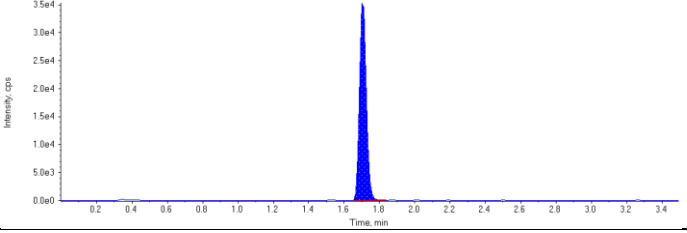
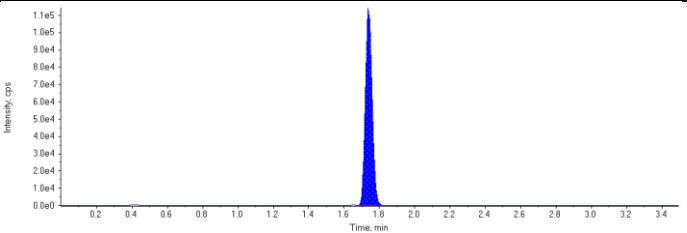
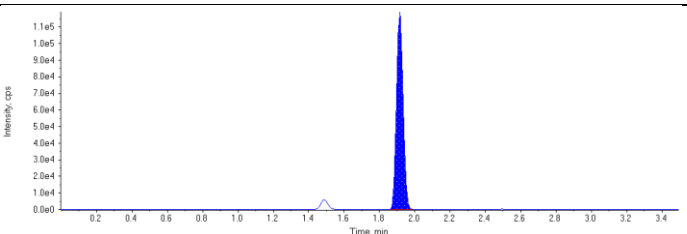
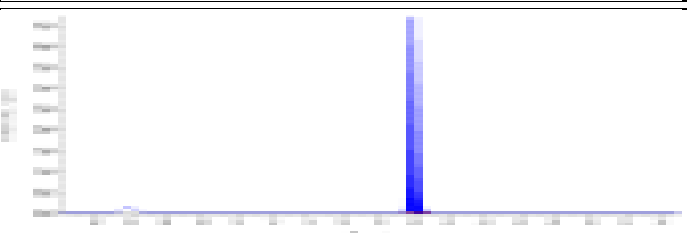
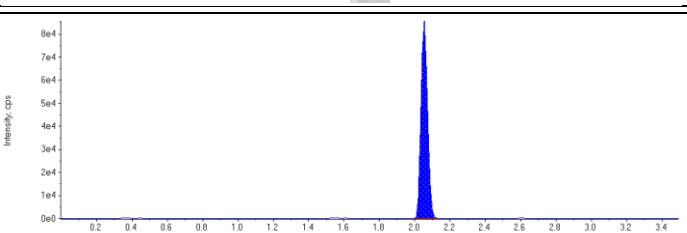
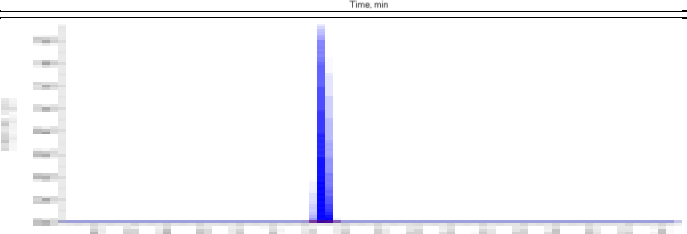
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.17 (1.15) min Calculated Conc: 81.2 ng/L Area Ratio: 25.3 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 68.1 ng/L Area Ratio: 22.4 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 68.3 ng/L Area Ratio: 9.19 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 60.5 ng/L Area Ratio: 9.96 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 64.1 ng/L Area Ratio: 11.6 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 62.0 ng/L Area Ratio: 10.3 Sample Type: (Quality Control)	

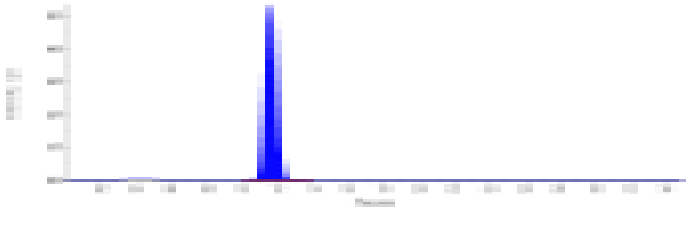
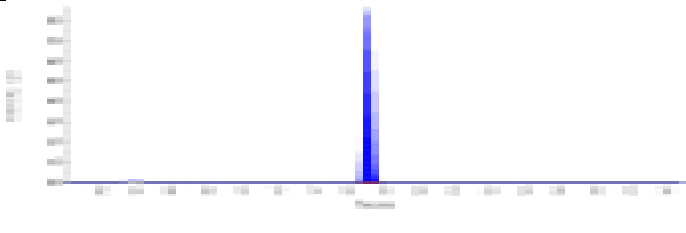
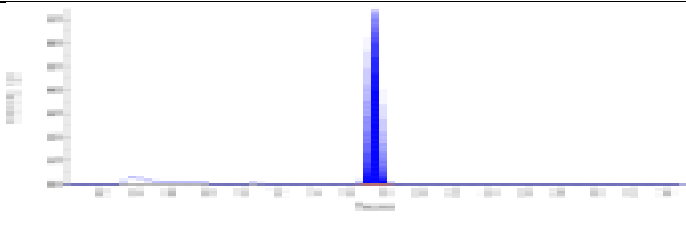
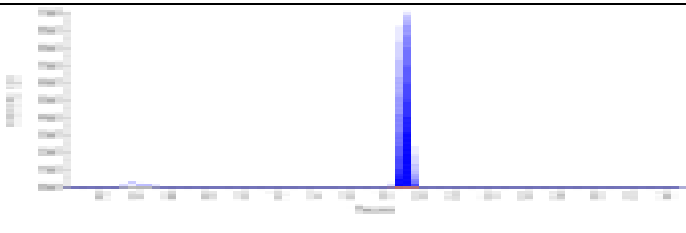
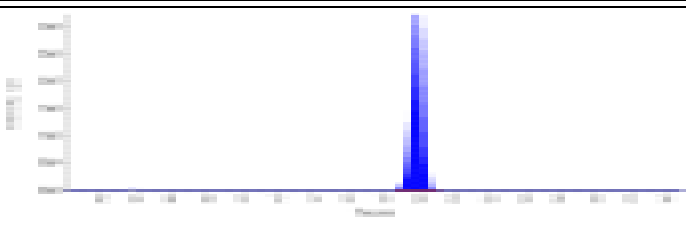
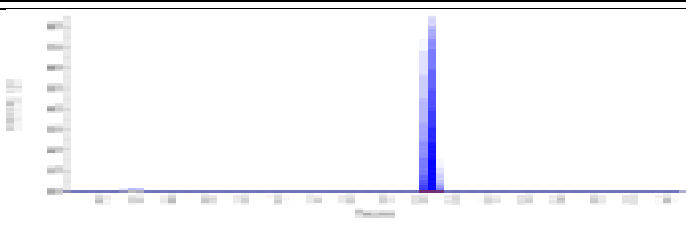
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 52.6 ng/L Area Ratio: 0.0194 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 47.1 ng/L Area Ratio: 0.0582 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 51.7 ng/L Area Ratio: 0.0557 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 51.0 ng/L Area Ratio: 0.0220 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 53.5 ng/L Area Ratio: 0.0394 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 144. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

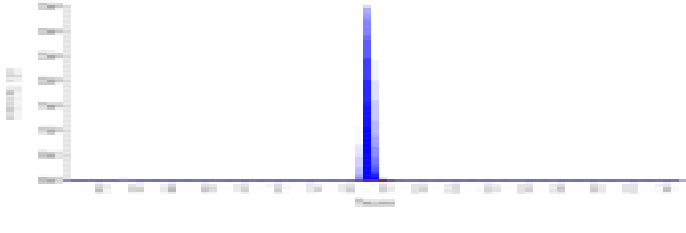
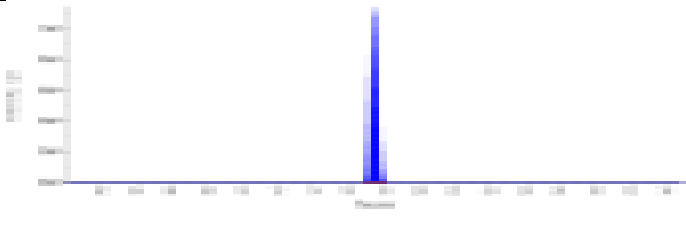
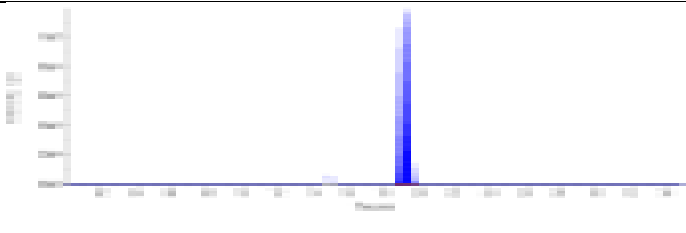
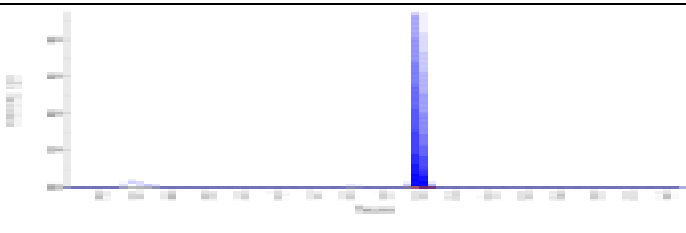
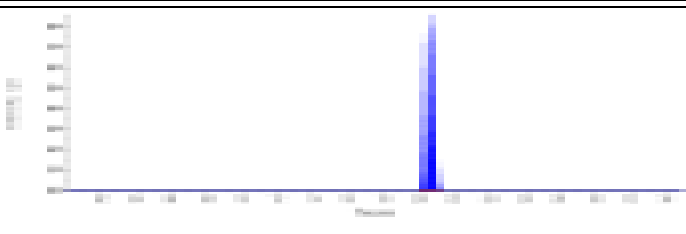
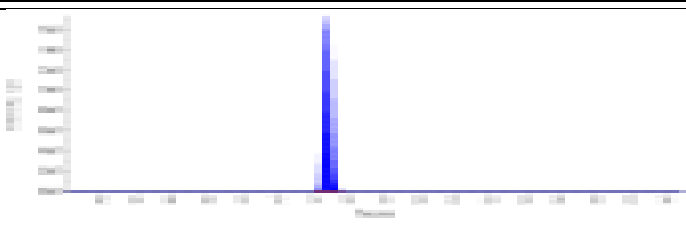
Sample Name	4386408~MTRX SPK	Injection Vial	10
Sample ID	4386408~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 10:48:37 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	95600.	1.71	1.00	-
MPFHpA	303000.	1.74	1.00	-
MPFOA	307000.	1.91	1.00	-
MPFOS	126000.	1.99	1.00	-
MPFNA	222000.	2.05	1.00	-
13C6-PFHxA IS	4930000.	1.48	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	2350000	1.16	50.0	79.2	158.0
PFHxS 1	2330000	1.71	50.0	73.8	148.0
PFHpA 1	2720000	1.74	50.0	66.7	133.0
PFOA 1	3150000	1.92	50.0	62.3	125.0
PFOS 1	1320000	1.99	50.0	58.0	116.0
PFNA 1	2220000	2.05	50.0	60.1	120.0
18O2-PFHxS	95600	1.71	100.	52.6	52.6
13C4-PFHpA	303000	1.74	100.	49.7	49.7
13C4-PFOA	307000	1.91	100.	57.7	57.7
13C4-PFOS	126000	1.99	100.	58.9	58.9
13C5-PFNA	222000	2.05	100.	61.2	61.2
13C6-PFHxA	4930000	1.48	100.	124.	124.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.91(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

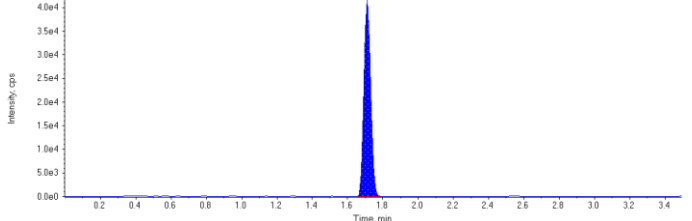
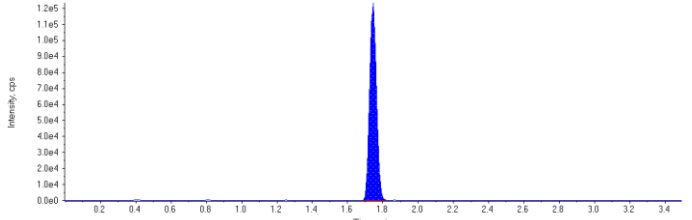
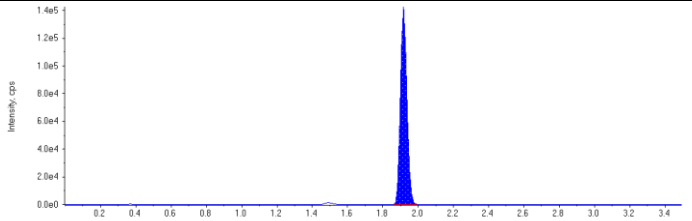
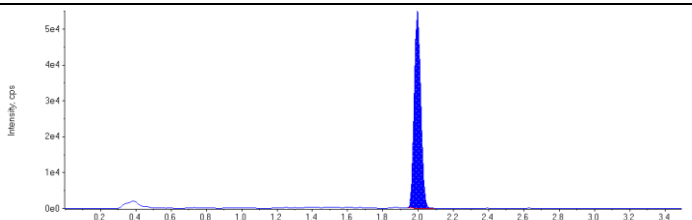
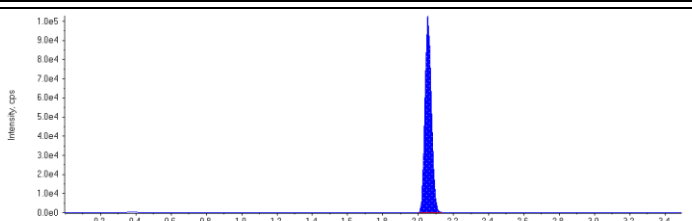
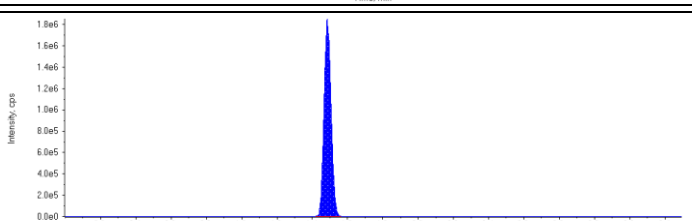
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 79.2 ng/L Area Ratio: 24.6 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 73.8 ng/L Area Ratio: 24.3 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 66.7 ng/L Area Ratio: 8.98 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 62.3 ng/L Area Ratio: 10.3 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 58.0 ng/L Area Ratio: 10.5 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 60.1 ng/L Area Ratio: 9.98 Sample Type: (Quality Control)	

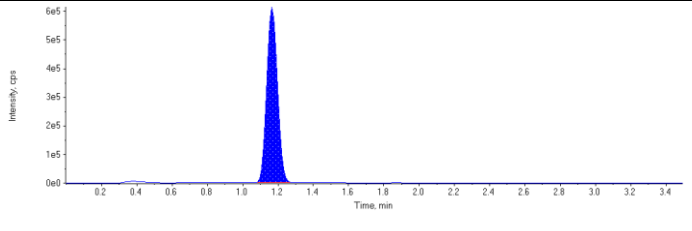
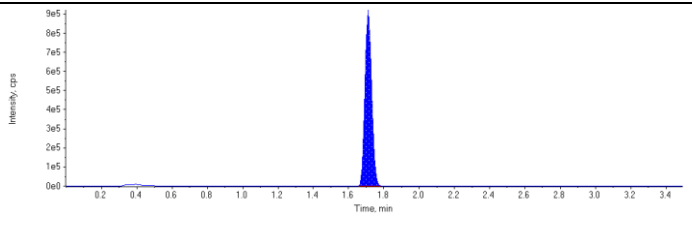
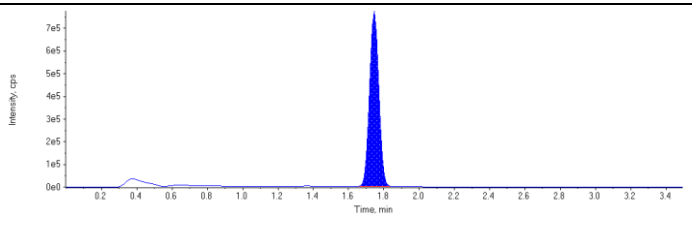
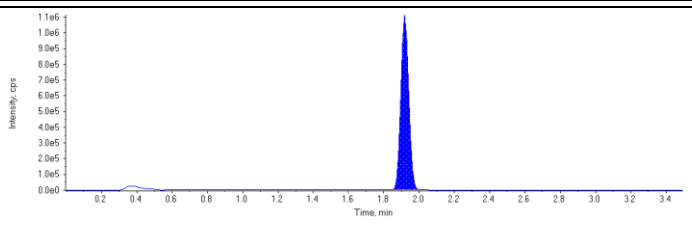
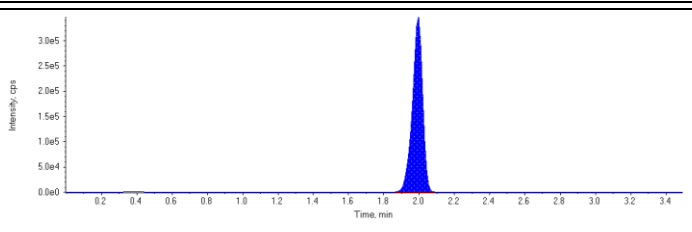
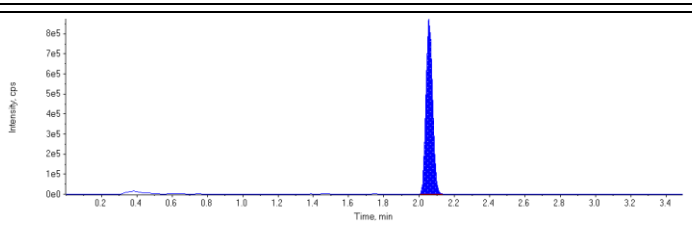
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 52.6 ng/L Area Ratio: 0.0194 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 49.7 ng/L Area Ratio: 0.0615 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.91 (1.88) min Calculated Conc: 57.7 ng/L Area Ratio: 0.0623 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 58.9 ng/L Area Ratio: 0.0255 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 61.2 ng/L Area Ratio: 0.0450 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 124. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

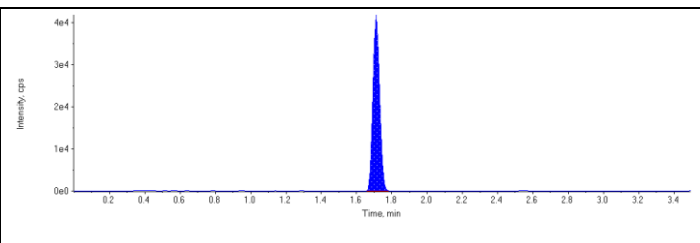
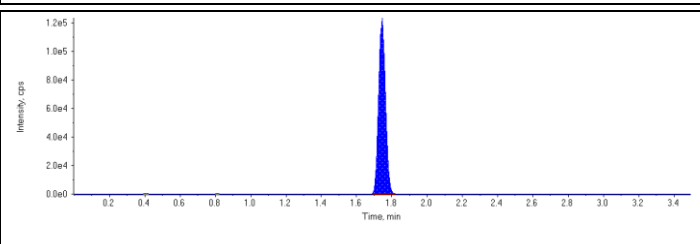
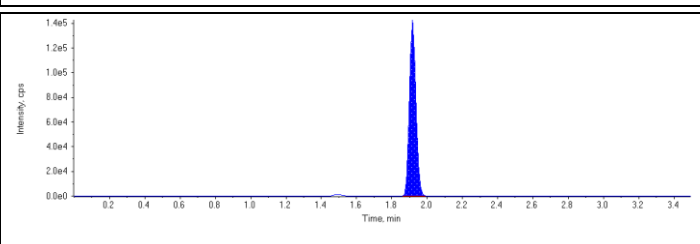
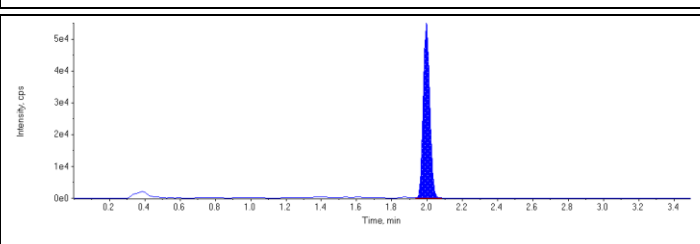
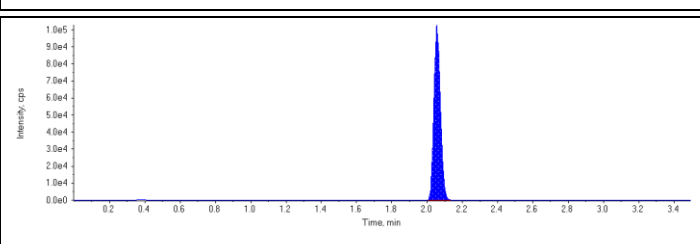
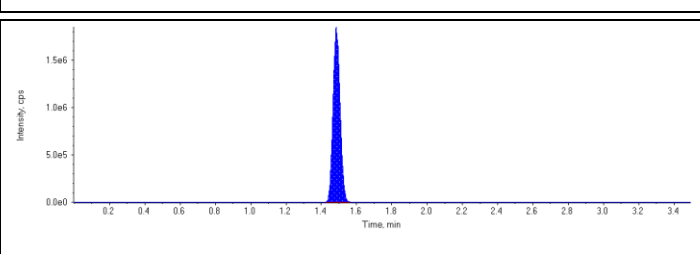
Sample Name	4386408~MTRX SPK:D1	Injection Vial	11
Sample ID	4386408~MTRX SPK:D1	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:30:58 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	110000.	1.71	1.00	-
MPFHpA	331000.	1.74	1.00	-
MPFOA	363000.	1.92	1.00	-
MPFOS	141000.	2.00	1.00	-
MPFNA	263000.	2.06	1.00	-
13C6-PFHxA IS	5140000.	1.49	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	2590000	1.17	50.0	76.0	152.0
PFHxS 1	2400000	1.71	50.0	66.4	133.0
PFHpA 1	2790000	1.75	50.0	62.7	125.0
PFOA 1	3420000	1.92	50.0	57.2	114.0
PFOS 1	1400000	1.99	50.0	54.4	109.0
PFNA 1	2270000	2.06	50.0	52.0	104.0
18O2-PFHxS	110000	1.71	100.	58.1	58.1
13C4-PFHpA	331000	1.74	100.	52.1	52.1
13C4-PFOA	363000	1.92	100.	65.5	65.5
13C4-PFOS	141000	2.00	100.	63.7	63.7
13C5-PFNA	263000	2.06	100.	69.5	69.5
13C6-PFHxA	5140000	1.49	100.	129.	129.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

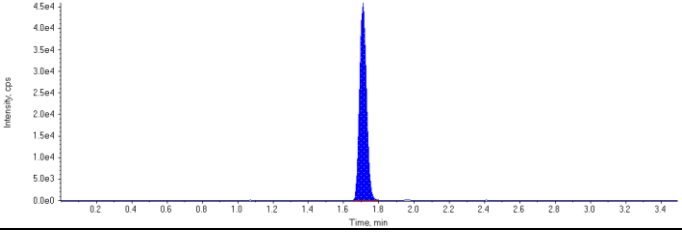
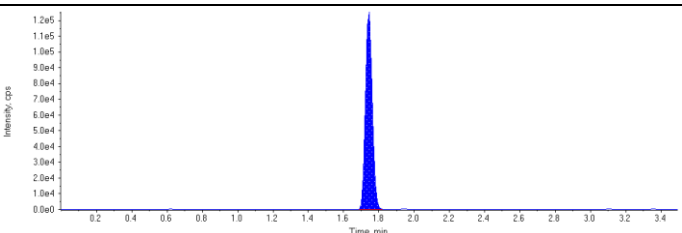
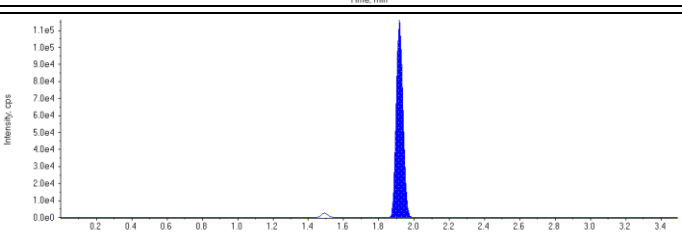
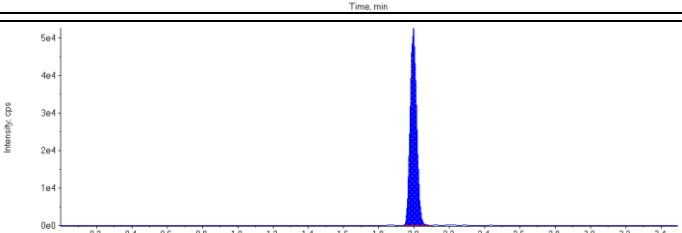
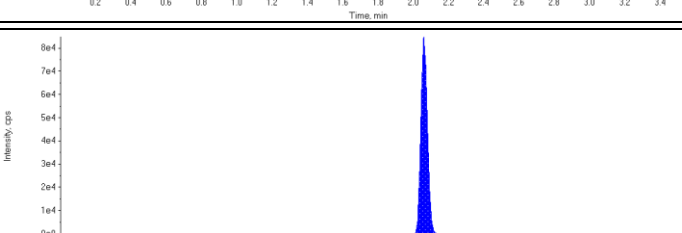
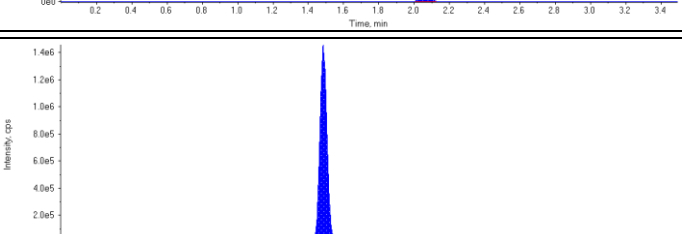
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.17 (1.15) min Calculated Conc: 76.0 ng/L Area Ratio: 23.6 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 66.4 ng/L Area Ratio: 21.9 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.75 (1.75) min Calculated Conc: 62.7 ng/L Area Ratio: 8.44 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 57.2 ng/L Area Ratio: 9.41 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 54.4 ng/L Area Ratio: 9.87 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 52.0 ng/L Area Ratio: 8.63 Sample Type: (Quality Control)	

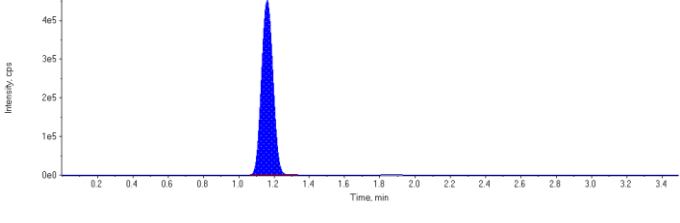
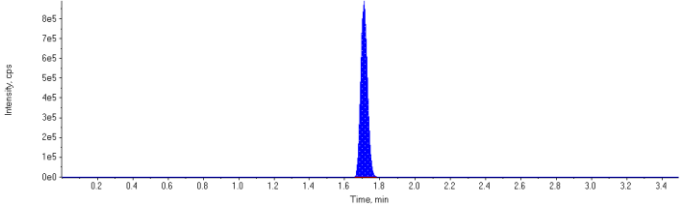
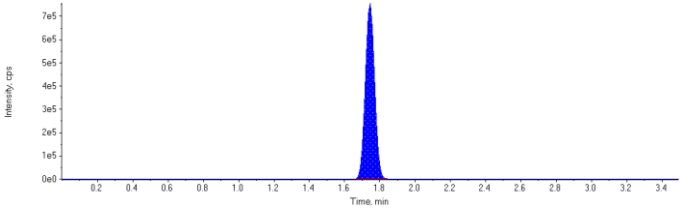
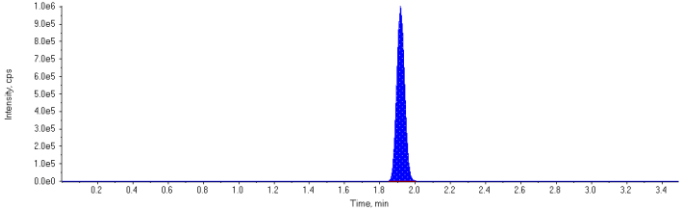
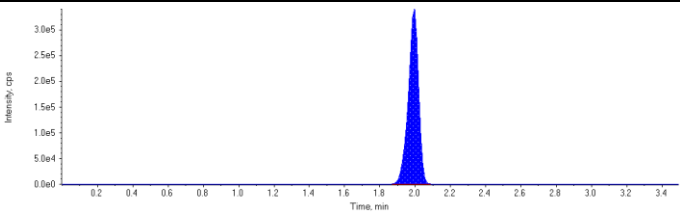
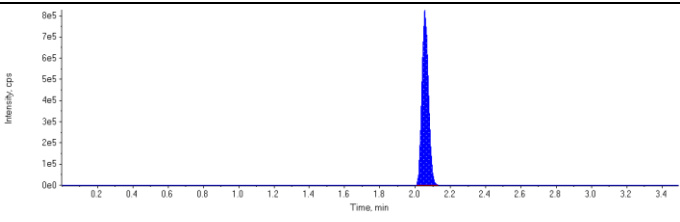
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 58.1 ng/L Area Ratio: 0.0214 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 52.1 ng/L Area Ratio: 0.0644 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 65.5 ng/L Area Ratio: 0.0707 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 63.7 ng/L Area Ratio: 0.0275 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 69.5 ng/L Area Ratio: 0.0511 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 129. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

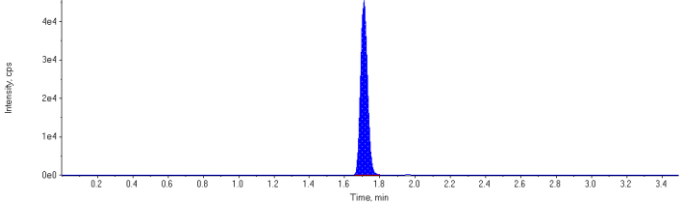
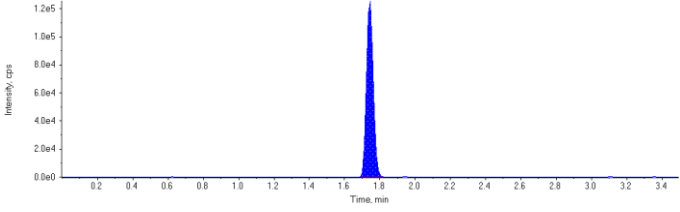
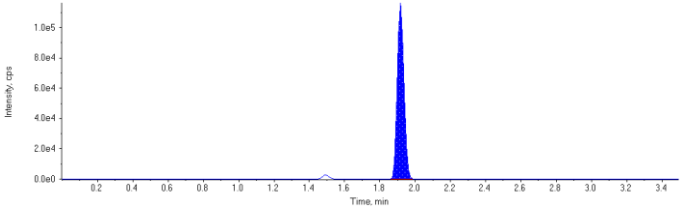
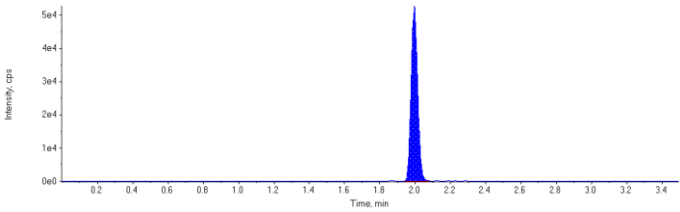
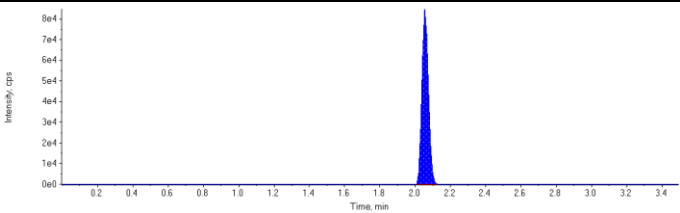
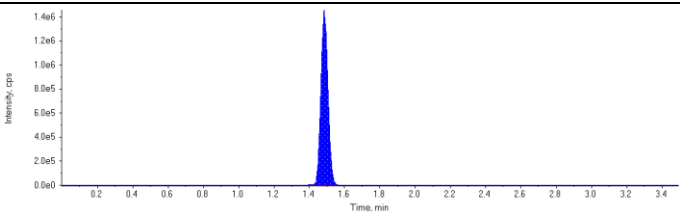
Sample Name	4386408~SPIKE	Injection Vial	12
Sample ID	4386408~SPIKE	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:36:03 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	123000.	1.71	1.00	-
MPFHpA	336000.	1.74	1.00	-
MPFOA	305000.	1.92	1.00	-
MPFOS	135000.	2.00	1.00	-
MPFNA	218000.	2.06	1.00	-
13C6-PFHxA IS	4050000.	1.49	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	2040000	1.16	50.0	53.6	107.0
PFHxS 1	2320000	1.71	50.0	57.3	115.0
PFHpA 1	2750000	1.74	50.0	60.7	121.0
PFOA 1	3120000	1.92	50.0	62.2	124.0
PFOS 1	1380000	1.99	50.0	56.2	112.0
PFNA 1	2130000	2.06	50.0	58.9	118.0
18O2-PFHxS	123000	1.71	100.	82.6	82.6
13C4-PFHpA	336000	1.74	100.	67.2	67.2
13C4-PFOA	305000	1.92	100.	69.9	69.9
13C4-PFOS	135000	2.00	100.	77.4	77.4
13C5-PFNA	218000	2.06	100.	73.2	73.2
13C6-PFHxA	4050000	1.49	100.	101.	101.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

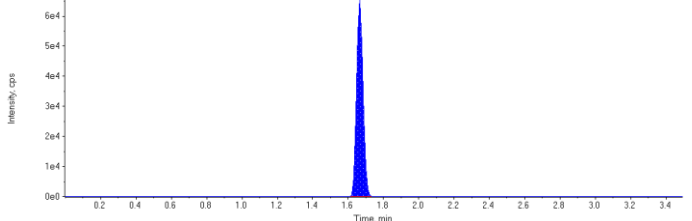
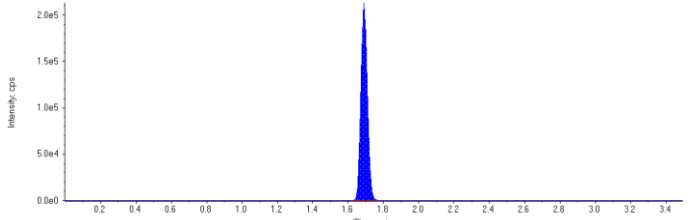
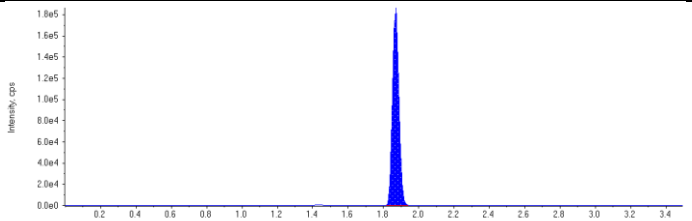
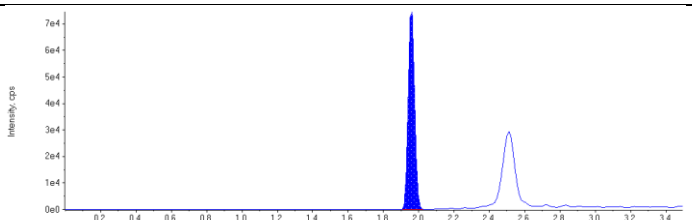
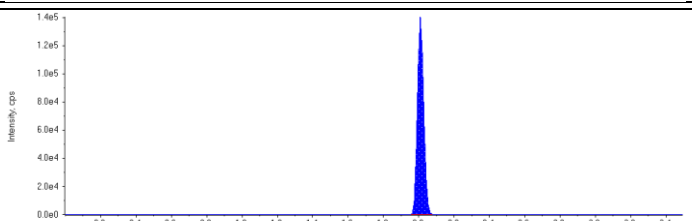
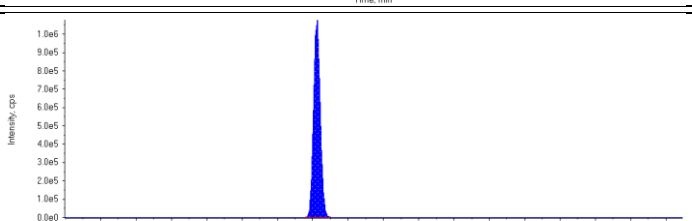
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 53.6 ng/L Area Ratio: 16.6 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 57.3 ng/L Area Ratio: 18.9 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 60.7 ng/L Area Ratio: 8.17 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 62.2 ng/L Area Ratio: 10.2 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 56.2 ng/L Area Ratio: 10.2 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 58.9 ng/L Area Ratio: 9.79 Sample Type: (Quality Control)	

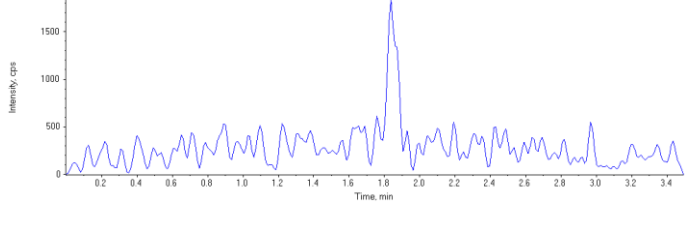
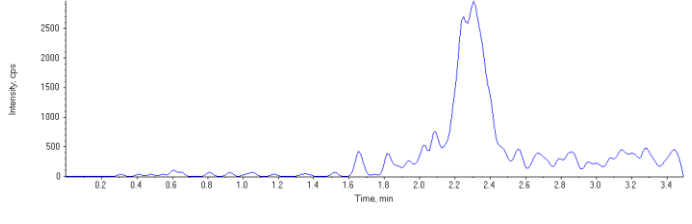
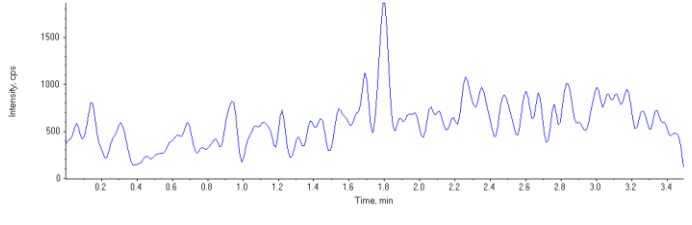
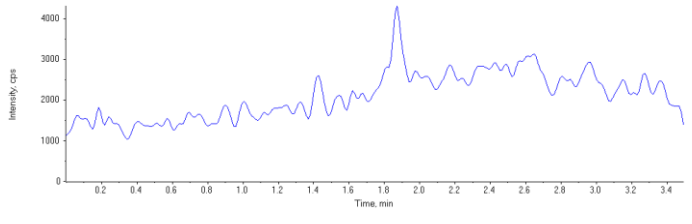
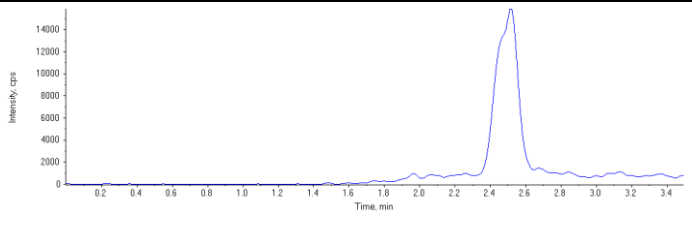
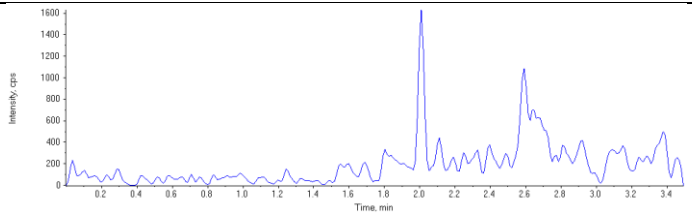
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 82.6 ng/L Area Ratio: 0.0304 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 67.2 ng/L Area Ratio: 0.0831 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 69.9 ng/L Area Ratio: 0.0755 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 77.4 ng/L Area Ratio: 0.0335 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 73.2 ng/L Area Ratio: 0.0539 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

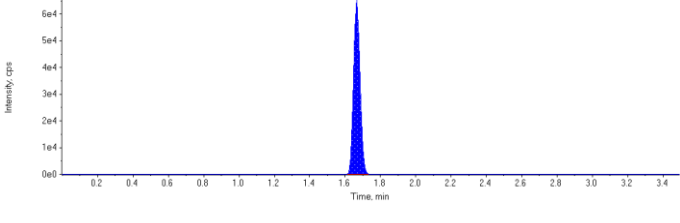
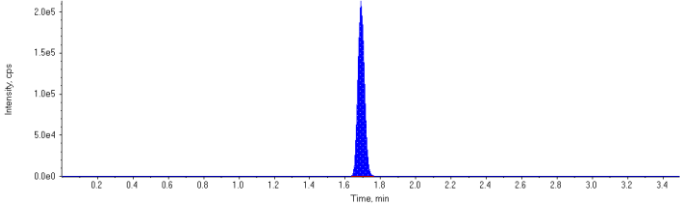
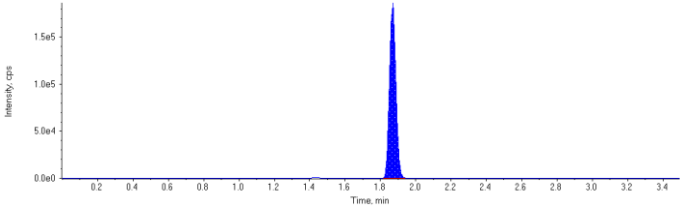
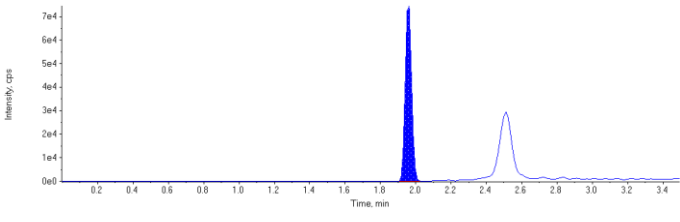
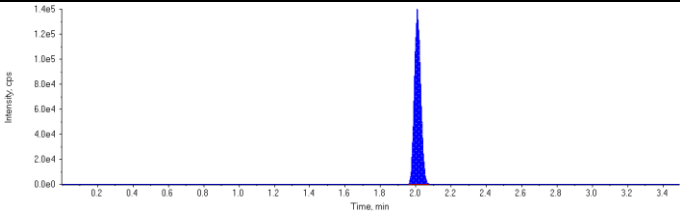
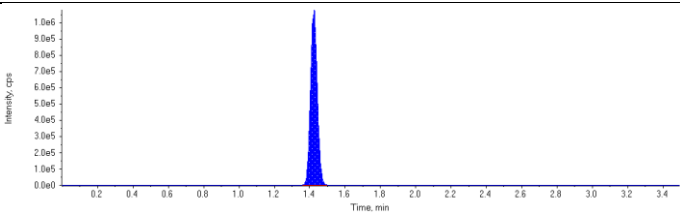
Sample Name	4394558~BLANK	Injection Vial	27
Sample ID	4394558~BLANK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 8:55:42 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	166000.	1.67	1.00	-
MPFHpA	539000.	1.69	1.00	-
MPFOA	466000.	1.87	1.00	-
MPFOS	189000.	1.96	1.00	-
MPFNA	350000.	2.01	1.00	-
13C6-PFHxA IS	2880000.	1.42	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	166000	1.67	100.	89.4	89.4
13C4-PFHpA	539000	1.69	100.	97.6	97.6
13C4-PFOA	466000	1.87	100.	96.9	96.9
13C4-PFOS	189000	1.96	100.	83.2	83.2
13C5-PFNA	350000	2.01	100.	90.8	90.8
13C6-PFHxA	2880000	1.42	100.	116.	116.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

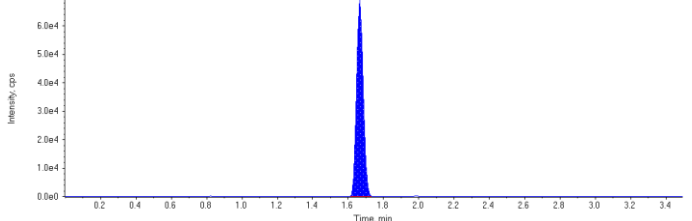
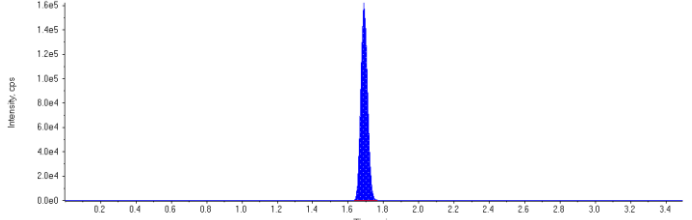
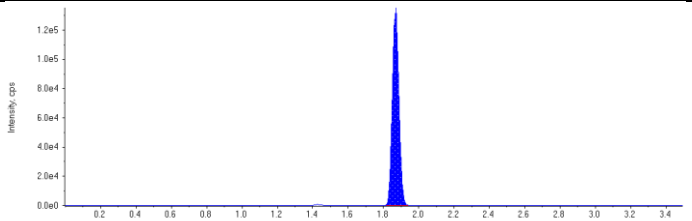
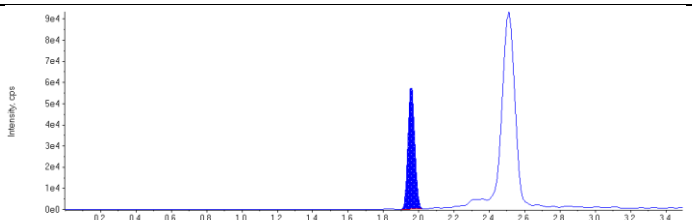
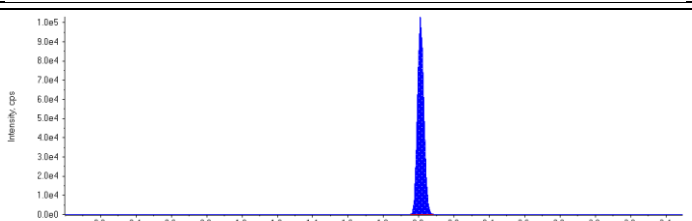
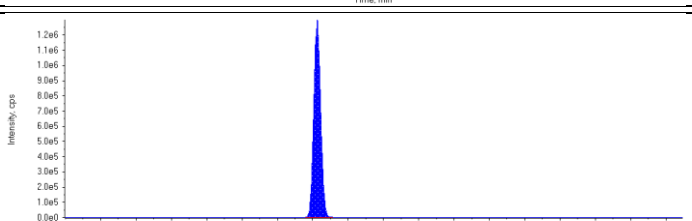
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.70) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.88) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

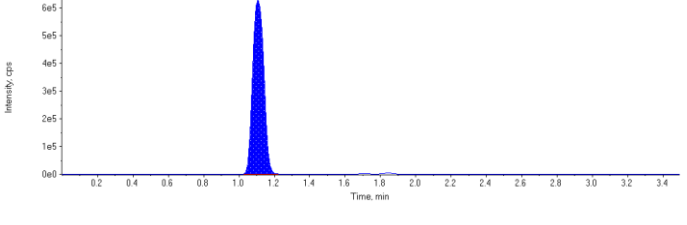
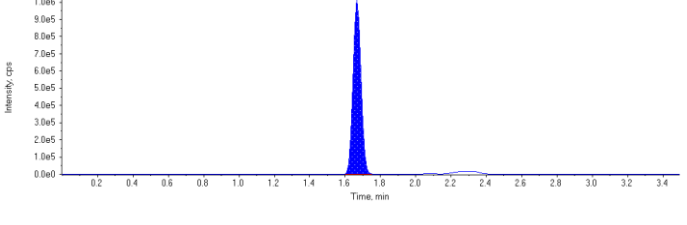
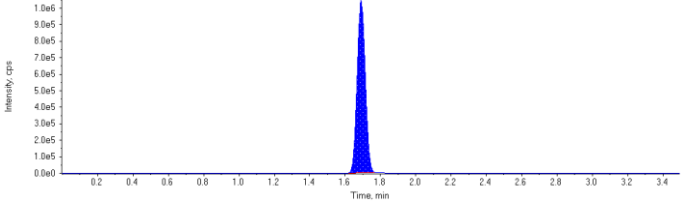
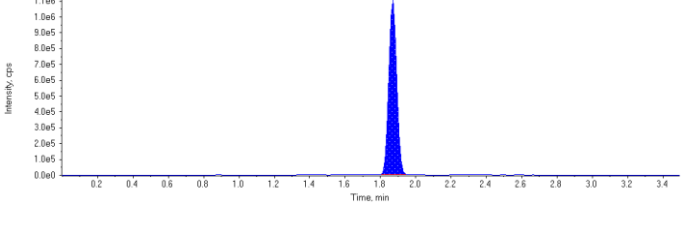
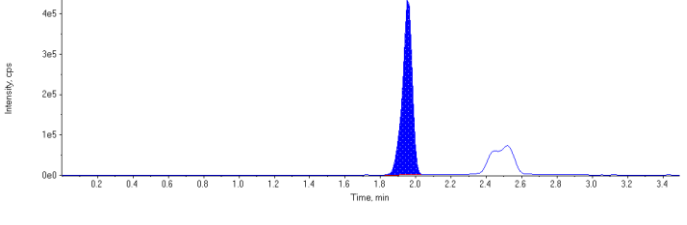
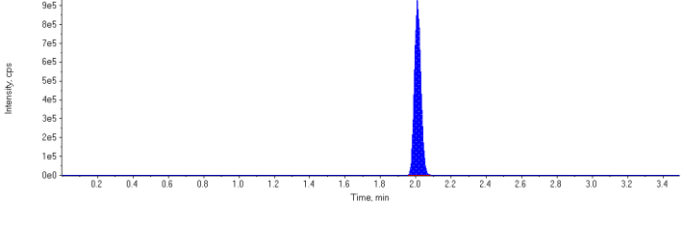
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 89.4 ng/L Area Ratio: 0.0577 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 97.6 ng/L Area Ratio: 0.187 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 96.9 ng/L Area Ratio: 0.162 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 83.2 ng/L Area Ratio: 0.0656 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 90.8 ng/L Area Ratio: 0.122 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 116. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

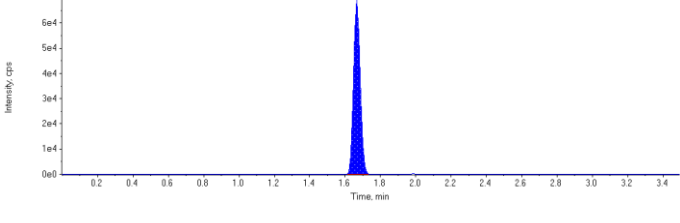
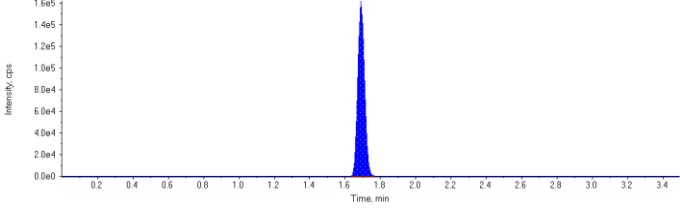
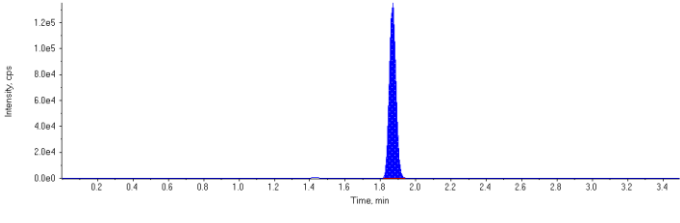
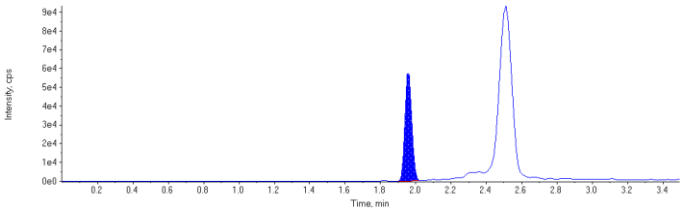
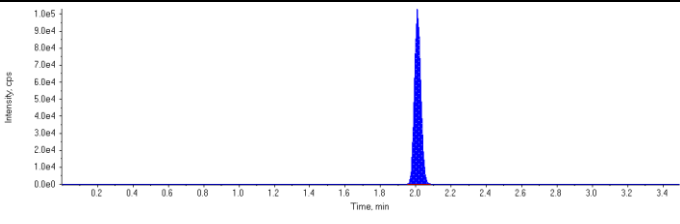
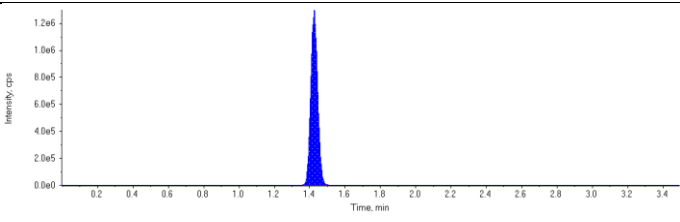
Sample Name	4394558~MTRX SPK	Injection Vial	28
Sample ID	4394558~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 10:09:47 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	180000.	1.67	1.00	-
MPFHpA	422000.	1.69	1.00	-
MPFOA	348000.	1.87	1.00	-
MPFOS	155000.	1.96	1.00	-
MPFNA	261000.	2.01	1.00	-
13C6-PFHxA IS	3520000.	1.42	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	2760000	1.11	0.00	54.6	0.0
PFHxS 1	3160000	1.67	0.00	60.3	0.0
PFHpA 1	3350000	1.69	0.00	66.4	0.0
PFOA 1	3420000	1.87	0.00	67.3	0.0
PFOS 1	1670000	1.96	0.00	69.3	0.0
PFNA 1	2340000	2.01	0.00	67.6	0.0
18O2-PFHxS	180000	1.67	100.	79.5	79.5
13C4-PFHpA	422000	1.69	100.	62.6	62.6
13C4-PFOA	348000	1.87	100.	59.1	59.1
13C4-PFOS	155000	1.96	100.	55.9	55.9
13C5-PFNA	261000	2.01	100.	55.5	55.5
13C6-PFHxA	3520000	1.42	100.	142.	142.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

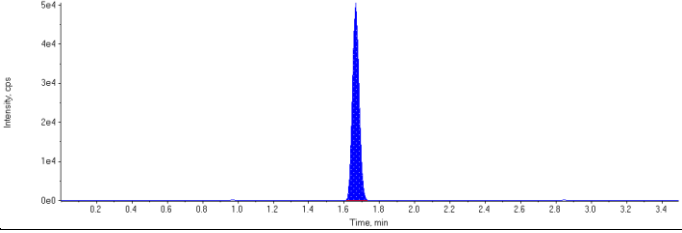
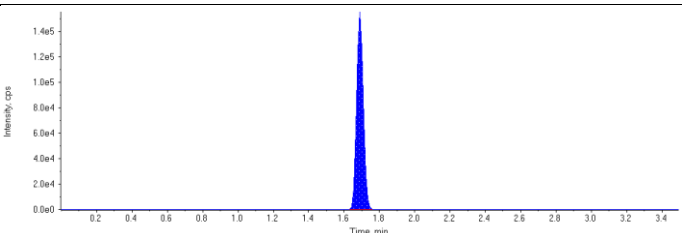
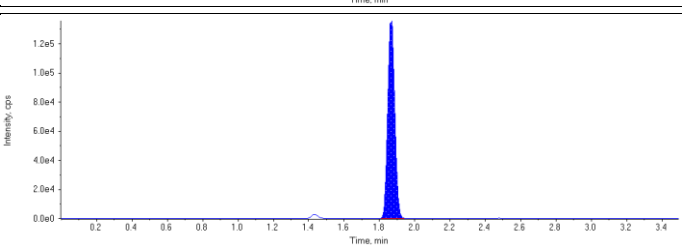
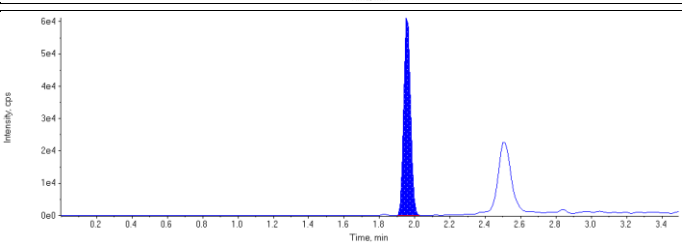
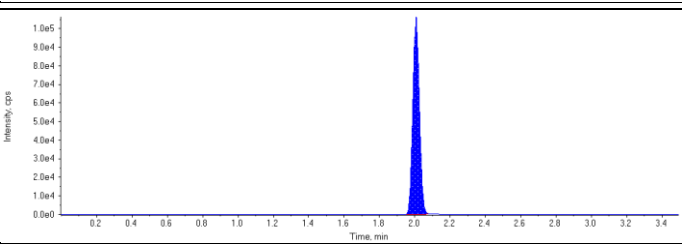
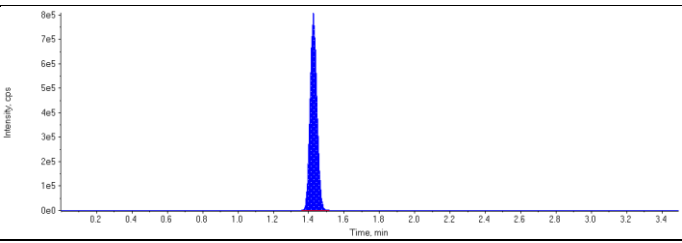
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.11 (1.09) min Calculated Conc: 54.6 ng/L Area Ratio: 15.3 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 60.3 ng/L Area Ratio: 17.5 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 66.4 ng/L Area Ratio: 7.94 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 67.3 ng/L Area Ratio: 9.84 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 69.3 ng/L Area Ratio: 10.8 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 67.6 ng/L Area Ratio: 8.95 Sample Type: (Quality Control)	

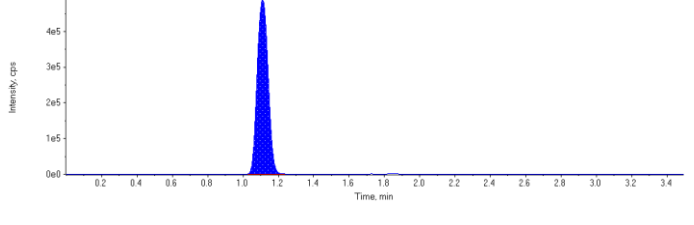
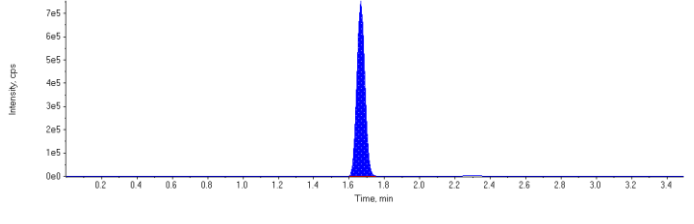
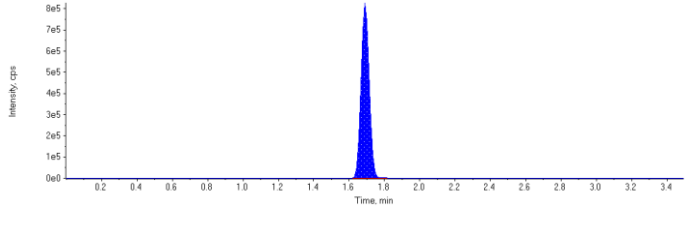
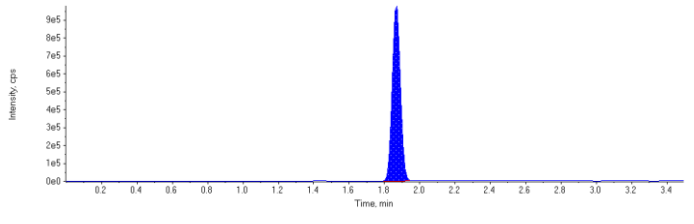
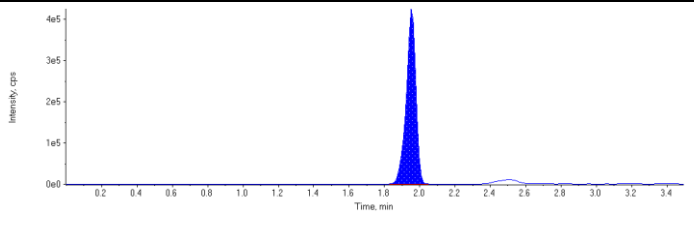
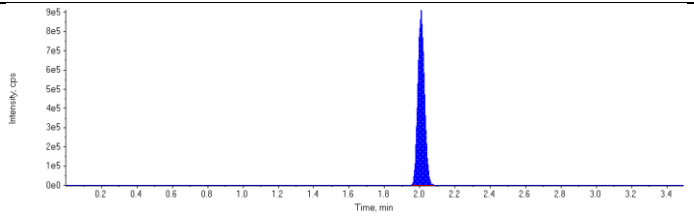
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 79.5 ng/L Area Ratio: 0.0513 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 62.6 ng/L Area Ratio: 0.120 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 59.1 ng/L Area Ratio: 0.0989 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 55.9 ng/L Area Ratio: 0.0441 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 55.5 ng/L Area Ratio: 0.0742 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 142. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

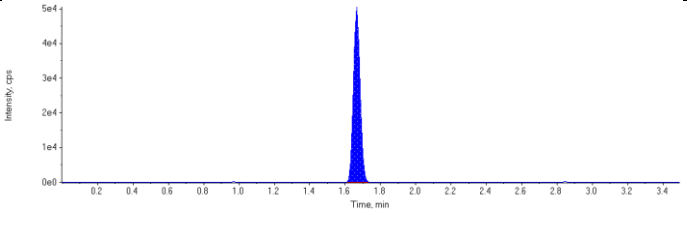
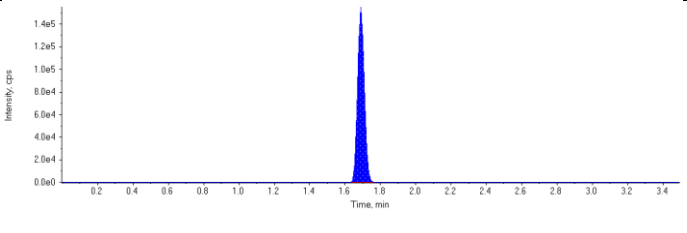
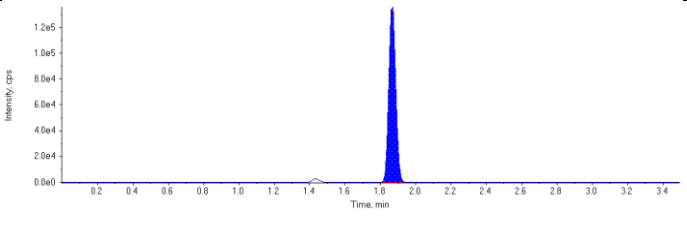
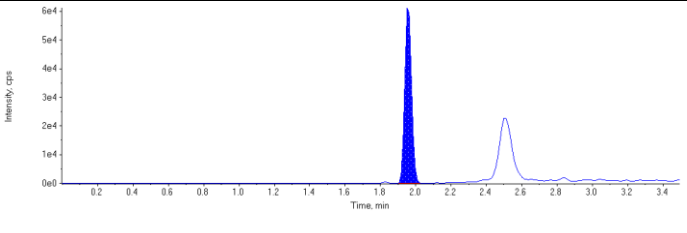
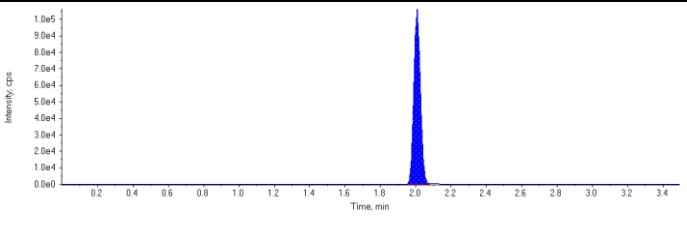
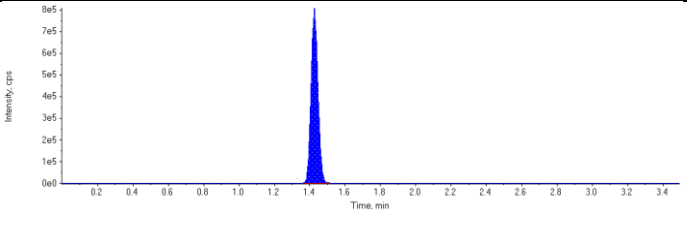
Sample Name	4394558~MTRX SPK	Injection Vial	28
Sample ID	4394558~MTRX SPK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 11:26:22 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	131000.	1.67	1.00	-
MPFHpA	405000.	1.69	1.00	-
MPFOA	373000.	1.87	1.00	-
MPFOS	164000.	1.96	1.00	-
MPFNA	275000.	2.01	1.00	-
13C6-PFHxA IS	2200000.	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	2110000	1.11	0.00	57.4	0.0
PFHxS 1	2340000	1.67	0.00	61.6	0.0
PFHpA 1	2640000	1.69	0.00	54.4	0.0
PFOA 1	3160000	1.87	0.00	57.8	0.0
PFOS 1	1610000	1.95	0.00	62.9	0.0
PFNA 1	2370000	2.01	0.00	65.1	0.0
18O2-PFHxS	131000	1.67	100.	92.3	92.3
13C4-PFHpA	405000	1.69	100.	96.1	96.1
13C4-PFOA	373000	1.87	100.	102.	102.0
13C4-PFOS	164000	1.96	100.	94.8	94.8
13C5-PFNA	275000	2.01	100.	93.4	93.4
13C6-PFHxA	2200000	1.43	100.	88.6	88.6

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

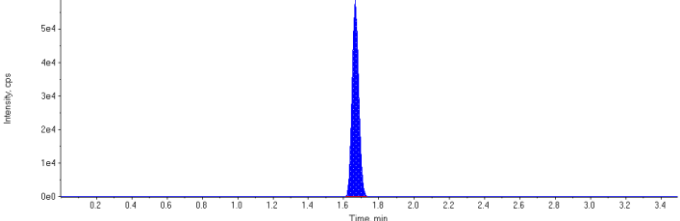
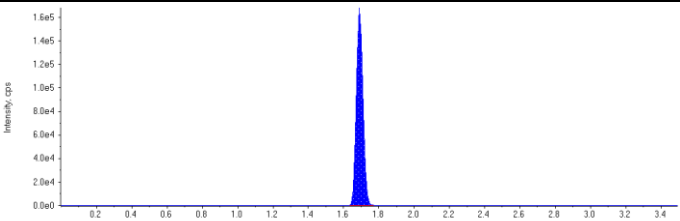
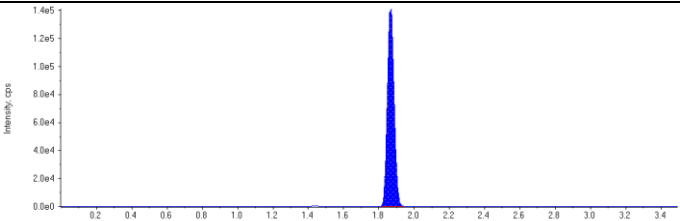
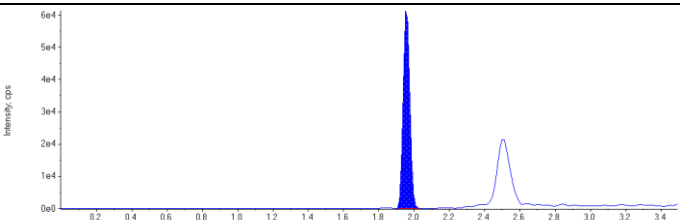
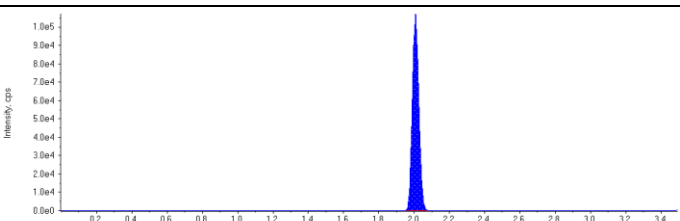
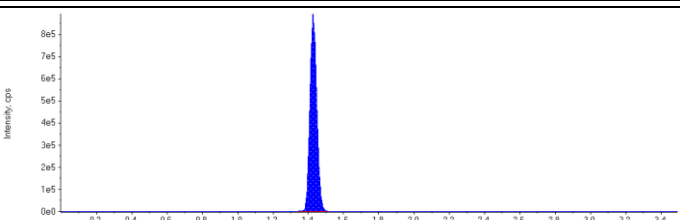
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.11 (1.09) min Calculated Conc: 57.4 ng/L Area Ratio: 16.1 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 61.6 ng/L Area Ratio: 17.9 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 54.4 ng/L Area Ratio: 6.51 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 57.8 ng/L Area Ratio: 8.45 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 62.9 ng/L Area Ratio: 9.78 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 65.1 ng/L Area Ratio: 8.62 Sample Type: (Quality Control)	

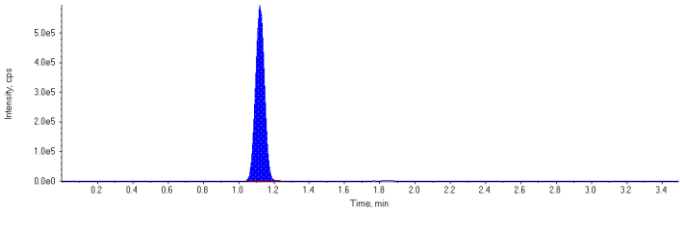
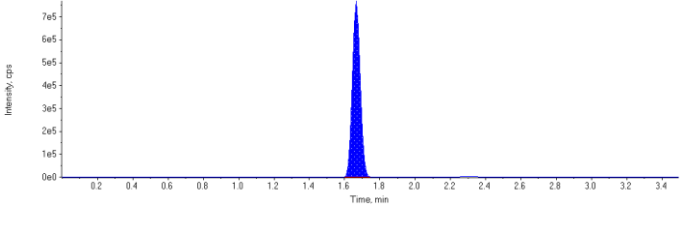
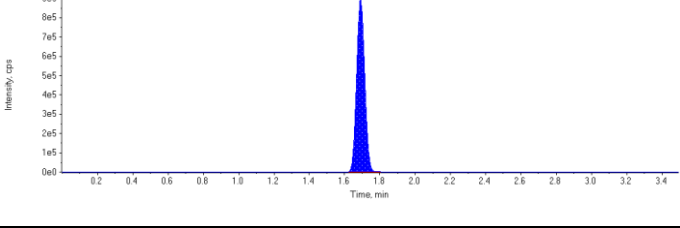
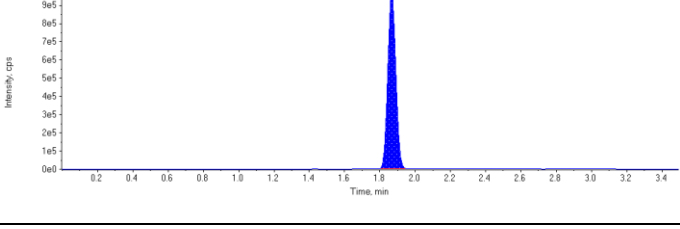
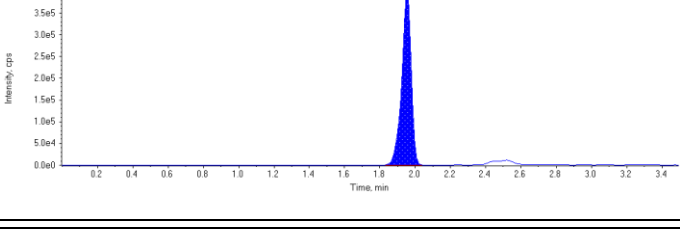
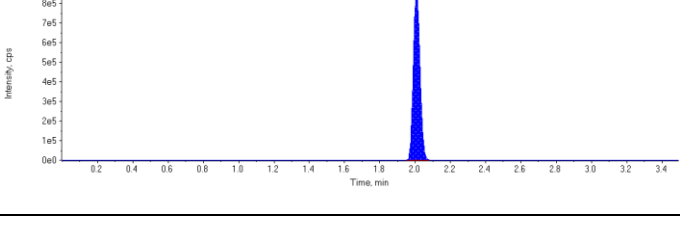
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 92.3 ng/L Area Ratio: 0.0596 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 96.1 ng/L Area Ratio: 0.184 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.170 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 94.8 ng/L Area Ratio: 0.0748 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 93.4 ng/L Area Ratio: 0.125 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 88.6 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

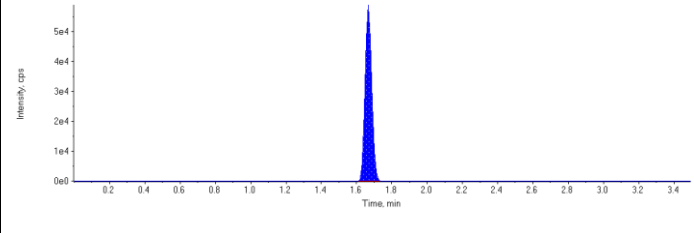
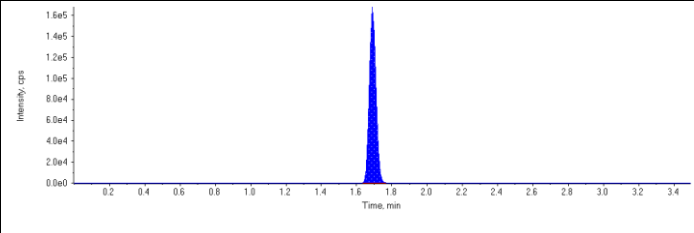
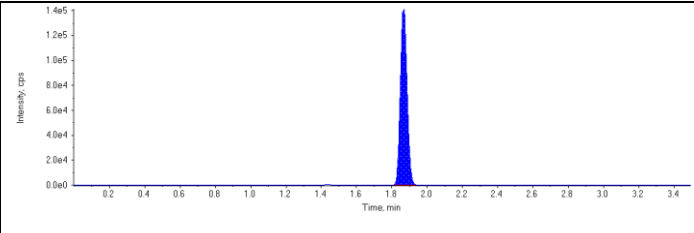
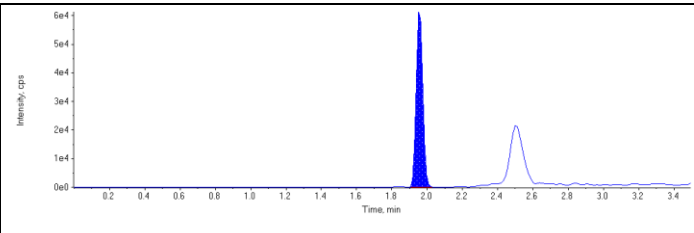
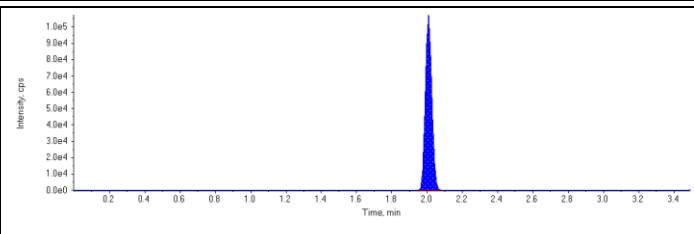
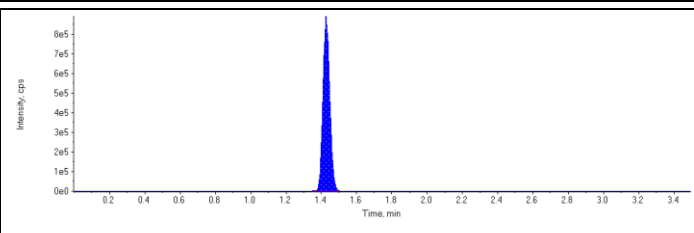
Sample Name	4394558~MTRX SPK:D1	Injection Vial	29
Sample ID	4394558~MTRX SPK:D1	Injection Volume (μL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 10:14:52 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-injected
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	434000.	1.69	1.00	-
MPFOA	376000.	1.87	1.00	-
MPFOS	161000.	1.96	1.00	-
MPFNA	275000.	2.01	1.00	-
13C6-PFHxA IS	2410000.	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	2100000	1.12	0.00	49.1	0.0
PFHxS 1	2370000	1.67	0.00	53.4	0.0
PFHpA 1	2860000	1.69	0.00	55.2	0.0
PFOA 1	3060000	1.87	0.00	55.7	0.0
PFOS 1	1490000	1.95	0.00	59.4	0.0
PFNA 1	2270000	2.01	0.00	62.4	0.0
18O2-PFHxS	153000	1.67	100.	98.1	98.1
13C4-PFHpA	434000	1.69	100.	93.8	93.8
13C4-PFOA	376000	1.87	100.	93.1	93.1
13C4-PFOS	161000	1.96	100.	84.6	84.6
13C5-PFNA	275000	2.01	100.	85.1	85.1
13C6-PFHxA	2410000	1.43	100.	97.4	97.4

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

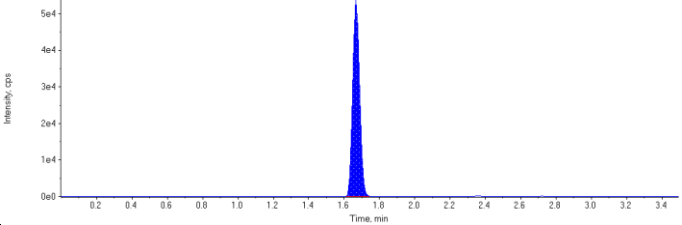
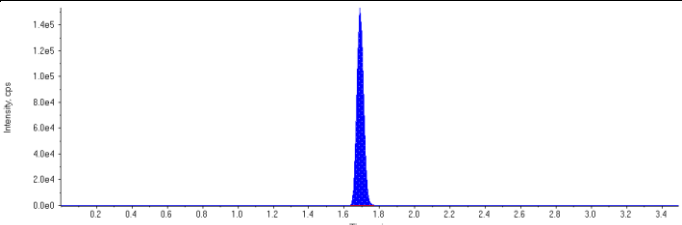
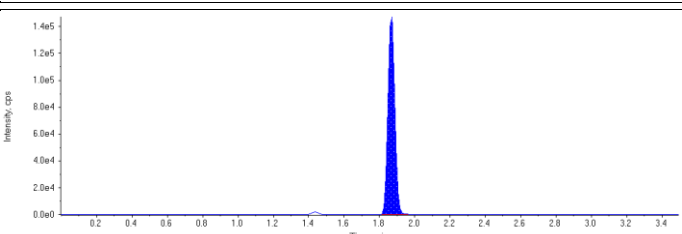
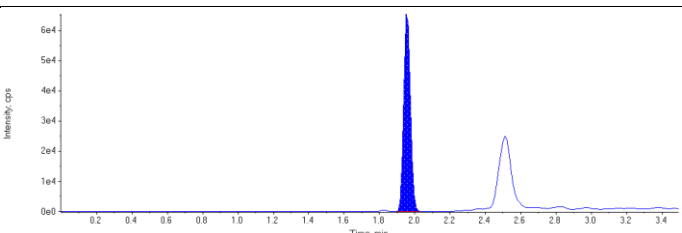
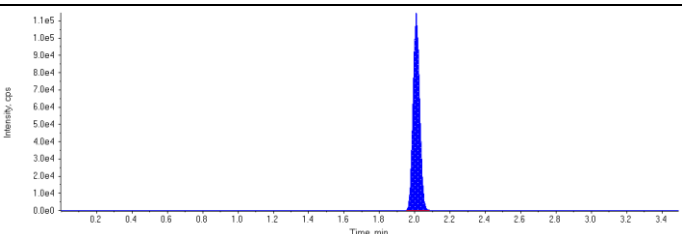
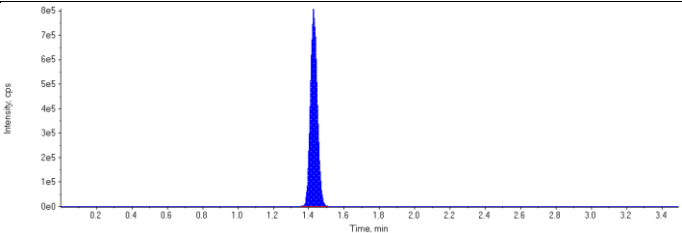
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.12 (1.09) min Calculated Conc: 49.1 ng/L Area Ratio: 13.7 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 53.4 ng/L Area Ratio: 15.5 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 55.2 ng/L Area Ratio: 6.60 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 55.7 ng/L Area Ratio: 8.13 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 59.4 ng/L Area Ratio: 9.24 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 62.4 ng/L Area Ratio: 8.26 Sample Type: (Quality Control)	

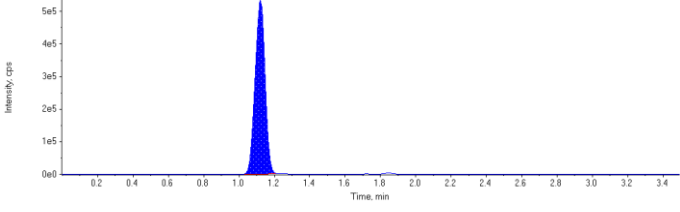
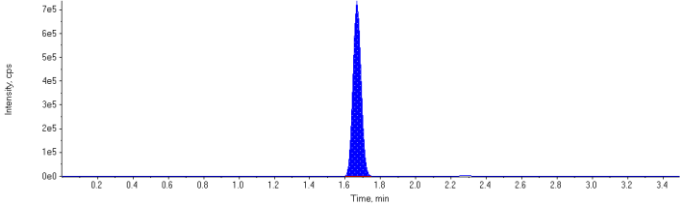
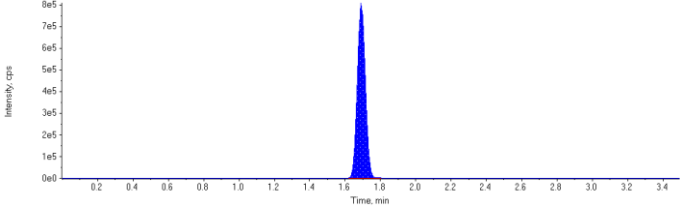
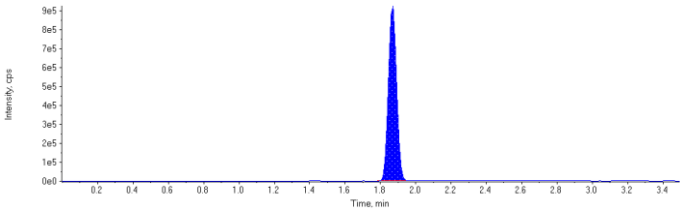
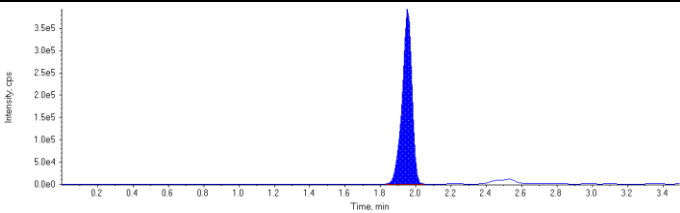
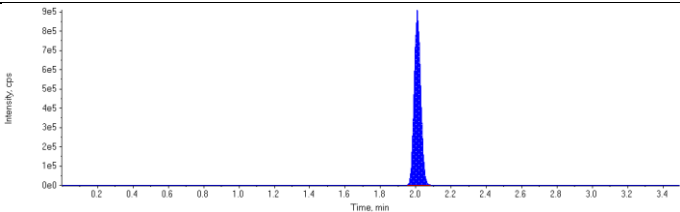
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 98.1 ng/L Area Ratio: 0.0634 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 93.8 ng/L Area Ratio: 0.180 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.1 ng/L Area Ratio: 0.156 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 84.6 ng/L Area Ratio: 0.0667 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 85.1 ng/L Area Ratio: 0.114 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 97.4 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

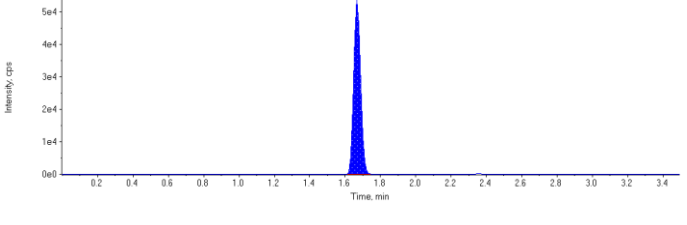
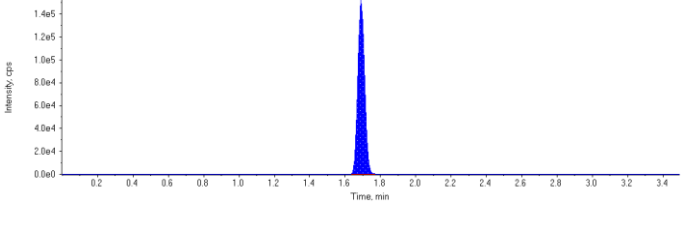
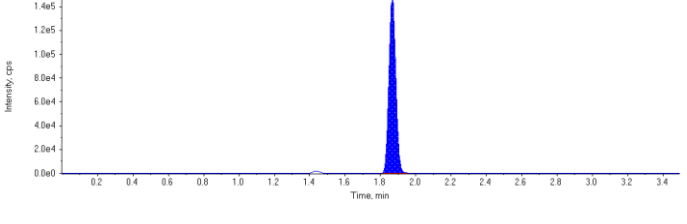
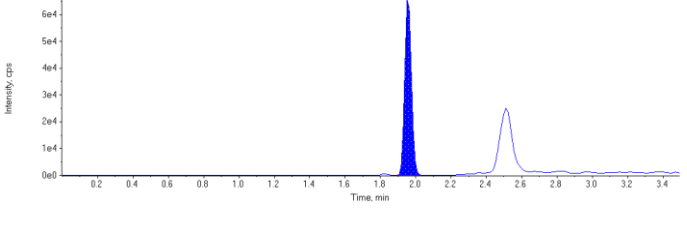
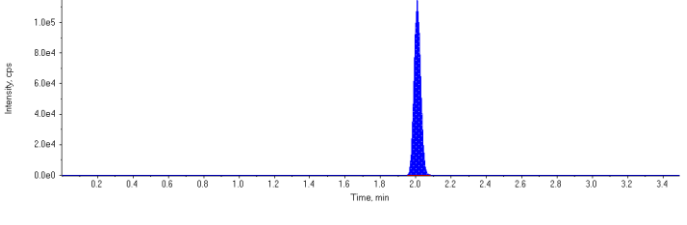
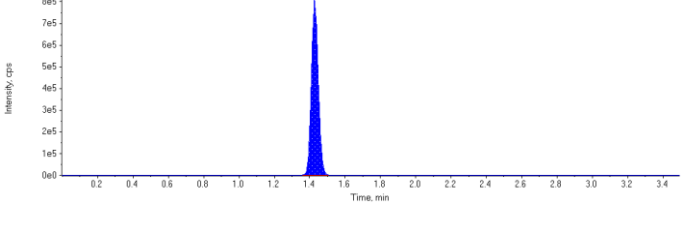
Sample Name	4394558~MTRX SPK:D1	Injection Vial	29
Sample ID	4394558~MTRX SPK:D1	Injection Volume (μL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 11:31:29 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	146000.	1.67	1.00	-
MPFHpA	404000.	1.69	1.00	-
MPFOA	398000.	1.87	1.00	-
MPFOS	174000.	1.96	1.00	-
MPFNA	298000.	2.01	1.00	-
13C6-PFHxA IS	2190000.	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	2100000	1.12	0.00	51.2	0.0
PFHxS 1	2320000	1.67	0.00	54.8	0.0
PFHpA 1	2560000	1.69	0.00	52.9	0.0
PFOA 1	2980000	1.87	0.00	51.2	0.0
PFOS 1	1500000	1.95	0.00	55.6	0.0
PFNA 1	2340000	2.01	0.00	59.4	0.0
18O2-PFHxS	146000	1.67	100.	104.	104.0
13C4-PFHpA	404000	1.69	100.	96.2	96.2
13C4-PFOA	398000	1.87	100.	109.	109.0
13C4-PFOS	174000	1.96	100.	101.	101.0
13C5-PFNA	298000	2.01	100.	102.	102.0
13C6-PFHxA	2190000	1.43	100.	88.2	88.2

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

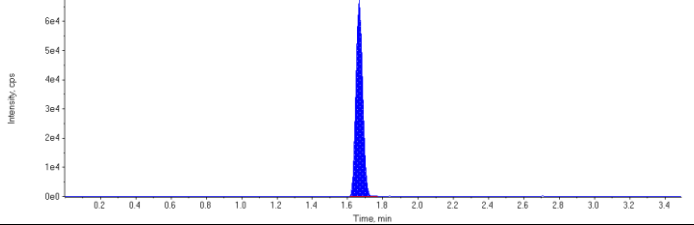
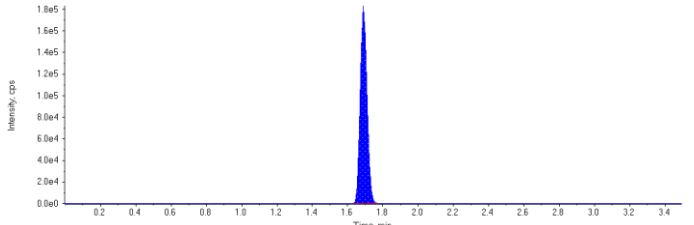
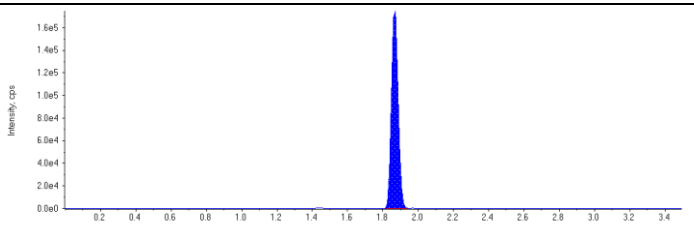
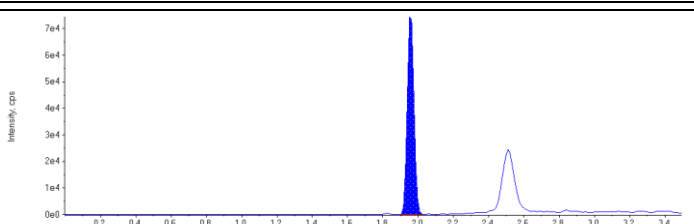
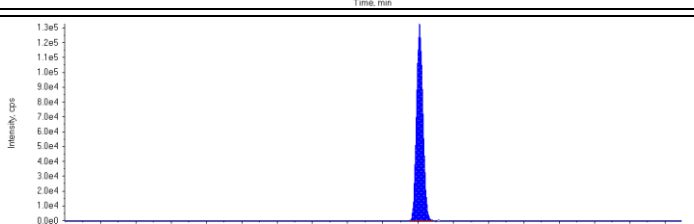
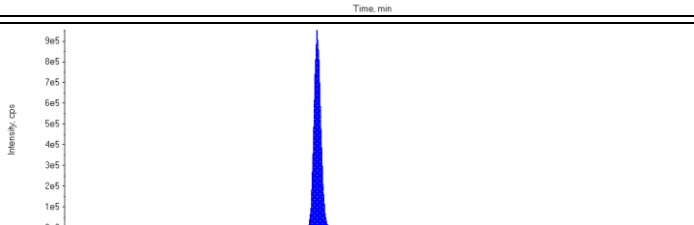
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.12 (1.09) min Calculated Conc: 51.2 ng/L Area Ratio: 14.3 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 54.8 ng/L Area Ratio: 15.9 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 52.9 ng/L Area Ratio: 6.33 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 51.2 ng/L Area Ratio: 7.48 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 55.6 ng/L Area Ratio: 8.64 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 59.4 ng/L Area Ratio: 7.85 Sample Type: (Quality Control)	

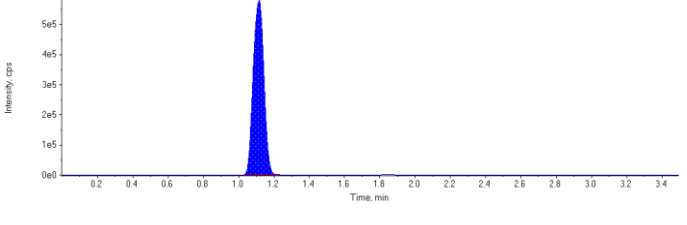
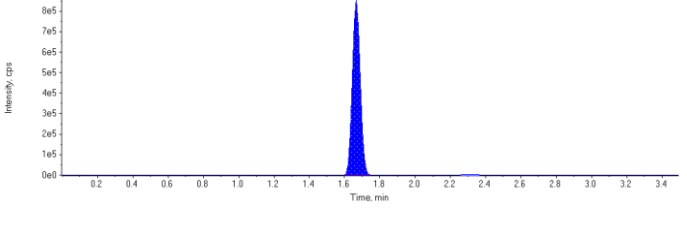
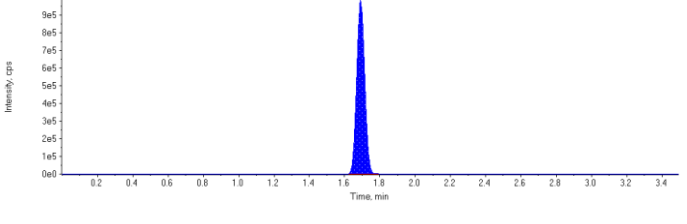
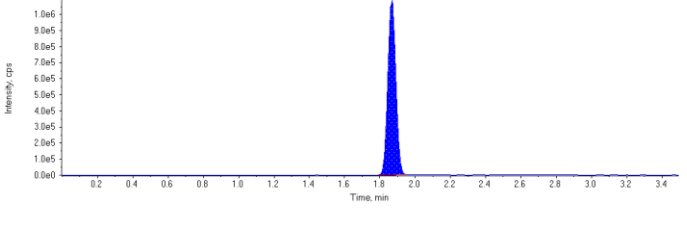
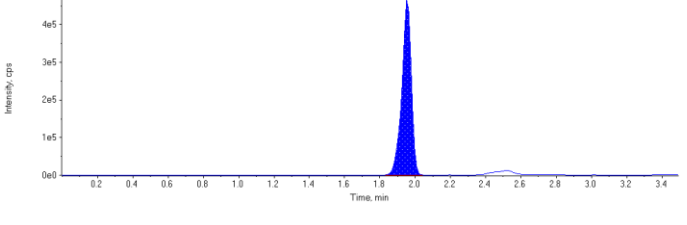
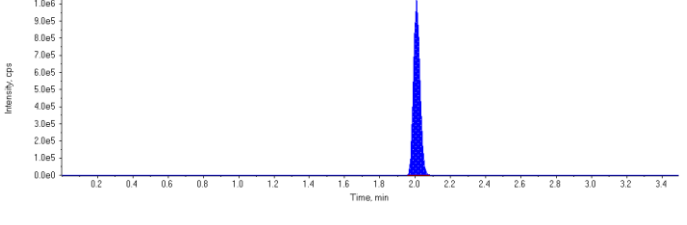
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 104. ng/L Area Ratio: 0.0669 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 96.2 ng/L Area Ratio: 0.185 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 109. ng/L Area Ratio: 0.182 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 101. ng/L Area Ratio: 0.0794 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.136 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 88.2 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

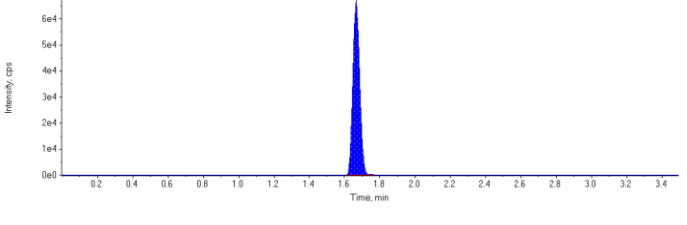
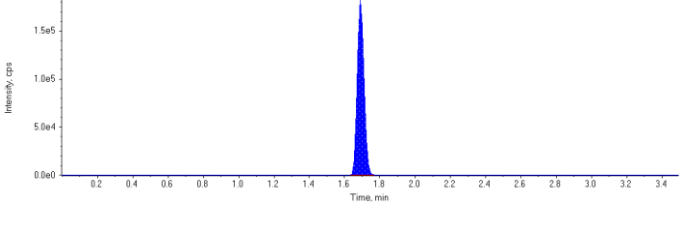
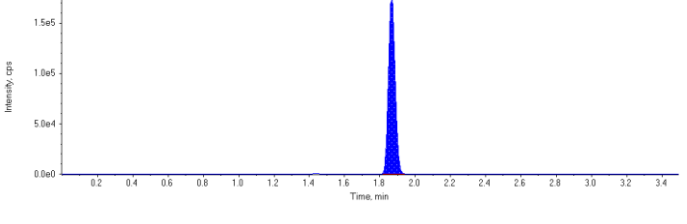
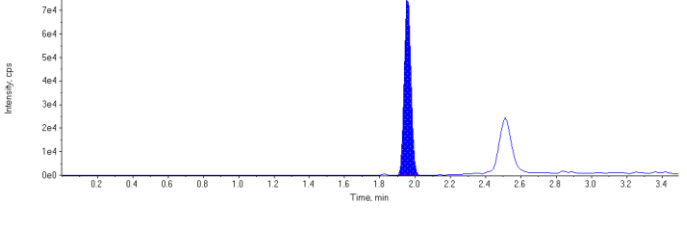
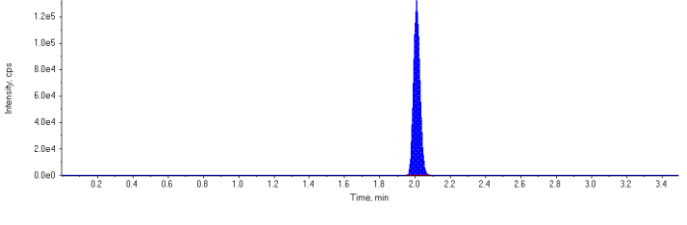
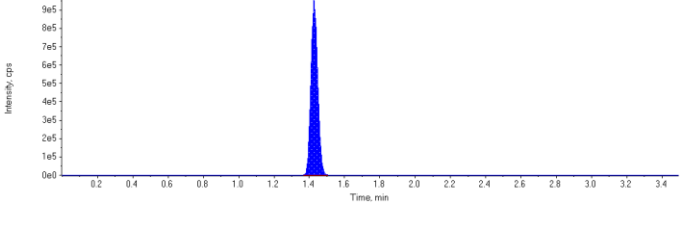
Sample Name	4394558~SPIKE	Injection Vial	30
Sample ID	4394558~SPIKE	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 10:19:58 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	178000.	1.67	1.00	-
MPFHpA	483000.	1.69	1.00	-
MPFOA	464000.	1.87	1.00	-
MPFOS	199000.	1.96	1.00	-
MPFNA	335000.	2.01	1.00	-
13C6-PFHxA IS	2540000.	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	2450000	1.12	0.00	49.2	0.0
PFHxS 1	2630000	1.67	0.00	51.1	0.0
PFHpA 1	3130000	1.69	0.00	54.2	0.0
PFOA 1	3430000	1.87	0.00	50.6	0.0
PFOS 1	1740000	1.95	0.00	56.4	0.0
PFNA 1	2610000	2.01	0.00	58.9	0.0
18O2-PFHxS	178000	1.67	100.	108.	108.0
13C4-PFHpA	483000	1.69	100.	98.8	98.8
13C4-PFOA	464000	1.87	100.	109.	109.0
13C4-PFOS	199000	1.96	100.	99.0	99.0
13C5-PFNA	335000	2.01	100.	98.3	98.3
13C6-PFHxA	2540000	1.43	100.	103.	103.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.12 (1.09) min Calculated Conc: 49.2 ng/L Area Ratio: 13.8 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 51.1 ng/L Area Ratio: 14.8 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 54.2 ng/L Area Ratio: 6.48 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 50.6 ng/L Area Ratio: 7.39 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 56.4 ng/L Area Ratio: 8.76 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 58.9 ng/L Area Ratio: 7.79 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 108. ng/L Area Ratio: 0.0699 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.8 ng/L Area Ratio: 0.190 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 109. ng/L Area Ratio: 0.182 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 99.0 ng/L Area Ratio: 0.0780 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 98.3 ng/L Area Ratio: 0.132 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

DoD Projects - Internal Data Validation Checklist				
Run date: 2016/02/19				
Worksheet # (s): 4386408				
Analysis: PFSLOW-W			1st 100% review	
Primary review by the analyst - 1st 100 % analysis review			yes	no
			n/a	*2nd 100% review
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>AN</i>		Date: 2016/02/22		
Comments:				
Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review				
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>AN</i>		Date: 2016/02/22		
Comments: Samples BVX 770, BVX 771 and BVX 819 were re-worked due to high analyte concentration. The samples will be re-analyzed with an appropriate dilution. <i>AN 2016/02/23</i>				

*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 # 4386408		Testcode: PFOs LOW TW	
Sample Preparation		yes	no
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)	/	GSZ
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: 2016/02/18	
Comments:			
Worksheet Approval			
		yes	no
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 DFTPP tune (if applicable) acceptable	/	
4	Continuing and Final CCV and DFTPP 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: <i>CM</i>		Date: 2016/02/22	
Comments:			
Worksheet Validation		yes	no
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: <i>APL</i>		Date: 2016/02/22	
Comments: Sample BUX 819 was sent for re-work due to high analyte concentration. The sample will be re-analyzed with an appropriate dilution.			
<i>APL 2016/02/23</i>			

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Thursday, February 18, 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 BVX776-01		0	125	0.3	1X					2016/02/18
	MTRX SPK	1	PFOSL BVX776-01		0	125	0.3	1X					2016/02/18
	SPIKE		PFOSL		0	125	0.3	1X					2016/02/18
	BLANK				0	125	0.3	1X					2016/02/18
B630791*	*BVX769-01R		OF-FB08-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX770-01R		OF-RW08-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX771-01R		OF-RW08P-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX772-01R		OF-FB41-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX773-01R		OF-RW41-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX774-01R		OF-RW41P-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX775-01R		OF-FB56-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX776-01R		OF-RW56-0216		0	125	0.3	1X	3	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX779-01R		OF-FB51-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX780-01R		OF-RW51-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630791*	*BVX781-01R		OF-RW51P-0216		0	125	0.3	1X	1	2016/02/18	2016/02/23 17:00		2016/02/18
B630797*	*BVX826-01R		OF-RW09-0216		<0.1	125	0.3	1X	1	2016/02/17	2016/02/23 17:00		2016/02/18
B630797*	*BVX827-01R		OF-RW37-0216		0	125	0.3	1X	1	2016/02/17	2016/02/23 17:00		2016/02/18
B630797*	*BVX828-01R		OF-RW11-0216		<0.1	125	0.3	1X	1	2016/02/17	2016/02/23 17:00		2016/02/18
B630797*	*BVX829-01R		OF-RW28-0216		0	125	0.3	1X	1	2016/02/17	2016/02/23 17:00		2016/02/18
B630797*	*BVX830-01R		OF-RW67-0216		0	125	0.3	1X	1	2016/02/17	2016/02/23 17:00		2016/02/18
B630796	BVX814				<0.1	12.5	0.3	1X					
B630796	BVX817				<0.1	12.5	0.3	1X					
B630796	BVX818				<0.2	6.25	0.3	1X					
B630796	BVX819				<0.1	12.5	0.3	1X					
Gsz, 2016/02/18													

Remarks: Job B630797 - extracted past the holding time (resulted from discrepancy between dates in TAT & summary; see attached email).

Job B630796 - rework; upfront dilution needed; lower volume used.

Samples extracted by: Geoffrey Sanchez, Gsz 2016/02/18

Instrumentation performed by: CS

Date: 2016/02/19

Calculations performed by: CS

Date: 2016/02/22

Validated by: AS

Date: 2016/02/23

-GZ, 2016/02/18

Job No.	Rep	Client Name	Contact	Client Tier	National
	Remarks				
GB630791	MDG TestAmerica	NREG PFOSLOW-W MS/MSD required on BVX776 Level IV	PFC Reporting Group	Tier 1 (Air.)	Test America
GB630797	MDG TestAmerica	NREG PFOSLOW-W Level IV required Project #: 320-17154	PFC Reporting Group	Tier 1 (Air.)	Test America

Surrogates/Spikes		PFC Spike C	PFC Spike A	PFC Spike A	IS	Method Spike	Spikes	Samples
Calib	MeOH	5% Spk = 6010	I-4675	I-4676	SI-6010			
STD	ul	25 6220	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		

[illegible][illegible]

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

Parameter Name	Units	MTRX SPK	DL	MTRX SPK Dup1	DL	SPIKE	DL
Perfluorobutanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorobutane Sulfonate (PFBS)	ng/L	11 156.786	2	11 150.386	2	107.20000	2
Perfluorodecane Sulfonate	ng/L	N/A*****		N/A*****		N/A*****	
Perfluoroheptanoic Acid (PFHpA)	ng/L	11 133.020	2	125.02000	2	121.40000	2
Perfluoroheptane sulfonate	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorohexanoic Acid (PFHxA)	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorohexane Sulfonate (PFHxS)	ng/L	11 147.600	2	11 132.800	2	114.60000	2
Perfluorononanoic Acid (PFNA)	ng/L	120.20000	2	104.00000	2	117.80000	2
Perfluoropentanoic Acid (PFPeA)	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorotetradecanoic Acid	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorotridecanoic Acid	ng/L	N/A*****		N/A*****		N/A*****	
Perfluoroundecanoic Acid (PFUnA)	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorodecanoic Acid (PFDA)	ng/L	N/A*****		N/A*****		N/A*****	
Perfluorododecanoic Acid (PFDoA)	ng/L	N/A*****		N/A*****		N/A*****	
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	124.60000	2	114.40000	2	124.40000	2
Perfluorooctane Sulfonate (PFOS)	ng/L	116.00000	2	108.80000	2	112.40000	2
13C2-perfluorotetradecanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C4-Perfluorobutanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C5-Perfluorononanoic acid	ng/L	61.2		69.5		73.2	
13C2-Perfluorodecanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C2-Perfluorododecanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C2-Perfluorohexanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C2-Perfluoroundecanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
13C4-Perfluoroheptanoic acid	ng/L	49.7		52.1		67.2	
13C4-Perfluorooctanoic acid	ng/L	57.7		65.5		69.9	
13C4-Perfluorooctanesulfonate	ng/L	58.9		63.7		77.4	
13C5-Perfluoropentanoic acid	ng/L	N/A*****		N/A*****		N/A*****	
18O2-Perfluorohexanesulfonate	ng/L	52.6		58.1		82.6	

Parameter Name	BLANK	DL	B630791 BVX769	DL	B630791 BVX770	DL	B630791 BVX771
Perfluorobutanoic acid	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorobutane Sulfonate (PFBS)	0	2	0	2	5.03000	2	5.24000
Perfluorodecane Sulfonate	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluoroheptanoic Acid (PFHpA)	0	2	0	2	2.88000	2	2.95000
Perfluoroheptane sulfonate	N/A*****			2		2	
Perfluorohexanoic Acid (PFHxA)	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorohexane Sulfonate (PFHxS)	0	2	0	2	53.30000	2	59.70000
Perfluorononanoic Acid (PFNA)	0	2	0	2	0.42900	2	0.39200
Perfluoropentanoic Acid (PFPeA)	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorotetradecanoic Acid	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorotridecanoic Acid	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorodecanoic Acid (PFDA)	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****		N/A*****	2	N/A*****	2	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	0	2	0	2	13.20000	2	13.90000
Perfluorooctane Sulfonate (PFOS)	0	2	0	2	223.00000	2	225.00000
13C2-perfluorotetradecanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C4-Perfluorobutanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C5-Perfluorononanoic acid	75.7		86.2		83.1		80.3
13C2-Perfluorodecanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C2-Perfluorododecanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C2-Perfluorohexanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C2-Perfluoroundecanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
13C4-Perfluoroheptanoic acid	73.9		71.9		62.5		60.5
13C4-Perfluorooctanoic acid	73.9		79.1		69.6		67.8
13C4-Perfluorooctanesulfonate	82.4		89.8		87.8		82.8
13C5-Perfluoropentanoic acid	N/A*****		N/A*****		N/A*****		N/A*****
18O2-Perfluorohexanesulfonate	86.2		79.4		87.0		78.1

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

Parameter Name	DL	B630791 BVX772	DL	B630791 BVX773	DL	B630791 BVX774	DL
Perfluorobutanoic acid	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorobutane Sulfonate (PFBS)	2	0	2	0	2	0.67400	2
Perfluorodecane Sulfonate	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluoroheptanoic Acid (PFHpA)	2	0	2	0	2	0	2
Perfluoroheptane sulfonate	2		2		2		2
Perfluorohexanoic Acid (PFHxA)	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorohexane Sulfonate (PFHxS)	2	0	2	0.68700	2	0.68700	2
Perfluorononanoic Acid (PFNA)	2	0	2	0	2	0	2
Perfluoropentanoic Acid (PFPeA)	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorotetradecanoic Acid	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorotridecanoic Acid	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluoroundecanoic Acid (PFUnA)	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorodecanoic Acid (PFDA)	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluorododecanoic Acid (PFDoA)	2	N/A *****	2	N/A *****	2	N/A *****	2
Perfluoro-n-Octanoic Acid (PFOA)	2	0	2	0.29800	2	0	2
Perfluorooctane Sulfonate (PFOS)	2	0	2	0	2	0	2
13C2-perfluorotetradecanoic acid		N/A *****		N/A *****		N/A *****	
13C4-Perfluorobutanoic acid		N/A *****		N/A *****		N/A *****	
13C5-Perfluorononanoic acid		77.7		66.0		63.5	
13C2-Perfluorodecanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluorododecanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluorohexanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluoroundecanoic acid		N/A *****		N/A *****		N/A *****	
13C4-Perfluoroheptanoic acid		64.8		59.4		54.9	
13C4-Perfluorooctanoic acid		67.5		64.8		60.0	
13C4-Perfluorooctanesulfonate		77.6		67.7		61.0	
13C5-Perfluoropentanoic acid		N/A *****		N/A *****		N/A *****	
18O2-Perfluorohexanesulfonate		72.2		62.2		62.2	

Parameter Name	B630791 BVX775	DL	B630791 BVX776	DL	B630791 BVX779	DL	B630791 BVX780
Perfluorobutanoic acid	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorobutane Sulfonate (PFBS)	0	2	0.80700	2	0.63000	2	0
Perfluorodecane Sulfonate	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluoroheptanoic Acid (PFHpA)	0	2	0.19000	2	0	2	6.61000
Perfluoroheptane sulfonate		2		2		2	
Perfluorohexanoic Acid (PFHxA)	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorohexane Sulfonate (PFHxS)	0	2	0	2	0	2	0
Perfluorononanoic Acid (PFNA)	0	2	0	2	0	2	0
Perfluoropentanoic Acid (PFPeA)	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorotetradecanoic Acid	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorotridecanoic Acid	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluoroundecanoic Acid (PFUnA)	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorodecanoic Acid (PFDA)	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluorododecanoic Acid (PFDoA)	N/A *****	2	N/A *****	2	N/A *****	2	N/A *****
Perfluoro-n-Octanoic Acid (PFOA)	0	2	0	2	0	2	0.30000
Perfluorooctane Sulfonate (PFOS)	0	2	0	2	0	2	0
13C2-perfluorotetradecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C4-Perfluorobutanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C5-Perfluorononanoic acid	62.9		74.4		88.7		62.6
13C2-Perfluorodecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluorododecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluorohexanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluoroundecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C4-Perfluoroheptanoic acid	53.0		59.7		75.7		50.5
13C4-Perfluorooctanoic acid	61.3		66.0		81.1		56.6
13C4-Perfluorooctanesulfonate	58.7		66.2		87.1		63.7
13C5-Perfluoropentanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
18O2-Perfluorohexanesulfonate	61.5		69.7		77.4		65.2

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

Parameter Name	DL	B630791 BVX781	DL	B630796 BVX814 ReWork	DL	B630796 BVX817 ReWork	DL
Perfluorobutanoic acid	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorobutane Sulfonate (PFBS)	2	0	2	9.58000	20	8.19000	20
Perfluorodecane Sulfonate	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluoroheptanoic Acid (PFHpA)	2	4.19000	2	17.70000	20	16.90000	20
Perfluoroheptane sulfonate	2		2	N/A *****	20	N/A *****	20
Perfluorohexanoic Acid (PFHxA)	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorohexane Sulfonate (PFHxS)	2	0	2	7.66000	20	7.48000	20
Perfluorononanoic Acid (PFNA)	2	0	2	3.74000	20	3.88000	20
Perfluoropentanoic Acid (PFPeA)	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorotetradecanoic Acid	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorotridecanoic Acid	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluoroundecanoic Acid (PFUnA)	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorodecanoic Acid (PFDA)	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluorododecanoic Acid (PFDoA)	2	N/A *****	2	N/A *****	20	N/A *****	20
Perfluoro-n-Octanoic Acid (PFOA)	2	0	2	493.00000	20	501.00000	20
Perfluorooctane Sulfonate (PFOS)	2	0	2	6.13000	20	5.90000	20
13C2-perfluorotetradecanoic acid		N/A *****		N/A *****		N/A *****	
13C4-Perfluorobutanoic acid		N/A *****		N/A *****		N/A *****	
13C5-Perfluorononanoic acid		61.6		68.7		75.3	
13C2-Perfluorodecanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluorododecanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluorohexanoic acid		N/A *****		N/A *****		N/A *****	
13C2-Perfluoroundecanoic acid		N/A *****		N/A *****		N/A *****	
13C4-Perfluoroheptanoic acid		53.4		58.9		69.6	
13C4-Perfluorooctanoic acid		57.3		64.0		72.1	
13C4-Perfluorooctanesulfonate		59.1		69.1		77.5	
13C5-Perfluoropentanoic acid		N/A *****		N/A *****		N/A *****	
18O2-Perfluorohexanesulfonate		61.7		66.0		84.1	

Parameter Name	B630796 BVX818 ReWork	DL	B630796 BVX819 ReWork	DL	B630797 BVX826	DL	B630797 BVX827
Perfluorobutanoic acid	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorobutane Sulfonate (PFBS)	N/A *****	40	8.62000	20	0	2	0.79200
Perfluorodecane Sulfonate	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluoroheptanoic Acid (PFHpA)	N/A *****	40	33.30000	20	0	2	0.45500
Perfluoroheptane sulfonate	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorohexanoic Acid (PFHxA)	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorohexane Sulfonate (PFHxS)	N/A *****	40	7.77000	20	0.71300	2	3.26000
Perfluorononanoic Acid (PFNA)	N/A *****	40	5.80000	20	0	2	0
Perfluoropentanoic Acid (PFPeA)	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorotetradecanoic Acid	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorotridecanoic Acid	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluoroundecanoic Acid (PFUnA)	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorodecanoic Acid (PFDA)	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluorododecanoic Acid (PFDoA)	N/A *****	40	N/A *****	20	N/A *****	2	N/A *****
Perfluoro-n-Octanoic Acid (PFOA)	1870	40	1100.00000	20	0.41200	2	7.15000
Perfluorooctane Sulfonate (PFOS)	N/A *****	40	8.57000	20	0.32000	2	0.81200
13C2-perfluorotetradecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C4-Perfluorobutanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C5-Perfluorononanoic acid	N/A *****		62.7		61.7		65.0
13C2-Perfluorodecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluorododecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluorohexanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C2-Perfluoroundecanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
13C4-Perfluoroheptanoic acid	N/A *****		43.1		53.8		51.9
13C4-Perfluorooctanoic acid	77.6		53.3		58.1		56.6
13C4-Perfluorooctanesulfonate	N/A *****		79.5		59.3		63.9
13C5-Perfluoropentanoic acid	N/A *****		N/A *****		N/A *****		N/A *****
18O2-Perfluorohexanesulfonate	N/A *****		74.5		69.2		64.4

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

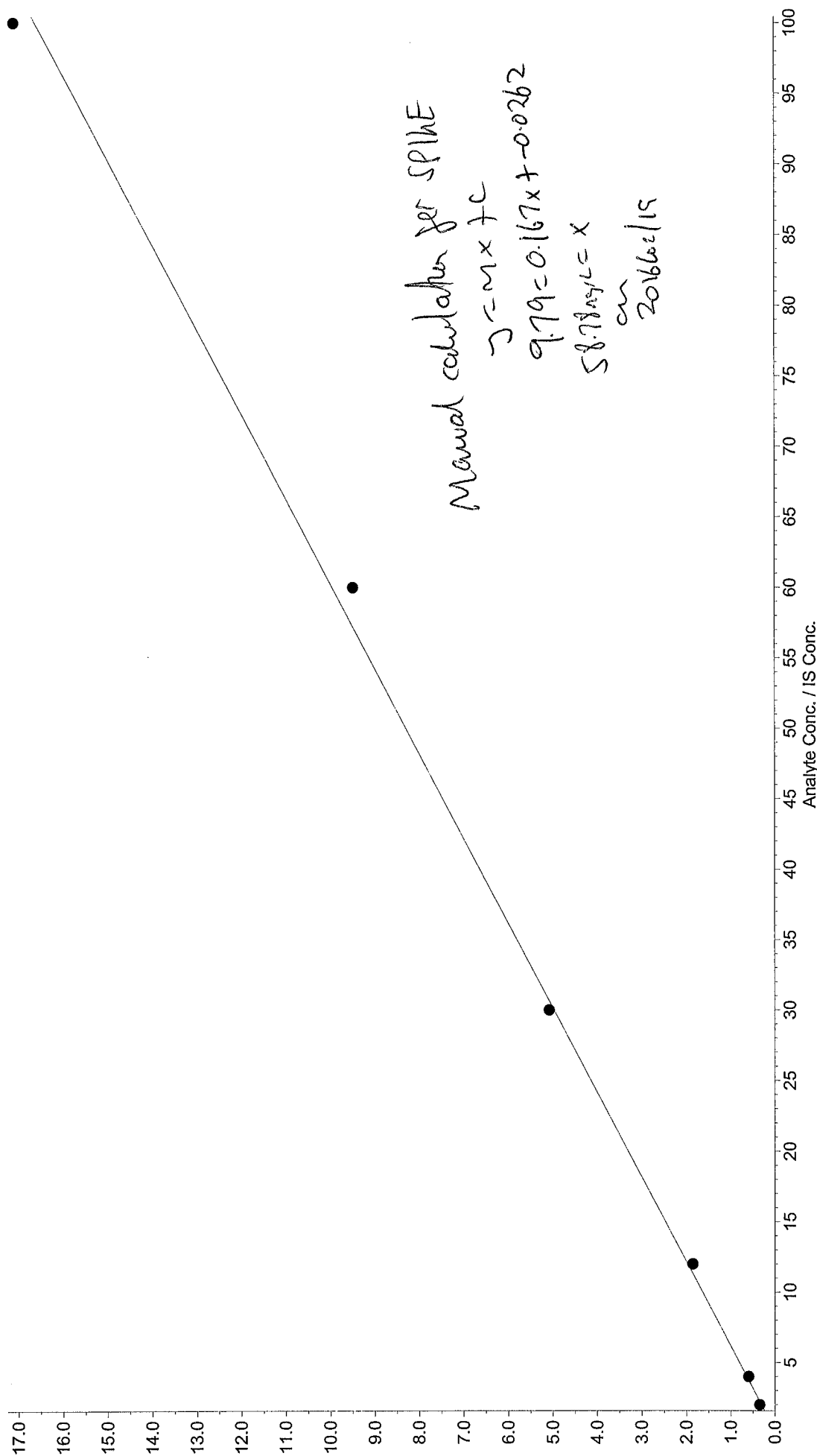
Parameter Name	DL	B630797 BVX828	DL	B630797 BVX829	DL	B630797 BVX830	DL
Perfluorobutanoic acid	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorobutane Sulfonate (PFBS)	2	0	2	0	2	0.96600	2
Perfluorodecane Sulfonate	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluoroheptanoic Acid (PFHpA)	2	0	2	0	2	0	2
Perfluoroheptane sulfonate	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorohexanoic Acid (PFHxA)	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorohexane Sulfonate (PFHxS)	2	0.75200	2	0.75300	2	0	2
Perfluorononanoic Acid (PFNA)	2	0	2	0.36600	2	0	2
Perfluoropentanoic Acid (PFPeA)	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorotetradecanoic Acid	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorotridecanoic Acid	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluoroundecanoic Acid (PFUnA)	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorodecanoic Acid (PFDA)	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluorododecanoic Acid (PFDoA)	2	N/A*****	2	N/A*****	2	N/A*****	2
Perfluoro-n-Octanoic Acid (PFOA)	2	0	2	0	2	0	2
Perfluorooctane Sulfonate (PFOS)	2	0.87100	2	0	2	0	2
13C2-perfluorotetradecanoic acid		N/A*****		N/A*****		N/A*****	
13C4-Perfluorobutanoic acid		N/A*****		N/A*****		N/A*****	
13C5-Perfluorononanoic acid		60.5		56.7		54.5	
13C2-Perfluorodecanoic acid		N/A*****		N/A*****		N/A*****	
13C2-Perfluorododecanoic acid		N/A*****		N/A*****		N/A*****	
13C2-Perfluorohexanoic acid		N/A*****		N/A*****		N/A*****	
13C2-Perfluoroundecanoic acid		N/A*****		N/A*****		N/A*****	
13C4-Perfluoroheptanoic acid		55.3		53.6		47.6	
13C4-Perfluorooctanoic acid		59.2		54.2		50.8	
13C4-Perfluorooctanesulfonate		53.9		59.2		50.8	
13C5-Perfluoropentanoic acid		N/A*****		N/A*****		N/A*****	
18O2-Perfluorohexanesulfonate		59.8		50.3		55.9	

Parameter Name	RDL	MDL	IDL				
Perfluorobutanoic acid	2	0.41	0				
Perfluorobutane Sulfonate (PFBS)	2	0.27	0				
Perfluorodecane Sulfonate	2	0.38	0				
Perfluoroheptanoic Acid (PFHpA)	2	0.39	0				
Perfluoroheptane sulfonate	2	0.4	0				
Perfluorohexanoic Acid (PFHxA)	2	0.42	0				
Perfluorohexane Sulfonate (PFHxS)	2	0.4	0				
Perfluorononanoic Acid (PFNA)	2	0.33	0				
Perfluoropentanoic Acid (PFPeA)	2	0.46	0				
Perfluorotetradecanoic Acid	2	0.61	0				
Perfluorotridecanoic Acid	2	0.6	0				
Perfluoroundecanoic Acid (PFUnA)	2	0.5	0				
Perfluorodecanoic Acid (PFDA)	2	0.24	0				
Perfluorododecanoic Acid (PFDoA)	2	0.63	0				
Perfluoro-n-Octanoic Acid (PFOA)	2	0.39	0				
Perfluorooctane Sulfonate (PFOS)	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 Name: PFC_Water_160219_4386408_Ulow.rdb

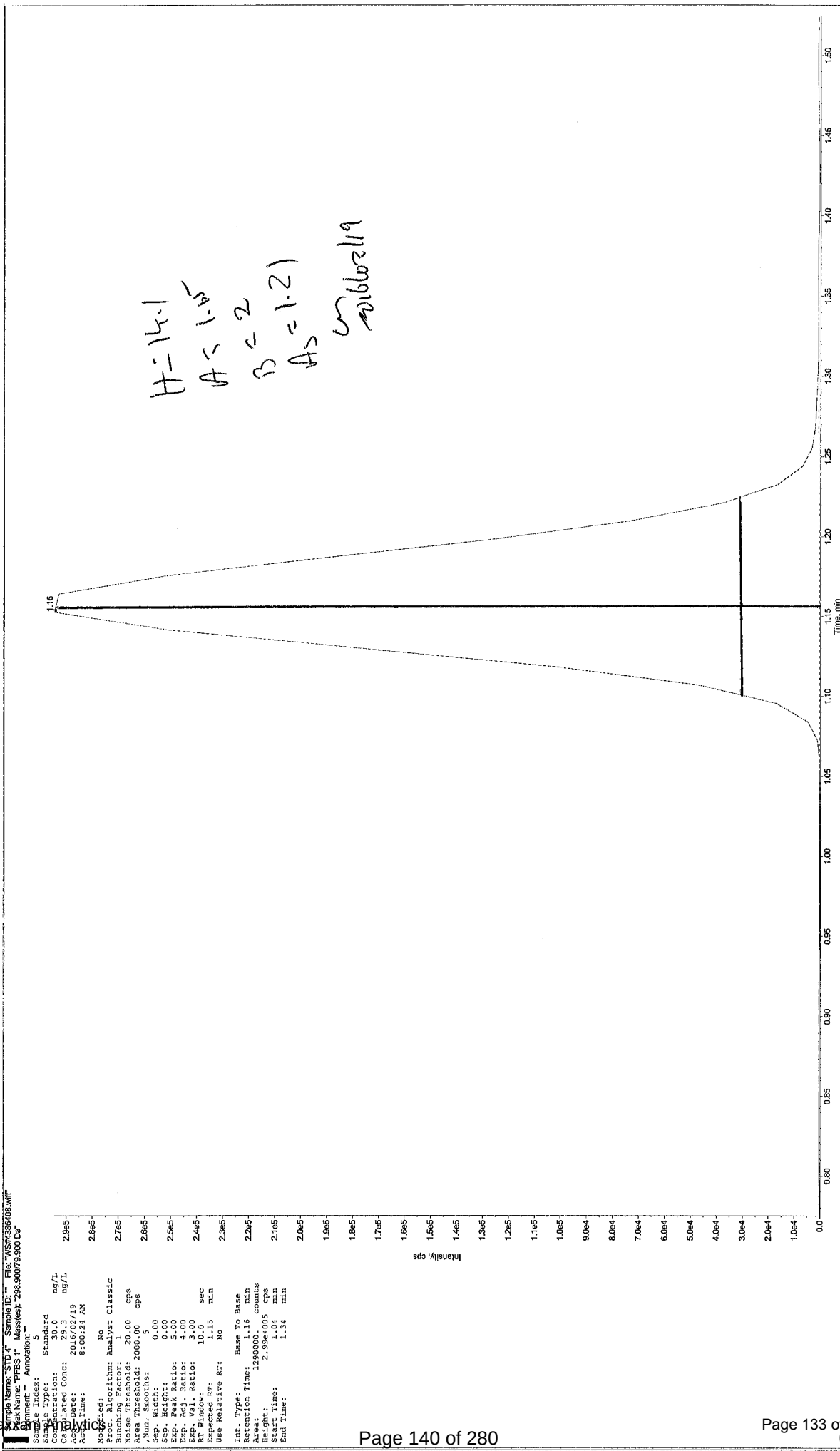
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PFC_Water_160219_4386408_Ulow.rdb (PFNA 1): "Linear" Regression ("1 / x" weighting): $y = 0.167x + -0.0262$ ($r = 0.9991$)



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Printing Date: Friday, February 19, 2016



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Printing Date: Friday, February 19, 2016

Sample Name: STD 4 Sample ID: File: W5M338506.wif

Comment: Annotation: 398.90079.900 Da

Sample Name: STD 4

Sample Type: Standard

Concentration: 30.0 ng/L

Calculated Conc: 31.3 ng/L

Acq Date: 2016/02/19

Acq Time: 8:00:24 AM

Method: No

Proc. Algorithm: Analyst Classic

Bunching Factor: 1

Area Threshold: 30.00 cps

Num. Smooths: 2

Sep. Width: 0.00

Sep. Height: 0.00

EXP. Adj. Ratio: 4.00

EXP. Val. Ratio: 3.00

RT Window: 30.0 sec

Expected RT: 1.68 min

Use Relative RT: No

Int. Type: Base To Base

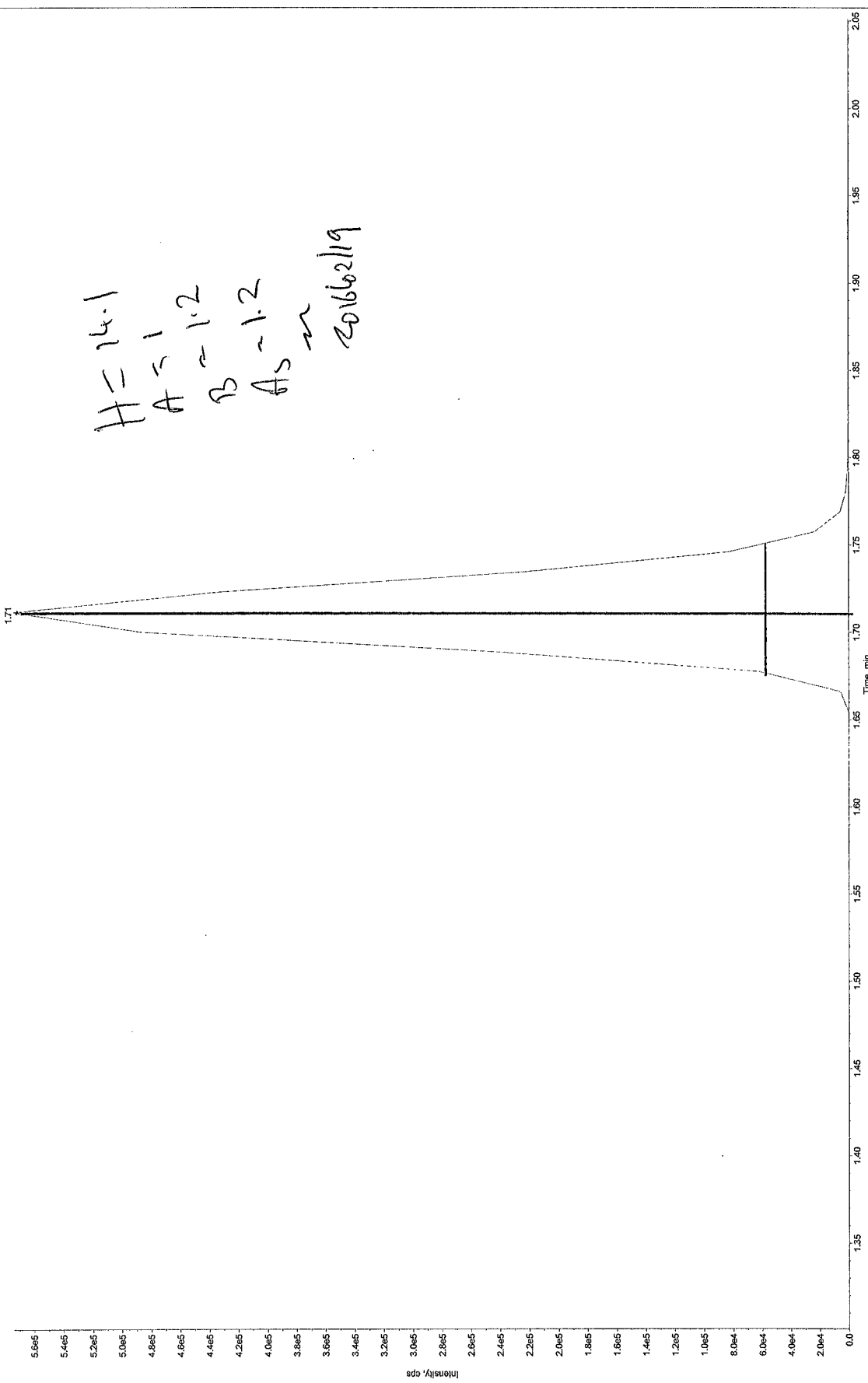
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Height: 5.76e5 cps

Start Time: 1.64 min

End Time: 1.85 min



Report Name: Worksheet - Parameter Lists

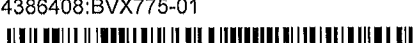
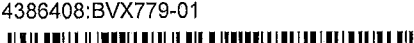
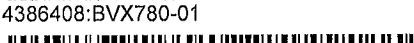
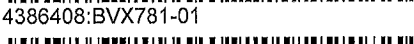
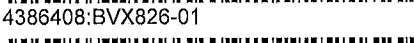
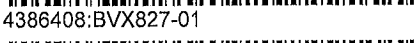
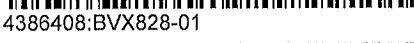
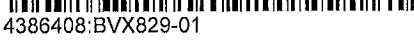
Report Date: 2016/02/18

Test Code: PFOSLOW-W

Worksheet Number: 4386408

<u>Sample Number</u>	<u>Parameter</u>
BVX769-01	Perfluorobutane Sulfonate (PFBS)
BVX770-01	Perfluoroheptanoic Acid (PFHpA)
BVX771-01	Perfluorohexane Sulfonate (PFHxS)
BVX772-01	Perfluorononanoic Acid (PFNA)
BVX773-01	Perfluoro-n-Octanoic Acid (PFOA)
BVX774-01	Perfluorooctane Sulfonate (PFOS)
BVX775-01	
BVX776-01	
BVX779-01	
BVX780-01	
BVX781-01	
BVX826-01	
BVX827-01	
BVX828-01	
BVX829-01	
BVX830-01	

WorkSheet 4386408 Instrument Sequences

1.	 4386408:MTRX SPK	MTRX SPK
2.	 4386408:MTRX SPK:D1	MTRX SPK :D1
3.	 4386408:SPIKE	SPIKE
4.	 4386408:BLANK	BLANK
5.	 4386408:BVX769-01	OF-FB08-0216
6.	 4386408:BVX770-01	OF-RW08-0216
7.	 4386408:BVX771-01	OF-RW08P-0216
8.	 4386408:BVX772-01	OF-FB41-0216
9.	 4386408:BVX773-01	OF-RW41-0216
10.	 4386408:BVX774-01	OF-RW41P-0216
11.	 4386408:BVX775-01	OF-FB56-0216
12.	 4386408:BVX776-01	OF-RW56-0216
13.	 4386408:BVX779-01	OF-FB51-0216
14.	 4386408:BVX780-01	OF-RW51-0216
15.	 4386408:BVX781-01	OF-RW51P-0216
16.	 4386408:BVX826-01	OF-RW09-0216
17.	 4386408:BVX827-01	OF-RW37-0216
18.	 4386408:BVX828-01	OF-RW11-0216
19.	 4386408:BVX829-01	OF-RW28-0216
20.	 4386408:BVX830-01	OF-RW67-0216

Worksheet Reagent Tracking Record

Worksheet # 4386408

Worksheet Reagent Tracking Record					Worksheet #					Volume (µL)				
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						100 ng/mL	125	62-5 NA	125	62-5 NA	NA	NA		
Internal Standard Solution A						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/ECV PFC						1 ug/mL	62-5							
Solvent/Reagent		Supplier	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/ Prepared	*Spiked by: GSZ				
DCM		Fisher				50% NaOH				Spike Date 2016/02/18				
Hexane		Fisher				20mM TBAS				Spike Syringe ID# Pijpster M23487B				
Acetone		Fisher				o-Phosphoric Acid				Int. Std Syringe ID# Pijpster M23487B				
Ottawa Sand		Fisher				Borax				*Spiking Witnessed by: SSV				
Methanol		Waters Fisher	/	SHB6676V	2016/02/18	Calcium Chloride				Final pH				
2-Propanol (IPA)		Fisher				EDTA								
Acetonitrile		Fisher				Phosphate Buffer								
MTBE		Fisher				Sodium Thiosulphate								
Sodium Sulfate		Fisher				DNPH								
60:40 H2O:MeOH Recon Solution			/	87-190	2016/02/12	5M Acetate Buffer								
DCM:Ethyl Ether (75:25)						FMOC								
Hexane:IPA (98:2)						0.25M Na2CO3								
2% Formic Acid			/	87-131	2016/01/13	0.5M TBAS								
0.2% Formic Acid			/	87-114	2015/12/31	1% NH4OH 0.2%		/	87-198	2016/02/18				
0.05M KOH						Leachate Fluid								
0.05M HCl						Reagent Water		/	158399	2016/02/17				
Equipment		ID#	✓	Equipment	ID#	✓	Equipment		Lot #	Bottle Tracking				
Pipettor		M15944C P29746D K19609D	/	SPE Cartridge			10 mL Serological Pipet			Bottle#	14991			
			/	Filter			QC Balance ID			Cap#	14443			
Dispenser				Centrifuge			Thermometer ID &Temp		SN 140614017 45°C	Systems plus Lot#				
Syringe				Sonicator						16-01-06				

Comments: 125ml Ref Bottle (HPPB)
Inj IS - SF-6017 - 2016/01/19
HPLC Evaporator

* - SPIKING OPERATIONS MUST BE WITNESSED AT ALL TIMES.

Batch Name: D:\Analyst Data\Projects\Enviro\PFOS\Batch\PFC_160219.dab

Printing Date: Friday, February 19, 2016

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160219 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*	1	1	PFC_160219WS#4386408	3.000
2	4386408-BLANK	2 Well Plates	1	*54VialPlate*	1	2	PFC_160219WS#4386408	3.000
3	STD 1	2 Well Plates	1	*54VialPlate*	1	3	PFC_160219WS#4386408	3.000
4	STD 2	2 Well Plates	1	*54VialPlate*	1	4	PFC_160219WS#4386408	3.000
5	STD 3	2 Well Plates	1	*54VialPlate*	1	5	PFC_160219WS#4386408	3.000
6	STD 4	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4386408	3.000
7	STD 5	2 Well Plates	1	*54VialPlate*	1	7	PFC_160219WS#4386408	3.000
8	STD 6	2 Well Plates	1	*54VialPlate*	1	8	PFC_160219WS#4386408	3.000
9	ICV	2 Well Plates	1	*54VialPlate*	1	9	PFC_160219WS#4386408	3.000
10	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4386408	3.000
11	4386408-MTRX SPK	2 Well Plates	1	*54VialPlate*	1	10	PFC_160219WS#4386408	3.000
12	4386408-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	1	11	PFC_160219WS#4386408	3.000
13	4386408-SPKE	2 Well Plates	1	*54VialPlate*	1	12	PFC_160219WS#4386408	3.000
14	4386408-BVX814-01 (10x)	2 Well Plates	1	*54VialPlate*	1	13	PFC_160219WS#4386408	3.000
15	4386408-BVX817-01 (10x)	2 Well Plates	1	*54VialPlate*	1	14	PFC_160219WS#4386408	3.000
16	4386408-BVX818-01 (20x)	2 Well Plates	1	*54VialPlate*	1	15	PFC_160219WS#4386408	3.000
17	4386408-BVX819-01 (10x)	2 Well Plates	1	*54VialPlate*	1	16	PFC_160219WS#4386408	3.000
18	4386408-BVX769-01	2 Well Plates	1	*54VialPlate*	1	17	PFC_160219WS#4386408	3.000
19	4386408-BVX770-01	2 Well Plates	1	*54VialPlate*	1	18	PFC_160219WS#4386408	3.000
20	4386408-BVX771-01	2 Well Plates	1	*54VialPlate*	1	19	PFC_160219WS#4386408	3.000
21	4386408-BVX772-01	2 Well Plates	1	*54VialPlate*	1	20	PFC_160219WS#4386408	3.000
22	4386408-BVX773-01	2 Well Plates	1	*54VialPlate*	1	21	PFC_160219WS#4386408	3.000
23	4386408-BVX774-01	2 Well Plates	1	*54VialPlate*	1	22	PFC_160219WS#4386408	3.000
24	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4386408	3.000
25	4386408-BVX775-01	2 Well Plates	1	*54VialPlate*	1	23	PFC_160219WS#4386408	3.000
26	4386408-BVX776-01	2 Well Plates	1	*54VialPlate*	1	24	PFC_160219WS#4386408	3.000
27	4386408-BVX779-01	2 Well Plates	1	*54VialPlate*	1	25	PFC_160219WS#4386408	3.000
28	4386408-BVX780-01	2 Well Plates	1	*54VialPlate*	1	26	PFC_160219WS#4386408	3.000
29	4386408-BVX781-01	2 Well Plates	1	*54VialPlate*	1	27	PFC_160219WS#4386408	3.000
30	4386408-BVX826-01	2 Well Plates	1	*54VialPlate*	1	28	PFC_160219WS#4386408	3.000
31	4386408-BVX827-01	2 Well Plates	1	*54VialPlate*	1	29	PFC_160219WS#4386408	3.000
32	4386408-BVX828-01	2 Well Plates	1	*54VialPlate*	1	30	PFC_160219WS#4386408	3.000
33	4386408-BVX829-01	2 Well Plates	1	*54VialPlate*	1	31	PFC_160219WS#4386408	3.000
34	4386408-BVX830-01	2 Well Plates	1	*54VialPlate*	1	32	PFC_160219WS#4386408	3.000
35	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4386408	3.000
36	4385924-BLANK	2 Well Plates	1	*54VialPlate*	1	33	PFC_160219WS#4385924	3.000
37	4385924-MTRX SPK	2 Well Plates	1	*54VialPlate*	1	34	PFC_160219WS#4385924	3.000
38	4385924-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	1	35	PFC_160219WS#4385924	3.000
39	4385924-SPKE	2 Well Plates	1	*54VialPlate*	1	36	PFC_160219WS#4385924	3.000
40	4385924-BVX947-01 (10x)	2 Well Plates	1	*54VialPlate*	1	37	PFC_160219WS#4385924	3.000
41	4385924-BVX782-01	2 Well Plates	1	*54VialPlate*	1	38	PFC_160219WS#4385924	3.000
42	4385924-BVX793-01	2 Well Plates	1	*54VialPlate*	1	39	PFC_160219WS#4385924	3.000
43	4385924-BVX794-01	2 Well Plates	1	*54VialPlate*	1	40	PFC_160219WS#4385924	3.000
44	4385924-BVX795-01	2 Well Plates	1	*54VialPlate*	1	41	PFC_160219WS#4385924	3.000
45	4385924-BVX796-01	2 Well Plates	1	*54VialPlate*	1	42	PFC_160219WS#4385924	3.000
46	4385924-BVX797-01	2 Well Plates	1	*54VialPlate*	1	43	PFC_160219WS#4385924	3.000
47	4385924-BVX798-01	2 Well Plates	1	*54VialPlate*	1	44	PFC_160219WS#4385924	3.000
48	4385924-BVX799-01	2 Well Plates	1	*54VialPlate*	1	45	PFC_160219WS#4385924	3.000
49	4385924-BVX800-01	2 Well Plates	1	*54VialPlate*	1	46	PFC_160219WS#4385924	3.000
50	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4385924	3.000
51	4385924-BVX801-01	2 Well Plates	1	*54VialPlate*	1	47	PFC_160219WS#4385924	3.000
52	4385924-BVX802-01	2 Well Plates	1	*54VialPlate*	1	48	PFC_160219WS#4385924	3.000
53	4385924-BVX803-01	2 Well Plates	1	*54VialPlate*	1	49	PFC_160219WS#4385924	3.000
54	4385924-BVX804-01	2 Well Plates	1	*54VialPlate*	1	50	PFC_160219WS#4385924	3.000
55	4385924-BVX805-01	2 Well Plates	1	*54VialPlate*	1	51	PFC_160219WS#4385924	3.000
56	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4385924	3.000
57	4385888-BLANK	2 Well Plates	1	*54VialPlate*	2	1	PFC_160219WS#4385888	3.000
58	4385888-MTRX SPK	2 Well Plates	1	*54VialPlate*	2	2	PFC_160219WS#4385888	3.000
59	4385888-MTRX SPK:D1	2 Well Plates	1	*54VialPlate*	2	3	PFC_160219WS#4385888	3.000
60	4385888-SPKE	2 Well Plates	1	*54VialPlate*	2	4	PFC_160219WS#4385888	3.000
61	4385888-BVX782-01	2 Well Plates	1	*54VialPlate*	2	5	PFC_160219WS#4385888	3.000
62	4385888-BVX783-01	2 Well Plates	1	*54VialPlate*	2	6	PFC_160219WS#4385888	3.000
63	4385888-BVX784-01	2 Well Plates	1	*54VialPlate*	2	7	PFC_160219WS#4385888	3.000
64	4385888-BVX785-01	2 Well Plates	1	*54VialPlate*	2	8	PFC_160219WS#4385888	3.000
65	4385888-BVX786-01	2 Well Plates	1	*54VialPlate*	2	9	PFC_160219WS#4385888	3.000
66	4385888-BVX787-01	2 Well Plates	1	*54VialPlate*	2	10	PFC_160219WS#4385888	3.000
67	4385888-BVX788-01	2 Well Plates	1	*54VialPlate*	2	11	PFC_160219WS#4385888	3.000
68	4385888-BVX789-01	2 Well Plates	1	*54VialPlate*	2	12	PFC_160219WS#4385888	3.000
69	4385888-BVX790-01	2 Well Plates	1	*54VialPlate*	2	13	PFC_160219WS#4385888	3.000
70	4385888-BVX791-01	2 Well Plates	1	*54VialPlate*	2	14	PFC_160219WS#4385888	3.000
71	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160219WS#4385888	3.000

Column #123
 MPA = Soln # 506, FJRE17
 MEB = MeOH, Fulo-L #1526B
 on 201602/19

Results Path: \\miss-netapp2\lcm\lcm3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160219_4386408_ULow.rdb

Printing Date: Monday, March 07, 2016

Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1 4386408--BLANK	2016/02/19 7:39:53 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	2	*54VialPlate*	1
2 STD 1	2016/02/19 7:45:04 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	3	*54VialPlate*	1
3 STD 2	2016/02/19 7:50:14 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	4	*54VialPlate*	1
4 STD 3	2016/02/19 7:55:19 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	5	*54VialPlate*	1
5 STD 4	2016/02/19 8:00:24 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	6	*54VialPlate*	1
6 STD 5	2016/02/19 8:05:30 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	7	*54VialPlate*	1
7 STD 6	2016/02/19 8:10:36 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	8	*54VialPlate*	1
8 ICV	2016/02/19 8:15:41 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	9	*54VialPlate*	1
9 CCV	2016/02/19 8:20:47 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	6	*54VialPlate*	1
10 4386408--MTRX SPK	2016/02/19 8:25:52 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	10	*54VialPlate*	1
11 4386408--MTRX SPK:D1	2016/02/19 8:30:58 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	11	*54VialPlate*	1
12 4386408--SPIKE	2016/02/19 8:36:03 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	12	*54VialPlate*	1
13 4386408--BVX814-01 (10x)	2016/02/19 8:51:19 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	13	*54VialPlate*	1
14 4386408--BVX817-01 (10x)	2016/02/19 8:56:24 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	14	*54VialPlate*	1
15 4386408--BVX818-01 (20x)	2016/02/19 9:01:31 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	15	*54VialPlate*	1
16 4386408--BVX819-01 (10x)	2016/02/19 9:06:37 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	16	*54VialPlate*	1
17 4386408--BVX769-01	2016/02/19 9:11:43 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	17	*54VialPlate*	1
18 4386408--BVX770-01	2016/02/19 9:16:48 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	18	*54VialPlate*	1
19 4386408--BVX771-01	2016/02/19 9:21:58 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	19	*54VialPlate*	1
20 4386408--BVX772-01	2016/02/19 9:27:04 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	20	*54VialPlate*	1
21 4386408--BVX773-01	2016/02/19 9:32:10 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	21	*54VialPlate*	1
22 4386408--BVX774-01	2016/02/19 9:37:16 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	22	*54VialPlate*	1
23 CCV	2016/02/19 9:42:22 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	6	*54VialPlate*	1
24 4386408--BVX775-01	2016/02/19 9:52:33 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	23	*54VialPlate*	1
25 4386408--BVX776-01	2016/02/19 9:57:39 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	24	*54VialPlate*	1
26 4386408--BVX779-01	2016/02/19 10:02:45 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	25	*54VialPlate*	1
27 4386408--BVX780-01	2016/02/19 10:07:51 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	26	*54VialPlate*	1
28 4386408--BVX781-01	2016/02/19 10:12:57 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	27	*54VialPlate*	1
29 4386408--BVX826-01	2016/02/19 10:18:03 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	28	*54VialPlate*	1
30 4386408--BVX827-01	2016/02/19 10:23:09 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	29	*54VialPlate*	1
31 4386408--BVX828-01	2016/02/19 10:28:14 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	30	*54VialPlate*	1
32 4386408--BVX829-01	2016/02/19 10:33:19 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	31	*54VialPlate*	1
33 4386408--BVX830-01	2016/02/19 10:38:25 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	32	*54VialPlate*	1
34 CCV	2016/02/19 10:43:32 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	6	*54VialPlate*	1
35 4386408--MTRX SPK	2016/02/19 10:48:37 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	10	*54VialPlate*	1
36 4386408--BVX830-01	2016/02/19 10:58:48 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	32	*54VialPlate*	1
37 CCV	2016/02/19 11:03:54 AM	PFC_Water_Low.dam	PFC_160219\WS#4386408.wiff	2 Well Plates	1	6	*54VialPlate*	1

DoD Projects - Internal Data Validation Checklist				
Run date: 20160226				
Worksheet # (s): 4394558				
Analysis: PFOJLOW-w			1st 100% review	
Primary review by the analyst - 1st 100 % analysis review			yes	no
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: [Signature]		Date: 20160229		
Comments:				
Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review				
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: [Signature]		Date: 2016/02/29		
Comments:				

*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 # <u>4394518</u>		Testcode: <u>Aslow-w</u>		
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: <u>mm</u>		Date: <u>2016/02/25</u>		
Comments: <u>B630791 / B630799 : Samples are already expired. Re-analysis done. Not hold time. Upfront dilution required. See copy of e-mail.</u>				
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 DFTPP tune (if applicable) acceptable	✓		
4	Continuing and Final CCV and DFTPP 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: <u>an</u>		Date: <u>2016/02/29</u>		
Comments:				
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: <u>32</u>		Date: <u>2016/02/29</u>		
Comments:				

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Thursday, February 25, 2016

Assigned to : Melinda Molina

Test Code : PFOSLOW-W

Instrument Id:

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

Remarks:

Samples extracted by:

Melinda Molina

Instrumentation performed by:

Date: 2016/02/25

Calculations performed by:

Date: 2016/02/29

Validated by:

Date: 2016/02/29

Maxxam Analytics

Page 142 of 267

03/09/2016

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

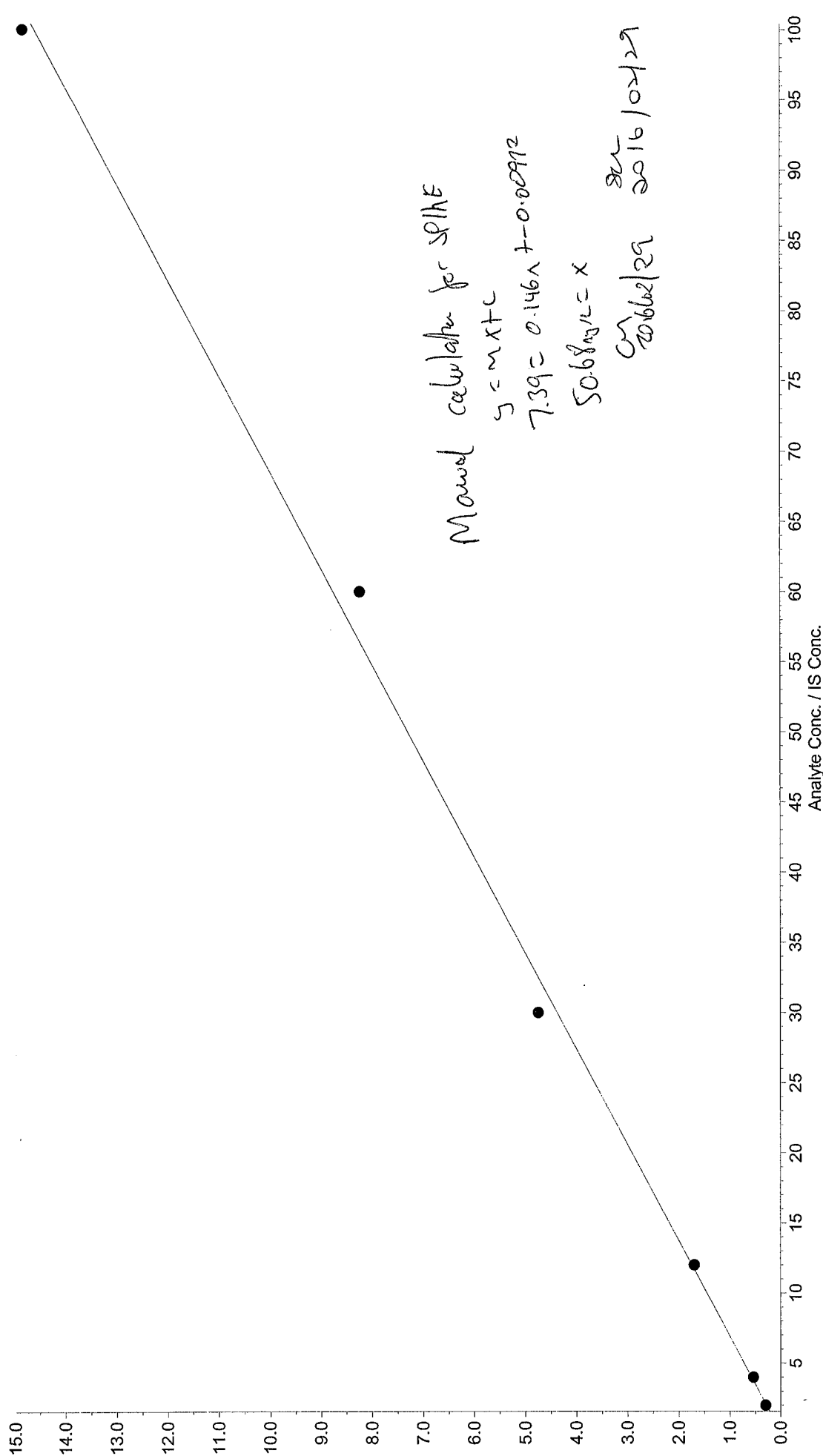
Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	B630788 BVX747 ReWork	B630789 BVX752
Perfluorobutanoic acid	ng/L	102.80000	113.20000	84.20000	0	0	0
Perfluorobutane Sulfonate (PFBS)	ng/L	114.80000	102.40000	98.40000	0	0	0
Perfluorodecane Sulfonate	ng/L	120.80000	118.00000	117.20000	0	0	0
Perfluoroheptanoic Acid (PFHpA)	ng/L	108.80000	105.80000	108.40000	0	0	0
Perfluoroheptane sulfonate	ng/L	120.40000	118.60000	112.60000	0	0	0
Perfluorohexanoic Acid (PFHxA)	ng/L	119.78400	106.18400	105.20000	0	0	0.30800
Perfluorohexane Sulfonate (PFHxS)	ng/L	123.20000	109.60000	102.20000	0	0.32100	0
Perfluorononanoic Acid (PFNA)	ng/L	130.20000	118.80000	117.80000	0	0	0
Perfluoropentanoic Acid (PFPeA)	ng/L	130.20000	111.00000	107.00000	0	0	0
Perfluorotetradecanoic Acid	ng/L	124.60000	121.40000	112.40000	0	0.33500	0
Perfluorotridecanoic Acid	ng/L	108.04600	105.84600	110.20000	0	0.14400	0.17700
Perfluoroundecanoic Acid (PFUnA)	ng/L	124.20000	121.00000	114.80000	0	0	0
Perfluorodecanoic Acid (PFDA)	ng/L	128.20000	123.20000	107.40000	0	0	0
Perfluorododecanoic Acid (PFDoA)	ng/L	121.63200	121.03200	120.20000	0	0.11800	0.18400
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	115.60000	102.40000	101.20000	0	0	0
Perfluorooctane Sulfonate (PFOS)	ng/L	125.80000	111.20000	112.80000	0	0	0
13C2-perfluorotetradecanoic acid	ng/L	81.4	83.3	99.1	88.1	87.4	84.5
13C4-Perfluorobutanoic acid	ng/L	77.2	74.9	92.1	80.7	71.8	85.2
13C5-Perfluorononanoic acid	ng/L	93.4	102.	98.3	90.8	98.0	98.4
13C2-Perfluorodecanoic acid	ng/L	83.0	82.2	96.6	87.5	93.3	96.7
13C2-Perfluorododecanoic acid	ng/L	76.9	71.2	90.1	85.9	76.4	86.3
13C2-Perfluorohexanoic acid	ng/L	88.7	97.6	97.0	90.7	94.4	103.
13C2-Perfluoroundecanoic acid	ng/L	74.1	81.6	99.7	89.7	83.3	89.8
13C4-Perfluoroheptanoic acid	ng/L	96.1	96.2	98.8	97.6	99.0	104.
13C4-Perfluorooctanoic acid	ng/L	102.	109.	109.	96.9	103.	110.
13C4-Perfluorooctanesulfonate	ng/L	94.8	101.	99.0	83.2	96.2	103.
13C5-Perfluoropentanoic acid	ng/L	83.8	88.4	93.5	95.2	95.6	96.6
18O2-Perfluorohexanesulfonate	ng/L	92.3	104.	108.	89.4	103.	108.

Parameter Name	B630789 BVX753	B630789 BVX754	B630789 BVX755	B630789 BVX756	DL	B630791 BVX770 ReWork	B630791 BVX771 ReWork
Perfluorobutanoic acid	2.84000	2.41000	0	0	2	0	0
Perfluorobutane Sulfonate (PFBS)	0.72000	0.84800	0	0	2	9.09000	8.27000
Perfluorodecane Sulfonate	0	0.03690	0	0	2	0	0
Perfluoroheptanoic Acid (PFHpA)	0.57200	0.61900	0	0	2	3.17000	3.85000
Perfluoroheptane sulfonate	0.68700	0.69200	0.66900	0	2	7.65000	7.76000
Perfluorohexanoic Acid (PFHxA)	0.61700	0.42700	0	0.26200	2	7.25000	8.56000
Perfluorohexane Sulfonate (PFHxS)	0.98700	1.12000	0	0	2	53.00000	51.20000
Perfluorononanoic Acid (PFNA)	0.67300	0.69300	0	0	2	0	0
Perfluoropentanoic Acid (PFPeA)	0	0	0	0	2	0	0
Perfluorotetradecanoic Acid	0	0.19900	0	0	2	0	0
Perfluorotridecanoic Acid	0	0	0	0	2	0	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	2	0	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0	2	0	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	2	0	0
Perfluoro-n-Octanoic Acid (PFOA)	1.70000	1.49000	0.20900	0.23800	2	13.90000	13.90000
Perfluorooctane Sulfonate (PFOS)	2.13000	1.92000	0	0	2	181.00000	173.00000
13C2-perfluorotetradecanoic acid	64.3	73.3	84.9	78.9		78.7	77.1
13C4-Perfluorobutanoic acid	59.5	57.3	95.7	41.8		99.4	74.0
13C5-Perfluorononanoic acid	58.1	66.8	101.	72.7		93.9	86.2
13C2-Perfluorodecanoic acid	78.5	80.1	95.8	93.1		86.2	87.3
13C2-Perfluorododecanoic acid	53.5	66.9	79.2	85.0		72.7	79.2
13C2-Perfluorohexanoic acid	61.8	68.8	113.	74.3		91.9	80.3
13C2-Perfluoroundecanoic acid	76.5	83.5	84.8	79.7		82.3	83.2
13C4-Perfluoroheptanoic acid	70.8	69.3	120.	76.5		95.8	89.7
13C4-Perfluorooctanoic acid	66.6	70.2	125.	81.6		100.	98.1
13C4-Perfluorooctanesulfonate	57.1	65.2	106.	69.0		88.8	88.3
13C5-Perfluoropentanoic acid	69.6	77.7	105.	64.8		87.7	85.2
18O2-Perfluorohexanesulfonate	73.8	72.4	113.	69.0		96.2	89.4

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

Parameter Name	DL	B630799 BVX844 ReWork	B630799 BVX845 ReWork	DL	RDL	MDL	IDL
Perfluorobutanoic acid	20	0	0	100	2	0.41	0
Perfluorobutane Sulfonate (PFBS)	20	45.00000	46.00000	100	2	0.27	0
Perfluorodecane Sulfonate	20	0	0	100	2	0.38	0
Perfluoroheptanoic Acid (PFHpA)	20	23.10000	27.80000	100	2	0.39	0
Perfluoroheptane sulfonate	20	47.60000	51.30000	100	2	0.4	0
Perfluorohexanoic Acid (PFHxA)	20	68.80000	77.50000	100	2	0.42	0
Perfluorohexane Sulfonate (PFHxS)	20	521.00000	576.00000	100	2	0.4	0
Perfluorononanoic Acid (PFNA)	20	7.95000	7.35000	100	2	0.33	0
Perfluoropentanoic Acid (PFPeA)	20	37.80000	37.90000	100	2	0.46	0
Perfluorotetradecanoic Acid	20	0	0	100	2	0.61	0
Perfluorotridecanoic Acid	20	0	0	100	2	0.6	0
Perfluoroundecanoic Acid (PFUnA)	20	0	0	100	2	0.5	0
Perfluorodecanoic Acid (PFDA)	20	0	0	100	2	0.24	0
Perfluorododecanoic Acid (PFDoA)	20	0	0	100	2	0.63	0
Perfluoro-n-Octanoic Acid (PFOA)	20	409.00000	462.00000	100	2	0.39	0
Perfluorooctane Sulfonate (PFOS)	20	1070.00000	1180.00000	100	2	0.3	0
13C2-perfluorotetradecanoic acid		64.2	71.9				
13C4-Perfluorobutanoic acid		112.	76.2				
13C5-Perfluorononanoic acid		95.7	95.9				
13C2-Perfluorodecanoic acid		88.9	84.6				
13C2-Perfluorododecanoic acid		74.7	66.7				
13C2-Perfluorohexanoic acid		98.6	90.0				
13C2-Perfluoroundecanoic acid		78.7	78.5				
13C4-Perfluoroheptanoic acid		99.4	93.1				
13C4-Perfluorooctanoic acid		101.	97.9				
13C4-Perfluorooctanesulfonate		96.4	95.0				
13C5-Perfluoropentanoic acid		88.5	87.7				
18O2-Perfluorohexanesulfonate		95.3	92.7				

PFC_Water_160226_4394558_ULow.rdb (PFOA 1): "Linear" Regression ("1 / x" weighting): $y = 0.146x + -0.00972$ ($r = 0.9986$)



Results Path: \\Miss-netapp2\lcm3\lcm3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160226_4394558_ULow.rdb

Printing Date: Monday, February 29, 2016

Sample Name: STD.4 Sample ID: File: WS4394551.wif

Report Name: PFBS 1 Mass(es): 298.90079500 Da

Sample Index: 1

Sample Type: Standard

Concentration: 30.0 ng/L

Calculated Conc: 29.9 ng/L

Acq Date: 2016/02/29

Acq Time: 9:16:09 AM

Mod: 67

Proc. Algorithm: Analyst Classic

Smoothing: 1

Window Factor: 1

Area Threshold: 2500.00 cps

Num. Smooths: 2

Sep. Width: 0.00

Sep. Height: 5.00

Sep. Ratio: 4.00

Exp. Adj. Ratio: 3.00

Exp. Val. Ratio: 3.00

RT Window: 30.0 sec

Expected RT: 1.09 min

Use Relative RT: No

Int. Type: Base To Base

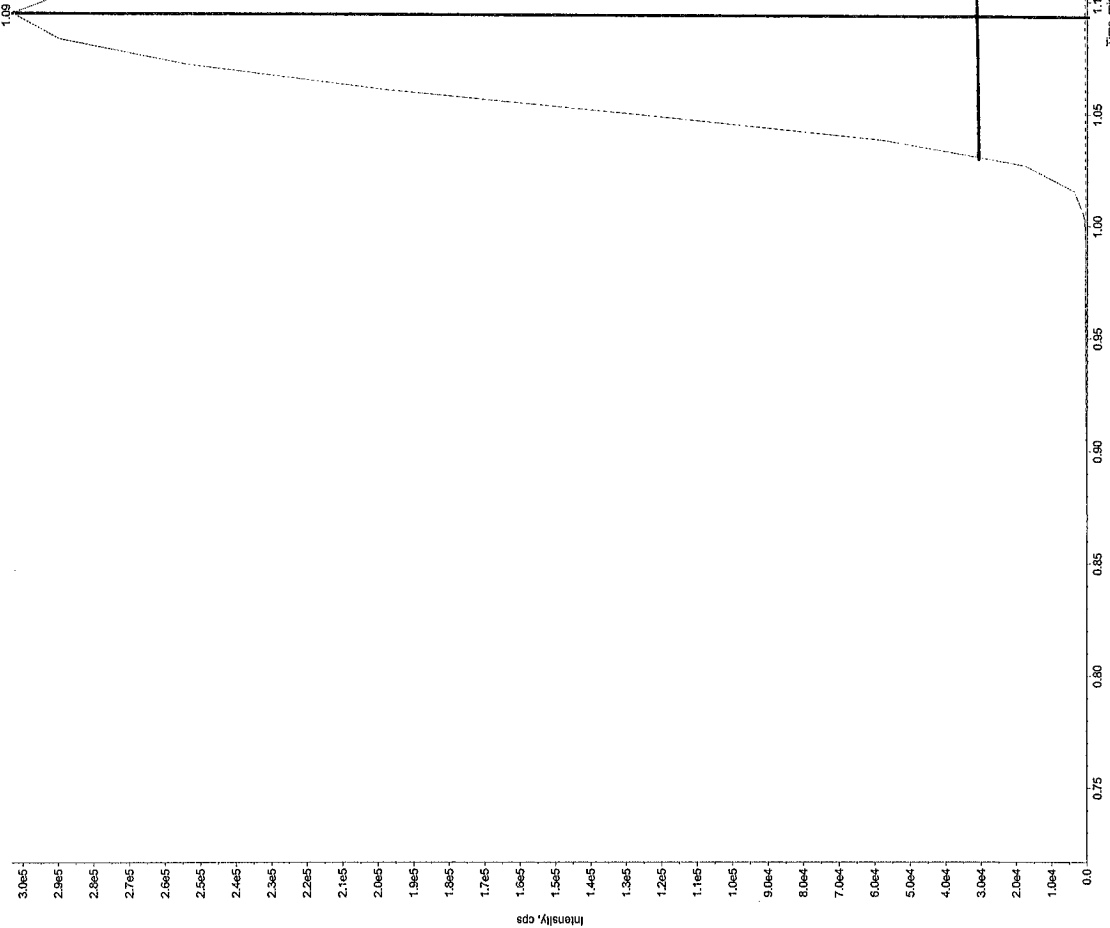
Retention Time: 1.09 min

Area: 139000 counts

Height: 100000 cps

Start Time: 0.979 min

End Time: 1.21 min

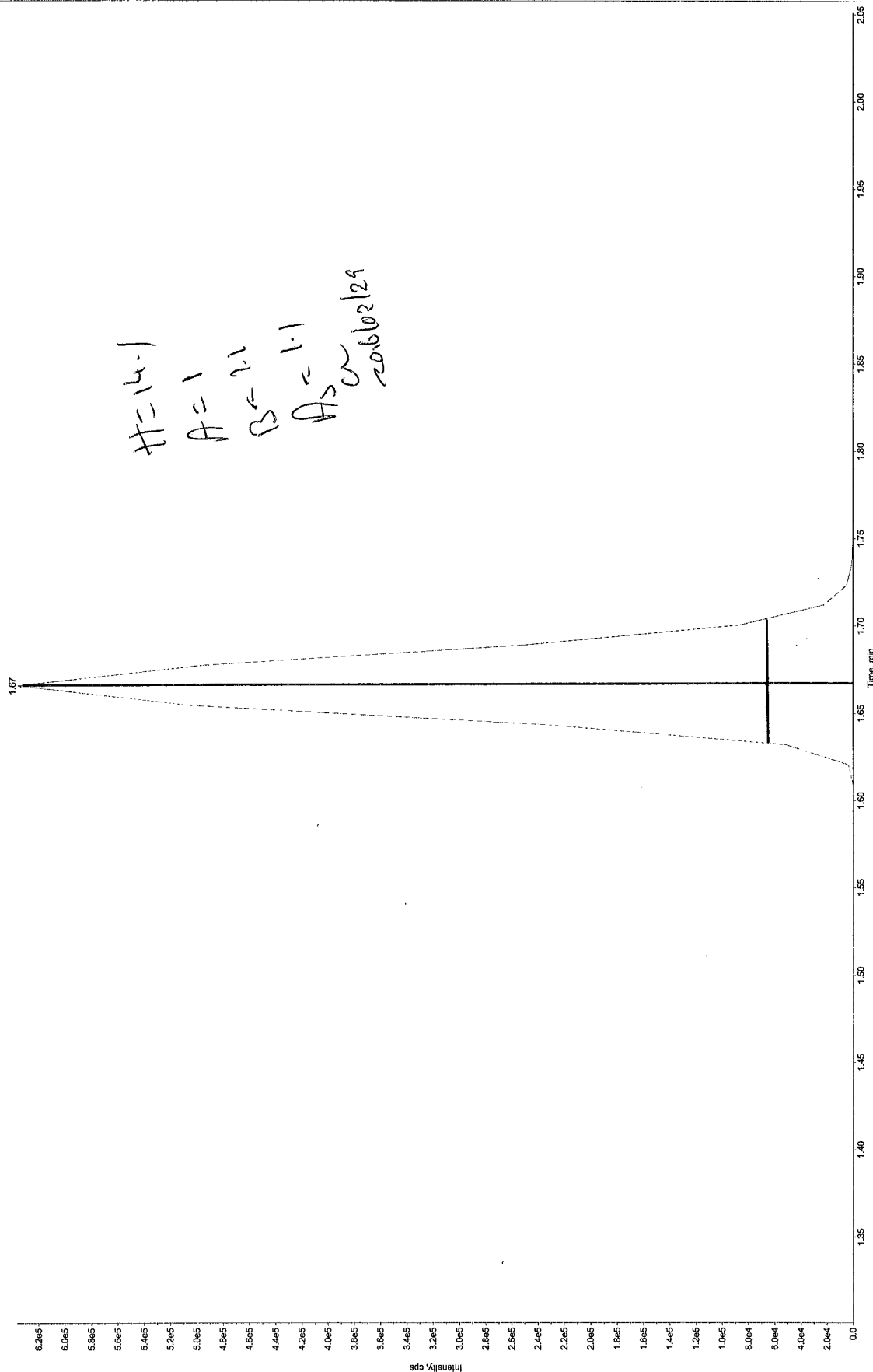


H = 14.1
A = 1.85
B = 1.75
A = 0.94
2016/2/29

Results Path: \\miss-netapp2\lcms\lcms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160226_4394558_ULow.rdb

Sample Name: STD 4 Sample ID: File: W54394551.wml
Conc Name: PFOS 1 Mass(es): 393.50079.500 Da

Sample Index: 74
Sample Type: Standard
Concentration: 30.0 ng/L
Calculated Conc: 30.22478 ng/L
Acq Date: 9/16/09 AM
Acq Time: 9:16:09 AM
Modif: No
Proc. Algorithm: Analyst Classic
Noise Floor: 1.67 cps
Noise Threshold: 20.00 cps
Area Threshold: 2000.00 cps
Num. Smoother: 2
Sep. Width: 0.00
Sep. Peak: 1.00
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Use Relative RT: No
Int. Type: Base To Base
Retention Time: 1.67 min
Start Time: 1.60 min
End Time: 1.76 min



<u>Sample Number</u>	<u>Parameter</u>
BVX747-01	Perfluorobutanoic acid
	Perfluorobutane Sulfonate (PFBS)
	Perfluorodecanoic Acid (PFDA)
	Perfluorododecanoic Acid (PFDoA)
	Perfluorodecane Sulfonate
	Perfluoroheptanoic Acid (PFHpA)
	Perfluoroheptane sulfonate
	Perfluorohexanoic Acid (PFHxA)
	Perfluorohexane Sulfonate (PFHxS)
	Perfluorononanoic Acid (PFNA)
	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)
	Perfluoropentanoic Acid (PFPeA)
	Perfluorotetradecanoic Acid
	Perfluorotridecanoic Acid
	Perfluoroundecanoic Acid (PFUnA)
BVX752-01	Perfluorobutane Sulfonate (PFBS)
BVX753-01	Perfluoroheptanoic Acid (PFHpA)
BVX754-01	Perfluorohexane Sulfonate (PFHxS)
BVX755-01	Perfluorononanoic Acid (PFNA)
BVX756-01	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)
BVX770-01	Perfluorooctane Sulfonate (PFOS)
BVX771-01	
BVX844-01	Perfluorohexane Sulfonate (PFHxS)
BVX845-01	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)

Worksheet Reagent Tracking Record

Worksheet #

4394558

Volume (µL)

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-DB 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	NA	62.5	125	NA	62.5
Internal Standard Solution A		✓	SE 6010 (4/4)		50 ng/mL	50	100	15	50	100	15
Internal Standard Solution B					250ng/mL	50	NA	50	NA	50	NA
ICV/CCV		✓	I 4676		1ug/mL	62.5					
Solvent/Reagent	Supplier	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/ Prepared		*Spiked by:	
DCM	Fisher				50% NaOH					mm	
Hexane	Fisher				20mM TBAS					Spike Date	
Acetone	Fisher				o-Phosphoric Acid					2016/02/25	
Ottawa Sand	Fisher				Borax					Spike Syringe ID#	
Methanol	Fisher	✓	SHB6 6076	2016/01/25	Calcium Chloride					M23487B	
2-Propanol (IPA)	Fisher				EDTA					Int. Std Syringe ID#	
Acetonitrile	Fisher				Phosphate Buffer					M23487B	
MTBE	Fisher				Sodium Thiosulphate					*Spiking Witnessed by:	
Sodium Sulfate	Fisher				DNPH					SSV	
Recon Solution					5M Acetate Buffer					Final pH	
DCM:Ethyl Ether (75:25)					FMOC						
Hexane:IPA (98:2)					0.25M Na ₂ CO ₃						
2% Formic Acid					0.5M TBAS						
0.2% Formic Acid					1% NH ₄ OH 0.2% H ₂ O ₂						
0.05M KOH					Leachate Fluid						
0.05M HCl					Reagent Water						
Equipment	ID#	✓	Equipment	ID#	✓	Equipment	Lot #	Bottle Tracking			
Pipettor 1mL	P29746D	✓	SPE Cartridge	DD263531A	✓	10 mL Serological Pipet		Bottle#	14991		
200µL	P19609D	✓	Filter			QC Balance ID		Cap#	14443		
Dispenser 100µL	M23487B	✓	Centrifuge			Thermometer ID & Temp		Systems plus Lot#			
Syringe			Sonicator						16-01-06		

Comments: led: 40 (H₂O: MeOH) PNLUE 87-190
Inj. I.S. (20µL) SE 6039

Dilution and Column Cleanup Worksheet

Worksheet: 4394558

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample added mL	Solvent Added mL	Int Stan Added uL	New Effective Final Volume	INITIAL DATE	Column Clean Up
B630791	BVX 770-01R	1X	10X	12.5	112.5	15	125	2016/02/25	-
	BVX 771-01R	1X	10X	12.5	112.5	15	125	2016/02/25	-
B630799	BVX 844-01R	1X	50X	2.5	122.5	15	125	2016/02/25	-
	BVX 845-01R	1X	50X	2.5	122.5	15	125	2016/02/25	-
H2O used: 54B6 572 V									
Pipette: (10mL) I 1629JB									
125 mL ref. bottle.									

PFOSLOW-W Re-works

Colm McNamara

Sent: Tuesday, February 23, 2016 7:25 AM**To:** Melinda Molina; Geoffrey Sanchez; Emily Henderson**Cc:** Adam Robinson; Araya Belay; Cristian Glnj; Sin Chii Chia; Melissa DiGrazia

Hi,

The following samples require re-work with dilutions.

WS# 4387619**B630787**

BVX741 20x

BVX743 20x

WS#4389346**B630799**

BVX844 50x

BVX845 50x

Colm McNamara

Analyst II, Liquid Chromatography

Secretary, Joint Health and Safety Committee

Office 905 817 5700, ext. 4009

Toll free 800 563 6266

6740 Campobello Road / Mississauga, ON Canada L5N 2L8

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PFOSLOW-W Re-works

Colm McNamara

Sent: Friday, February 19, 2016 11:07 AM**To:** Melinda Molina; Geoffrey Sanchez; Emily Henderson**Cc:** Adam Robinson; Araya Belay; Cristian Ginja; Sin Chii Chia

Hi,

WS#4386408

BVX770 10x

BVX771 10x

Colm McNamara

Analyst II, Liquid Chromatography

Secretary, Joint Health and Safety Committee

Office 905 817 5700, ext. 4009

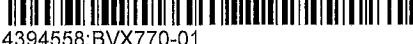
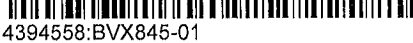
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WorkSheet 4394558 Instrument Sequences

1.	 4394558:MTRX SPK	MTRX SPK
2.	 4394558:MTRX SPK:D1	MTRX SPK :D1
3.	 4394558:SPIKE	SPIKE
4.	 4394558:BLANK	BLANK
5.	 4394558:BVX747-01	ZWICKLBAVER
6.	 4394558:BVX752-01	OF-FB60-0216
7.	 4394558:BVX753-01	OF-RW60-0216
8.	 4394558:BVX754-01	OF-RW60P-0216
9.	 4394558:BVX755-01	OF-FB46-0216
10.	 4394558:BVX756-01	OF-RW46-0216
11.	 4394558:BVX770-01	OF-RW08-0216
12.	 4394558:BVX771-01	OF-RW08P-0216
13.	 4394558:BVX844-01	OF-RW44-0216
14.	 4394558:BVX845-01	OF-RW44P-0216

Batch Name: D:\Analyst Data\Projects\Enviro\PFOS\Batch\PFC_160226.dab

Printing Date: Friday, February 26, 2016

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160226 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 (ul)
1	RINSE	2 Well Plate	1	*54VialPlate	2	1	PFC_160226\WS#4394551	3.000
2	4394551-BLANK	2 Well Plate	1	*54VialPlate	2	2	PFC_160226\WS#4394551	3.000
3	STD 1	2 Well Plate	1	*54VialPlate	2	3	PFC_160226\WS#4394551	3.000
4	STD 2	2 Well Plate	1	*54VialPlate	2	4	PFC_160226\WS#4394551	3.000
5	STD 3	2 Well Plate	1	*54VialPlate	2	5	PFC_160226\WS#4394551	3.000
6	STD 4	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
7	STD 5	2 Well Plate	1	*54VialPlate	2	7	PFC_160226\WS#4394551	3.000
8	STD 6	2 Well Plate	1	*54VialPlate	2	8	PFC_160226\WS#4394551	3.000
9	ICV	2 Well Plate	1	*54VialPlate	2	9	PFC_160226\WS#4394551	3.000
10	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
11	4394551-MTRX SPK	2 Well Plate	1	*54VialPlate	2	10	PFC_160226\WS#4394551	3.000
12	4394551-MTRX SPK.D1	2 Well Plate	1	*54VialPlate	2	11	PFC_160226\WS#4394551	3.000
13	4394551-SPKE	2 Well Plate	1	*54VialPlate	2	12	PFC_160226\WS#4394551	3.000
14	4394551-BVX757-01	2 Well Plate	1	*54VialPlate	2	13	PFC_160226\WS#4394551	3.000
15	4394551-BVX758-01	2 Well Plate	1	*54VialPlate	2	14	PFC_160226\WS#4394551	3.000
16	4394551-BVX759-01	2 Well Plate	1	*54VialPlate	2	15	PFC_160226\WS#4394551	3.000
17	4394551-BVX760-01	2 Well Plate	1	*54VialPlate	2	16	PFC_160226\WS#4394551	3.000
18	4394551-BVX761-01	2 Well Plate	1	*54VialPlate	2	17	PFC_160226\WS#4394551	3.000
19	4394551-BVX762-01(50X)	2 Well Plate	1	*54VialPlate	2	18	PFC_160226\WS#4394551	3.000
20	4394551-BVX763-01	2 Well Plate	1	*54VialPlate	2	19	PFC_160226\WS#4394551	3.000
21	4394551-BVX764-01	2 Well Plate	1	*54VialPlate	2	20	PFC_160226\WS#4394551	3.000
22	4394551-BVX765-01	2 Well Plate	1	*54VialPlate	2	21	PFC_160226\WS#4394551	3.000
23	4394551-BVX766-01	2 Well Plate	1	*54VialPlate	2	22	PFC_160226\WS#4394551	3.000
24	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
25	4394551-BVX767-01	2 Well Plate	1	*54VialPlate	2	23	PFC_160226\WS#4394551	3.000
26	4394551-BVX768-01	2 Well Plate	1	*54VialPlate	2	24	PFC_160226\WS#4394551	3.000
27	4394551-BVX762-01(10X)	2 Well Plate	1	*54VialPlate	2	25	PFC_160226\WS#4394551	3.000
28	4394551-BVX762-01	2 Well Plate	1	*54VialPlate	2	26	PFC_160226\WS#4394551	3.000
29	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394558	3.000
30	4394558-BLANK	2 Well Plate	1	*54VialPlate	2	27	PFC_160226\WS#4394558	3.000
31	4394558-MTRX SPK	2 Well Plate	1	*54VialPlate	2	28	PFC_160226\WS#4394558	3.000
32	4394558-MTRX SPK.D1	2 Well Plate	1	*54VialPlate	2	29	PFC_160226\WS#4394558	3.000
33	4394558-SPKE	2 Well Plate	1	*54VialPlate	2	30	PFC_160226\WS#4394558	3.000
34	4394558-BVX747-01	2 Well Plate	1	*54VialPlate	2	31	PFC_160226\WS#4394558	3.000
35	4394558-BVX752-01	2 Well Plate	1	*54VialPlate	2	32	PFC_160226\WS#4394558	3.000
36	4394558-BVX753-01	2 Well Plate	1	*54VialPlate	2	33	PFC_160226\WS#4394558	3.000
37	4394558-BVX754-01	2 Well Plate	1	*54VialPlate	2	34	PFC_160226\WS#4394558	3.000
38	4394558-BVX755-01	2 Well Plate	1	*54VialPlate	2	35	PFC_160226\WS#4394558	3.000
39	4394558-BVX756-01	2 Well Plate	1	*54VialPlate	2	36	PFC_160226\WS#4394558	3.000
40	4394558-BVX770-01(10X)	2 Well Plate	1	*54VialPlate	2	37	PFC_160226\WS#4394558	3.000
41	4394558-BVX771-01(10X)	2 Well Plate	1	*54VialPlate	2	38	PFC_160226\WS#4394558	3.000
42	4394558-BVX844-01(50X)	2 Well Plate	1	*54VialPlate	2	39	PFC_160226\WS#4394558	3.000
43	4394558-BVX845-01(50X)	2 Well Plate	1	*54VialPlate	2	40	PFC_160226\WS#4394558	3.000
44	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394558	3.000
45	RINSE	2 Well Plate	1	*54VialPlate	2	1	PFC_160226\WS#4395833	3.000
46	4395833-BLANK	2 Well Plate	1	*54VialPlate	1	1	PFC_160226\WS#4395833	3.000
47	STD 1	2 Well Plate	1	*54VialPlate	1	2	PFC_160226\WS#4395833	3.000
48	STD 2	2 Well Plate	1	*54VialPlate	1	3	PFC_160226\WS#4395833	3.000
49	STD 3	2 Well Plate	1	*54VialPlate	1	4	PFC_160226\WS#4395833	3.000
50	STD 4	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
51	STD 5	2 Well Plate	1	*54VialPlate	1	6	PFC_160226\WS#4395833	3.000
52	STD 6	2 Well Plate	1	*54VialPlate	1	7	PFC_160226\WS#4395833	3.000
53	ICV	2 Well Plate	1	*54VialPlate	1	8	PFC_160226\WS#4395833	3.000
54	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
55	4395833-MTRX SPK	2 Well Plate	1	*54VialPlate	1	9	PFC_160226\WS#4395833	3.000
56	4395833-MTRX SPK.D1	2 Well Plate	1	*54VialPlate	1	10	PFC_160226\WS#4395833	3.000
57	4395833-SPKE	2 Well Plate	1	*54VialPlate	1	11	PFC_160226\WS#4395833	3.000
58	4395833-BVX702-01	2 Well Plate	1	*54VialPlate	1	12	PFC_160226\WS#4395833	3.000
59	4395833-BVX703-01	2 Well Plate	1	*54VialPlate	1	13	PFC_160226\WS#4395833	3.000
60	4395833-BVX704-01	2 Well Plate	1	*54VialPlate	1	14	PFC_160226\WS#4395833	3.000
61	4395833-BVX705-01	2 Well Plate	1	*54VialPlate	1	15	PFC_160226\WS#4395833	3.000
62	4395833-BVX706-01	2 Well Plate	1	*54VialPlate	1	16	PFC_160226\WS#4395833	3.000
63	4395833-BVX707-01	2 Well Plate	1	*54VialPlate	1	17	PFC_160226\WS#4395833	3.000
64	4395833-BVX708-01	2 Well Plate	1	*54VialPlate	1	18	PFC_160226\WS#4395833	3.000
65	4395833-BVX709-01	2 Well Plate	1	*54VialPlate	1	19	PFC_160226\WS#4395833	3.000
66	4395833-BVX710-01	2 Well Plate	1	*54VialPlate	1	20	PFC_160226\WS#4395833	3.000
67	4395833-BVX711-01	2 Well Plate	1	*54VialPlate	1	21	PFC_160226\WS#4395833	3.000
68	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
69	4395833-BVX712-01	2 Well Plate	1	*54VialPlate	1	22	PFC_160226\WS#4395833	3.000
70	4395833-BVX713-01	2 Well Plate	1	*54VialPlate	1	23	PFC_160226\WS#4395833	3.000
71	4395833-BVX714-01 (10x)	2 Well Plate	1	*54VialPlate	1	24	PFC_160226\WS#4395833	3.000
72	4395833-BVX715-01	2 Well Plate	1	*54VialPlate	1	25	PFC_160226\WS#4395833	3.000
73	4395833-BVX716-01	2 Well Plate	1	*54VialPlate	1	26	PFC_160226\WS#4395833	3.000
74	4395833-BVX717-01 (10x)	2 Well Plate	1	*54VialPlate	1	27	PFC_160226\WS#4395833	3.000
75	4395833-BVX718-01	2 Well Plate	1	*54VialPlate	1	28	PFC_160226\WS#4395833	3.000
76	4395833-BVX719-01	2 Well Plate	1	*54VialPlate	1	29	PFC_160226\WS#4395833	3.000
77	4395833-BVX720-01	2 Well Plate	1	*54VialPlate	1	30	PFC_160226\WS#4395833	3.000
78	4395833-BVX721-01	2 Well Plate	1	*54VialPlate	1	31	PFC_160226\WS#4395833	3.000
79	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
80	4395833-BVX714-01	2 Well Plate	1	*54VialPlate	1	32	PFC_160226\WS#4395833	3.000
81	4395833-BVX717-01	2 Well Plate	1	*54VialPlate	1	33	PFC_160226\WS#4395833	3.000
82	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000

Column # 123

MPA = soln #513, FSRG-17

MPB = Methanol

Fisher lot #158013

8/26 2016/02/26

Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1 4394558-BLANK	2016/02/29 8:55:42 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	27	*54VialPlate*	2
2 STD 1	2016/02/29 9:00:47 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	3	*54VialPlate*	2
3 STD 2	2016/02/29 9:05:58 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	4	*54VialPlate*	2
4 STD 3	2016/02/29 9:11:03 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	5	*54VialPlate*	2
5 STD 4	2016/02/29 9:16:09 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	6	*54VialPlate*	2
6 STD 5	2016/02/29 9:21:15 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	7	*54VialPlate*	2
7 STD 6	2016/02/29 9:26:22 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	8	*54VialPlate*	2
8 ICV	2016/02/29 9:41:39 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	9	*54VialPlate*	2
9 CCV	2016/02/29 9:46:45 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2
10 4394558-MTRX SPK	2016/02/29 10:09:47 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	28	*54VialPlate*	2
11 4394558-MTRX SPK:D1	2016/02/29 10:14:52 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	29	*54VialPlate*	2
12 4394558-SPIKE	2016/02/29 10:19:58 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	30	*54VialPlate*	2
13 4394558-BVX747-01	2016/02/29 10:25:08 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	31	*54VialPlate*	2
14 4394558-BVX752-01	2016/02/29 10:30:15 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	32	*54VialPlate*	2
15 4394558-BVX753-01	2016/02/29 10:35:21 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	33	*54VialPlate*	2
16 4394558-BVX754-01	2016/02/29 10:40:27 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	34	*54VialPlate*	2
17 4394558-BVX755-01	2016/02/29 10:45:33 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	35	*54VialPlate*	2
18 4394558-BVX756-01	2016/02/29 10:50:39 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	36	*54VialPlate*	2
19 4394558-BVX770-01(10X)	2016/02/29 10:55:45 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	37	*54VialPlate*	2
20 4394558-BVX771-01(10X)	2016/02/29 11:00:50 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	38	*54VialPlate*	2
21 4394558-BVX844-01(50X)	2016/02/29 11:05:56 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	39	*54VialPlate*	2
22 4394558-BVX845-01(50X)	2016/02/29 11:11:02 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	40	*54VialPlate*	2
23 CCV	2016/02/29 11:21:13 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2
24 4394558-MTRX SPK	2016/02/29 11:26:22 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	28	*54VialPlate*	2
25 4394558-MTRX SPK:D1	2016/02/29 11:31:29 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	29	*54VialPlate*	2
26 CCV	2016/02/29 11:36:34 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2



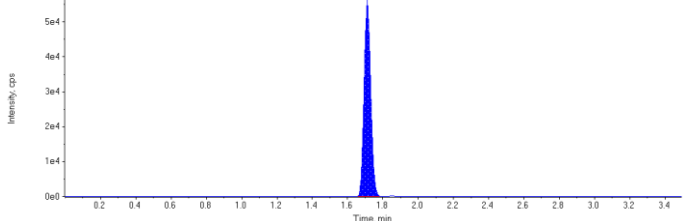
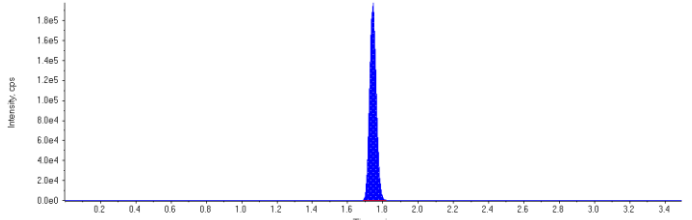
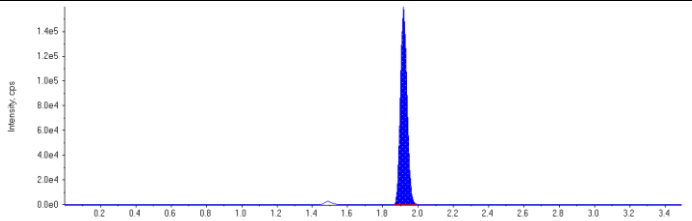
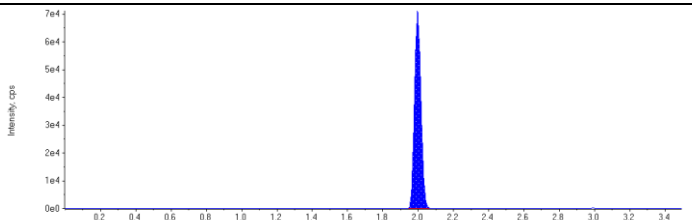
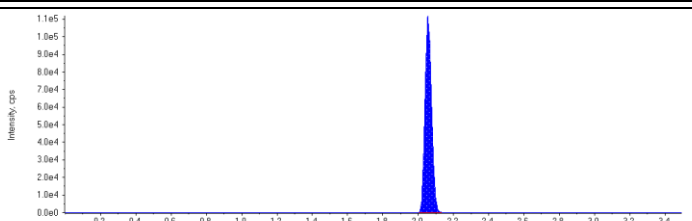
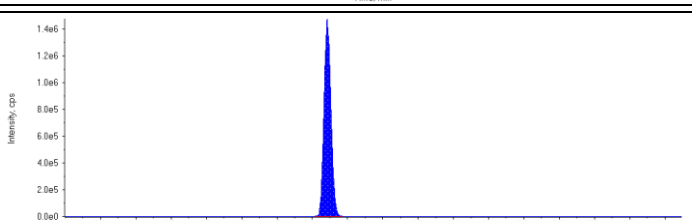
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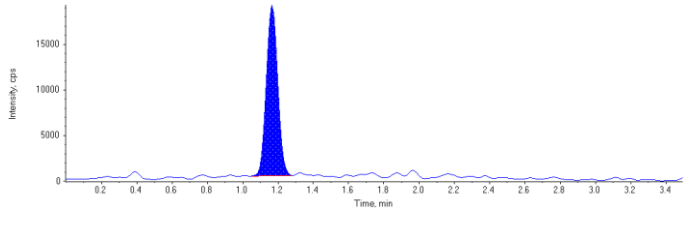
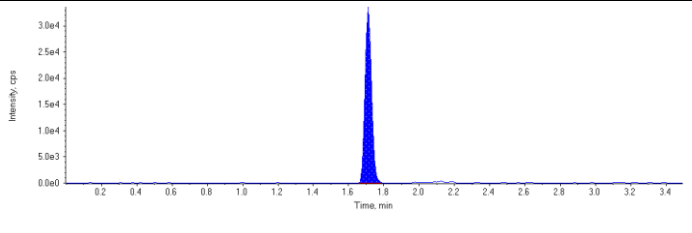
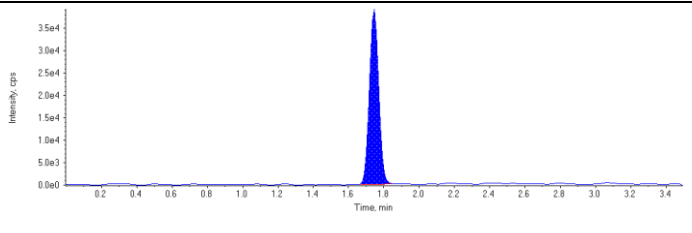
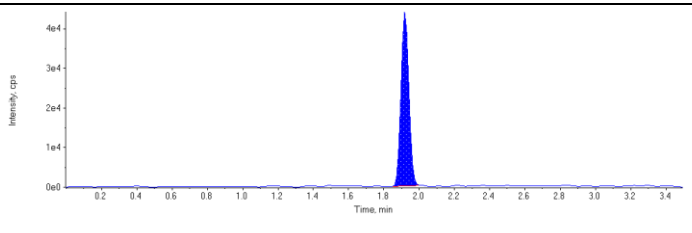
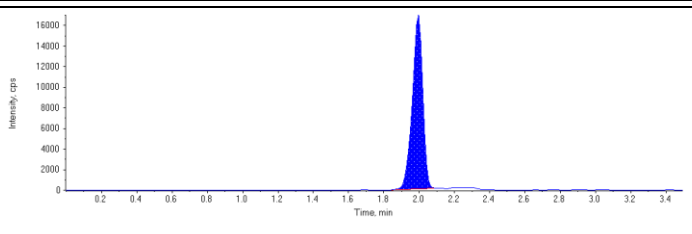
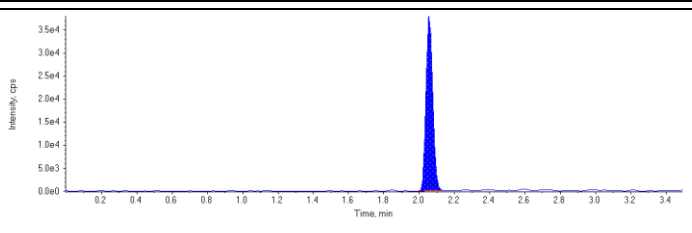
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

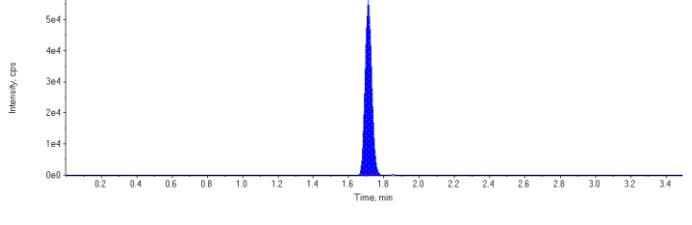
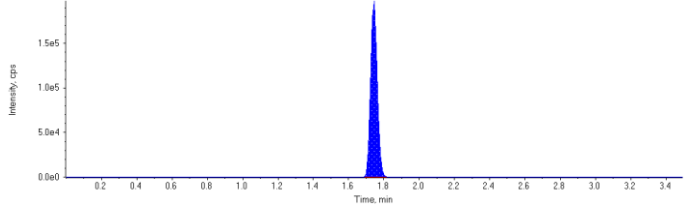
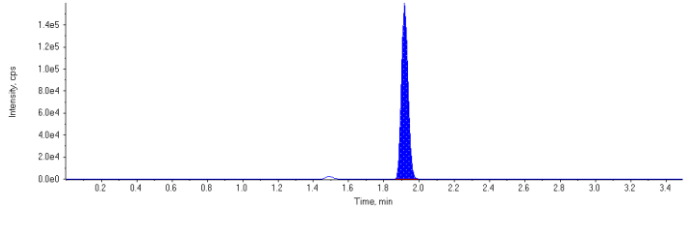
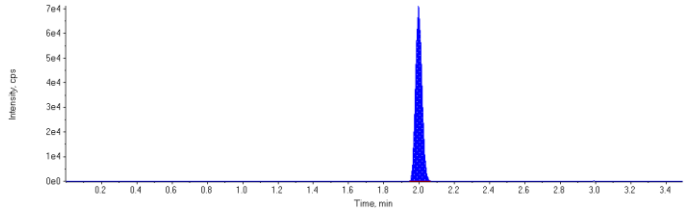
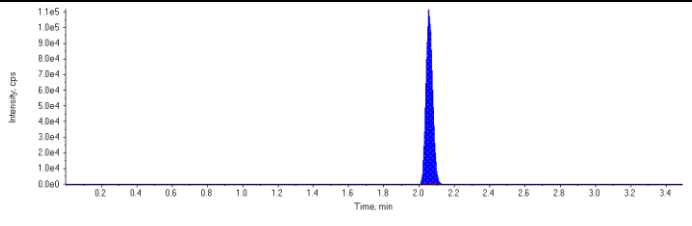
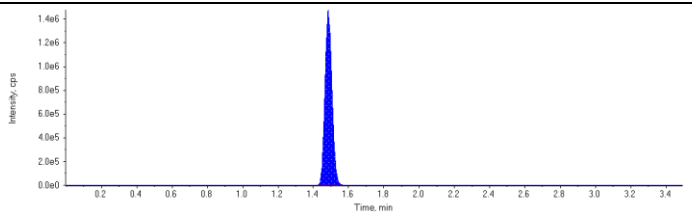
Sample Name	STD 1	Injection Vial	3
Sample ID	STD 1	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 7:45:04 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	146000.	1.71	1.00	-
MPFHpA	517000.	1.74	1.00	-
MPFOA	413000.	1.92	1.00	-
MPFOS	179000.	2.00	1.00	-
MPFNA	291000.	2.06	1.00	-
13C6-PFHxA IS	4050000.	1.49	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	83700	1.17	2.00	2.40	120.0
PFHxS 1	85100	1.71	2.00	2.35	117.0
PFHpA 1	142000	1.74	2.00	2.11	106.0
PFOA 1	136000	1.92	2.00	2.20	110.0
PFOS 1	69300	1.99	2.00	2.31	116.0
PFNA 1	101000	2.06	2.00	2.24	112.0
18O2-PFHxS	146000	1.71	100.	97.9	97.9
13C4-PFHpA	517000	1.74	100.	103.	103.0
13C4-PFOA	413000	1.92	100.	94.5	94.5
13C4-PFOS	179000	2.00	100.	102.	102.0
13C5-PFNA	291000	2.06	100.	97.6	97.6
13C6-PFHxA	4050000	1.49	100.	101.	101.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

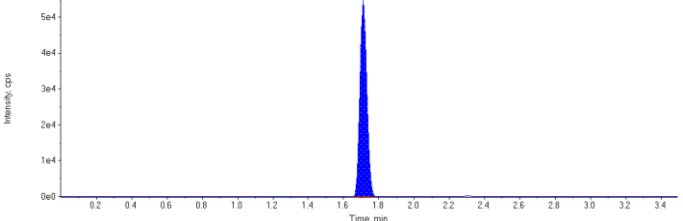
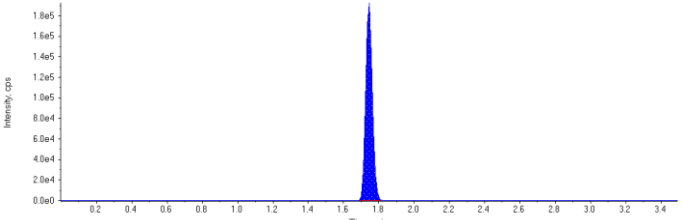
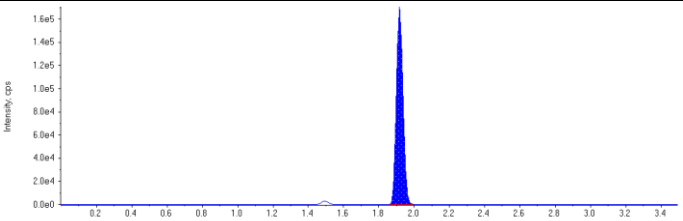
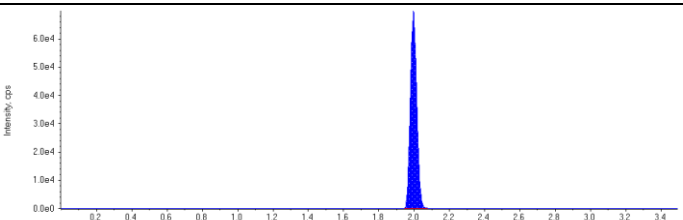
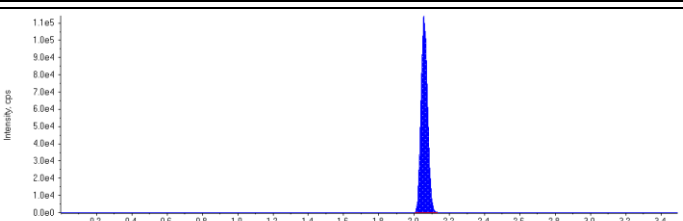
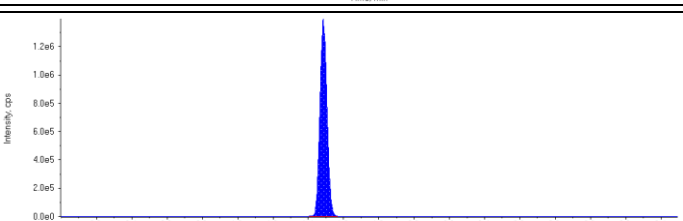
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.17 (1.15) min Calculated Conc: 2.40 ng/L Area Ratio: 0.573 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 2.35 ng/L Area Ratio: 0.583 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 2.11 ng/L Area Ratio: 0.275 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 2.20 ng/L Area Ratio: 0.331 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 2.31 ng/L Area Ratio: 0.387 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 2.24 ng/L Area Ratio: 0.346 Sample Type: (Standard)	

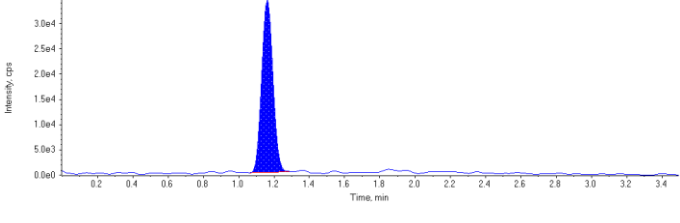
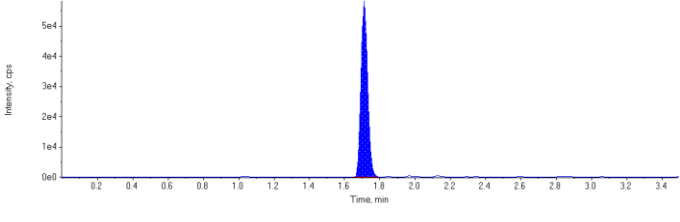
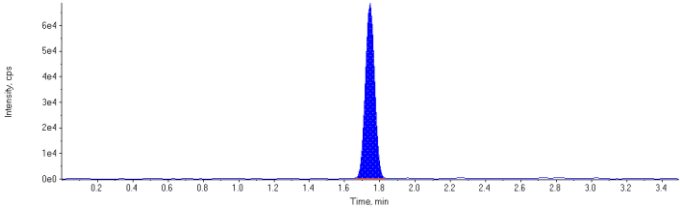
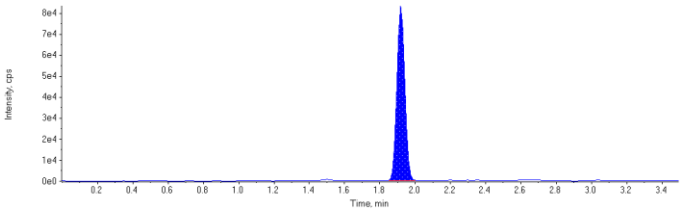
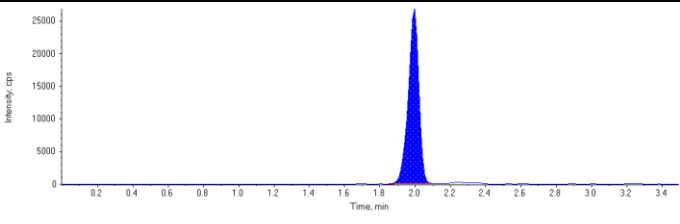
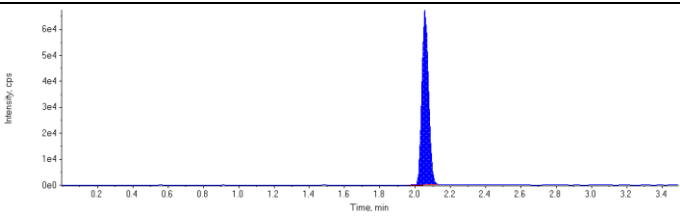
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 97.9 ng/L Area Ratio: 0.0361 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 103. ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 94.5 ng/L Area Ratio: 0.102 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 0.0443 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 97.6 ng/L Area Ratio: 0.0719 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

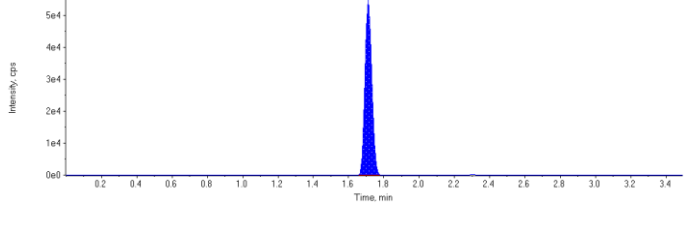
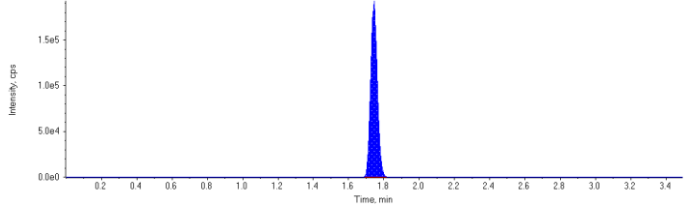
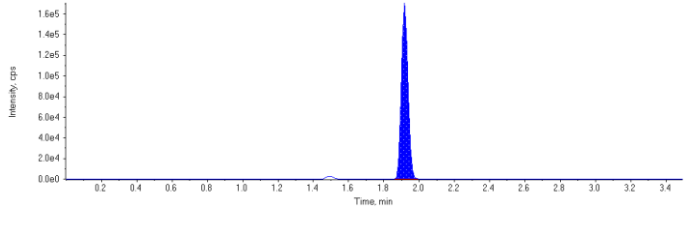
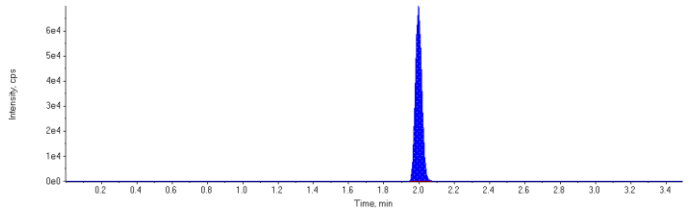
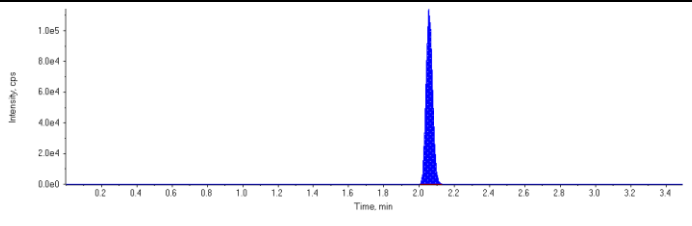
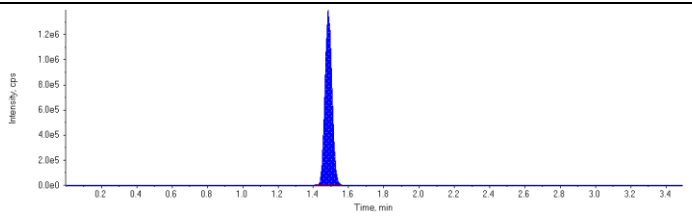
Sample Name	STD 2	Injection Vial	4
Sample ID	STD 2	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 7:50:14 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	147000.	1.71	1.00	-
MPFHpA	503000.	1.74	1.00	-
MPFOA	442000.	1.92	1.00	-
MPFOS	177000.	2.00	1.00	-
MPFNA	296000.	2.06	1.00	-
13C6-PFHxA IS	3880000.	1.49	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	151000	1.16	4.00	3.86	96.4
PFHxS 1	151000	1.71	4.00	3.68	92.1
PFHpA 1	247000	1.74	4.00	3.72	92.9
PFOA 1	258000	1.92	4.00	3.73	93.3
PFOS 1	111000	1.99	4.00	3.63	90.7
PFNA 1	177000	2.06	4.00	3.74	93.6
18O2-PFHxS	147000	1.71	100.	103.	103.0
13C4-PFHpA	503000	1.74	100.	105.	105.0
13C4-PFOA	442000	1.92	100.	105.	105.0
13C4-PFOS	177000	2.00	100.	105.	105.0
13C5-PFNA	296000	2.06	100.	104.	104.0
13C6-PFHxA	3880000	1.49	100.	97.3	97.3

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.49(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

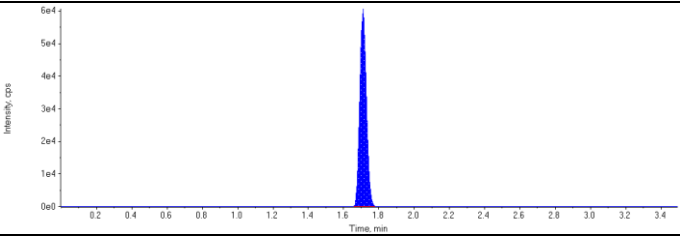
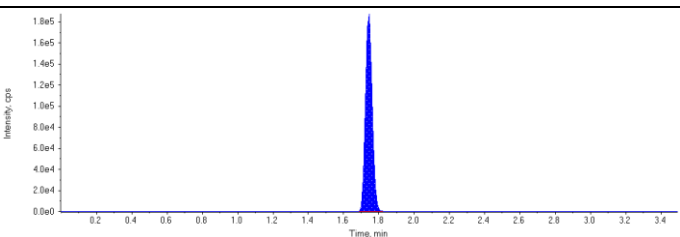
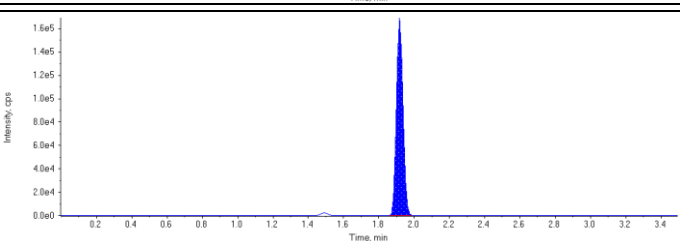
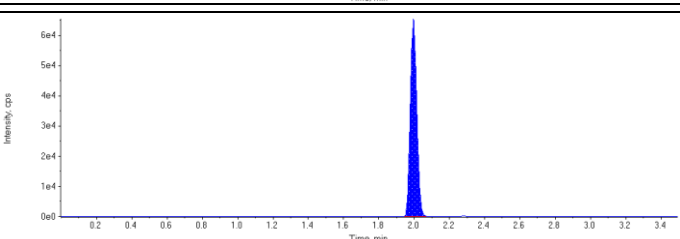
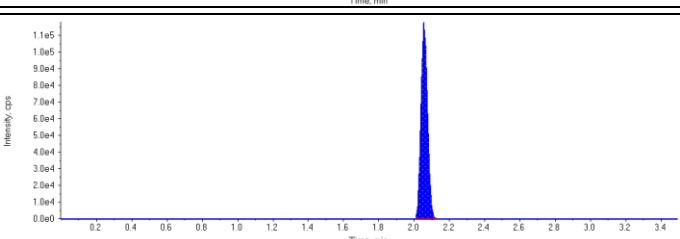
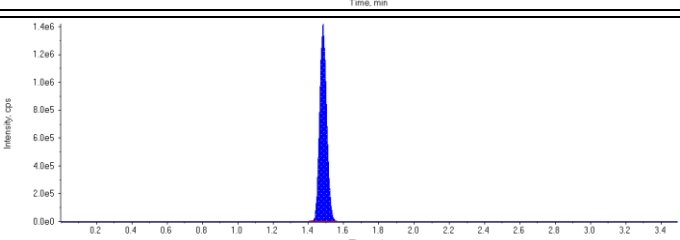
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 3.86 ng/L Area Ratio: 1.03 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 3.68 ng/L Area Ratio: 1.03 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 3.72 ng/L Area Ratio: 0.491 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 3.73 ng/L Area Ratio: 0.584 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 3.63 ng/L Area Ratio: 0.627 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 3.74 ng/L Area Ratio: 0.597 Sample Type: (Standard)	

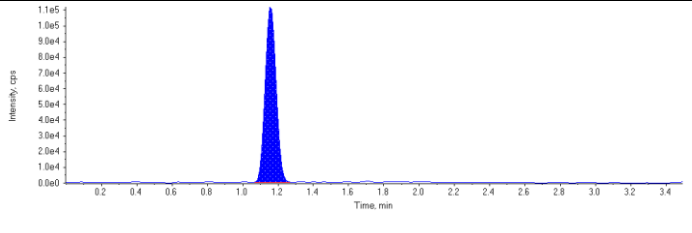
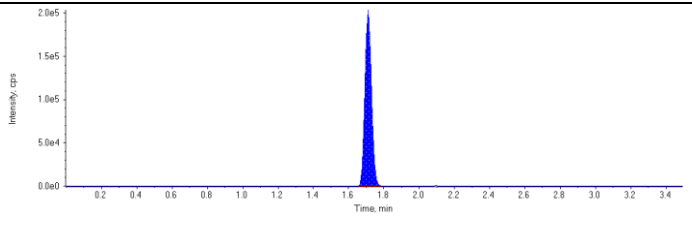
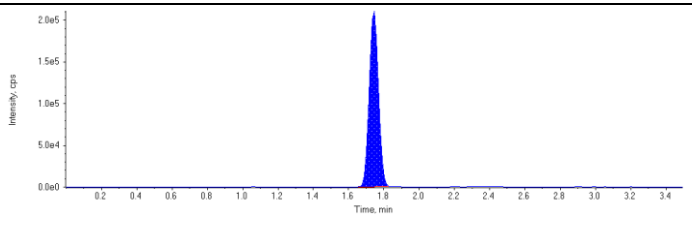
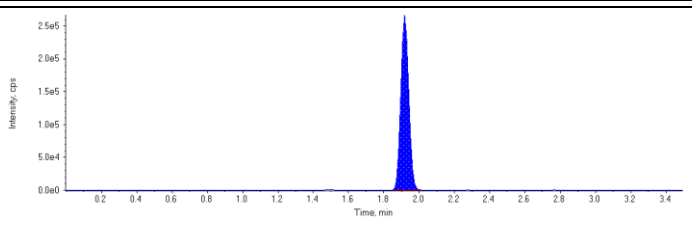
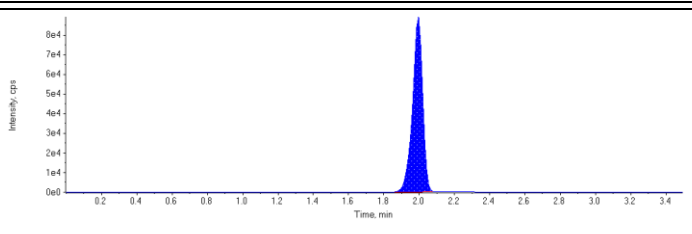
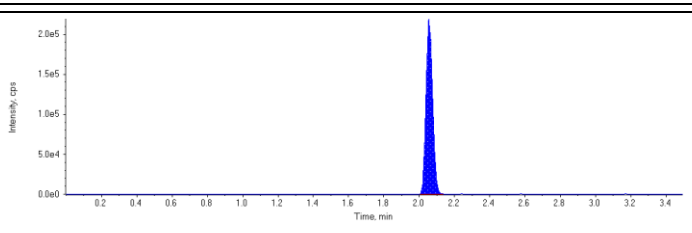
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 0.0378 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 105. ng/L Area Ratio: 0.129 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 105. ng/L Area Ratio: 0.114 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 105. ng/L Area Ratio: 0.0456 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 104. ng/L Area Ratio: 0.0763 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.49 (1.42) min Calculated Conc: 97.3 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

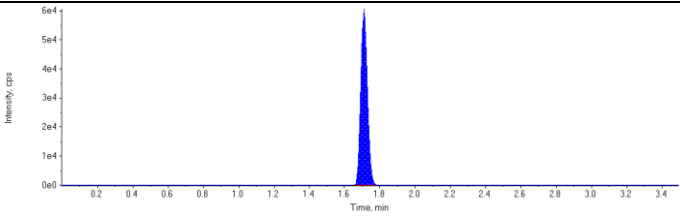
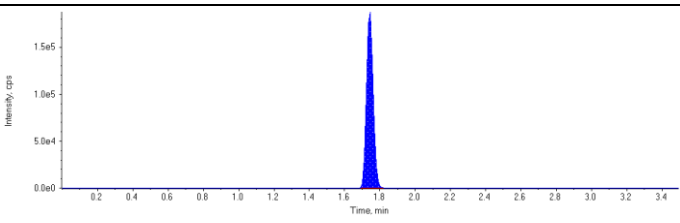
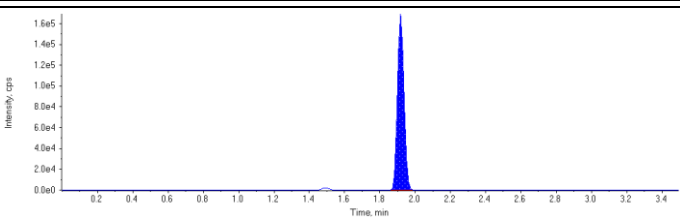
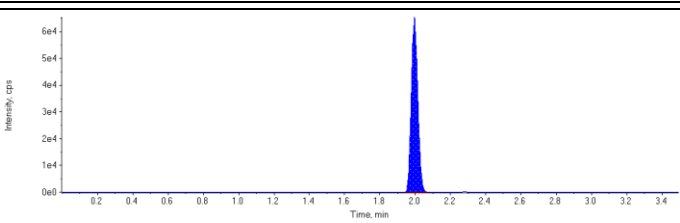
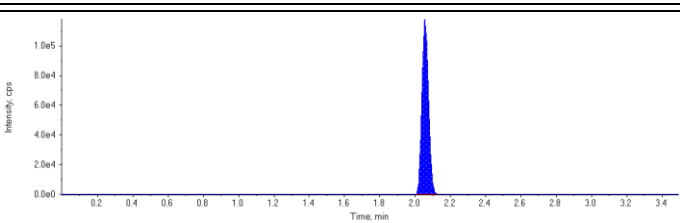
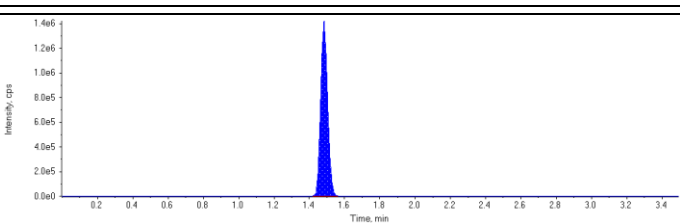
Sample Name	STD 3	Injection Vial	5
Sample ID	STD 3	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 7:55:19 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.71	1.00	-
MPFHpA	498000.	1.74	1.00	-
MPFOA	435000.	1.92	1.00	-
MPFOS	167000.	2.00	1.00	-
MPFNA	307000.	2.06	1.00	-
13C6-PFHxA IS	3890000.	1.48	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	482000	1.16	12.0	10.4	87.0
PFHxS 1	518000	1.71	12.0	10.6	88.1
PFHpA 1	764000	1.74	12.0	11.5	95.5
PFOA 1	835000	1.92	12.0	11.8	98.4
PFOS 1	356000	1.99	12.0	11.9	99.2
PFNA 1	570000	2.06	12.0	11.3	94.2
18O2-PFHxS	156000	1.71	100.	109.	109.0
13C4-PFHpA	498000	1.74	100.	104.	104.0
13C4-PFOA	435000	1.92	100.	104.	104.0
13C4-PFOS	167000	2.00	100.	99.4	99.4
13C5-PFNA	307000	2.06	100.	107.	107.0
13C6-PFHxA	3890000	1.48	100.	97.4	97.4

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

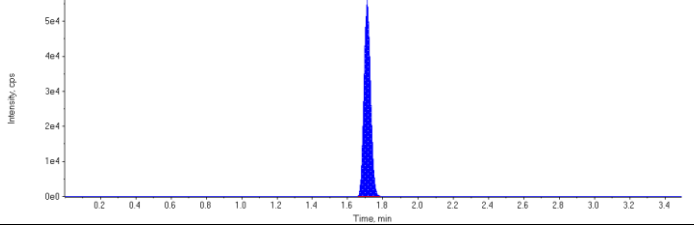
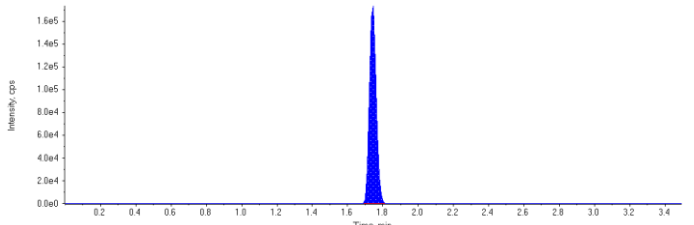
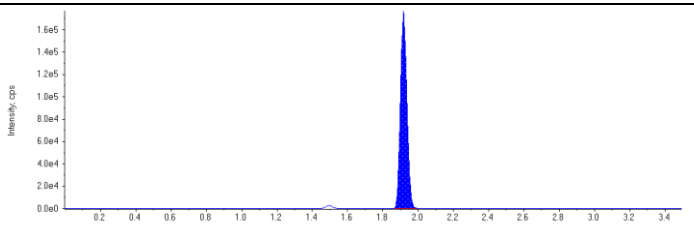
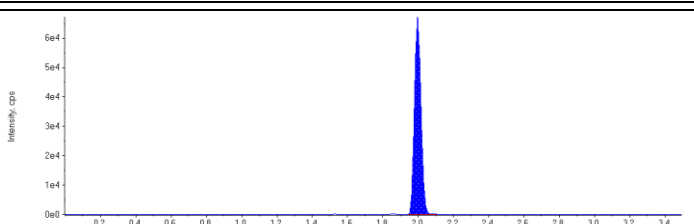
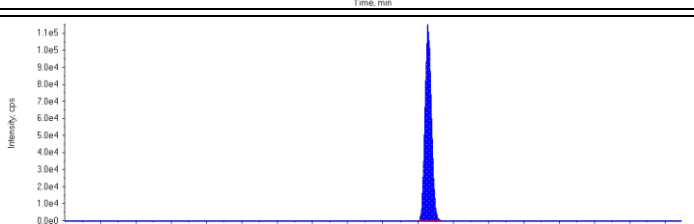
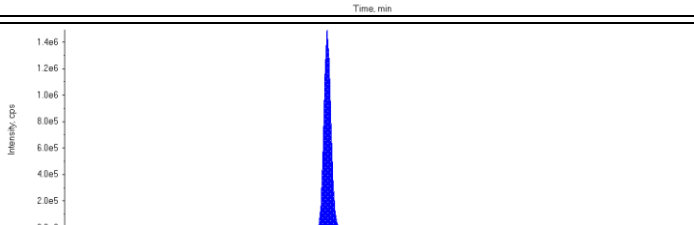
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 10.4 ng/L Area Ratio: 3.09 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 10.6 ng/L Area Ratio: 3.32 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 11.5 ng/L Area Ratio: 1.53 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 11.8 ng/L Area Ratio: 1.92 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 11.9 ng/L Area Ratio: 2.13 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 11.3 ng/L Area Ratio: 1.86 Sample Type: (Standard)	

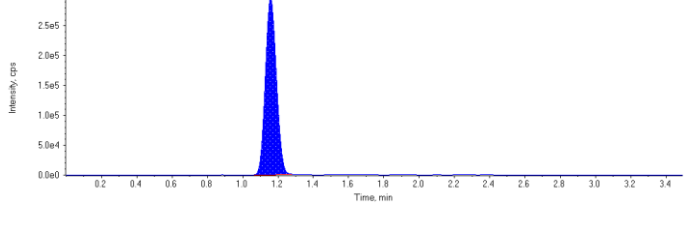
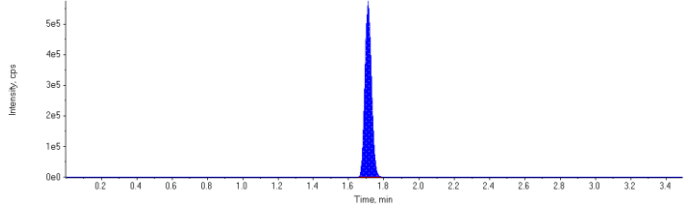
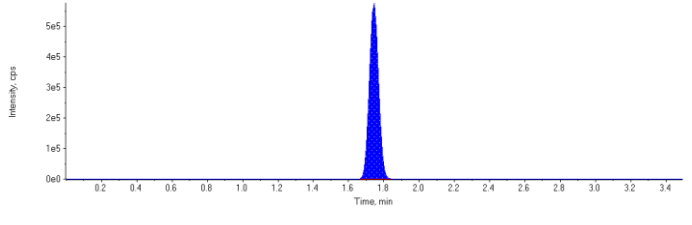
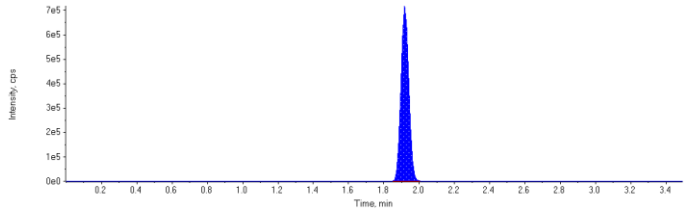
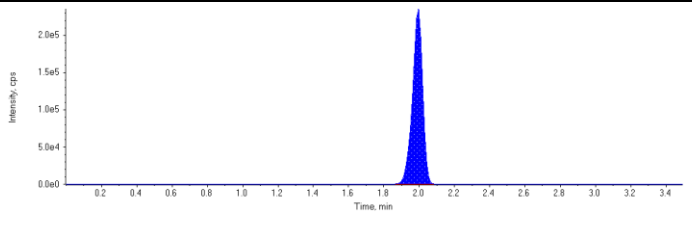
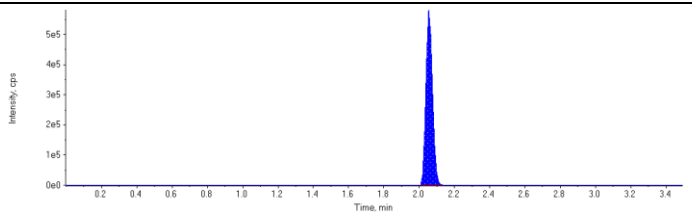
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 109. ng/L Area Ratio: 0.0401 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 104. ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 104. ng/L Area Ratio: 0.112 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 99.4 ng/L Area Ratio: 0.0429 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 107. ng/L Area Ratio: 0.0791 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 97.4 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

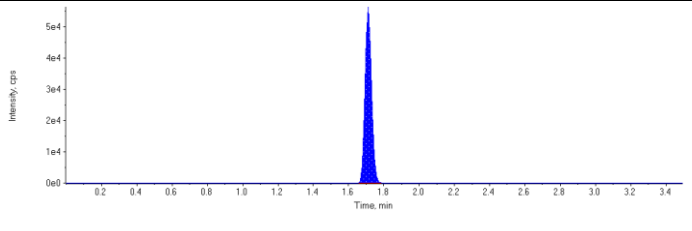
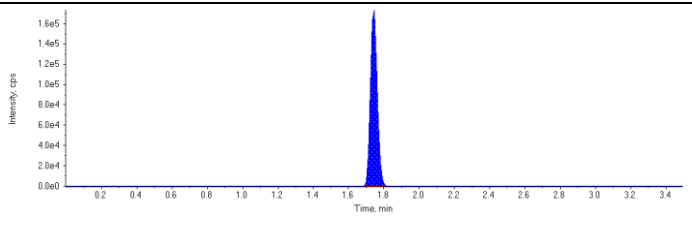
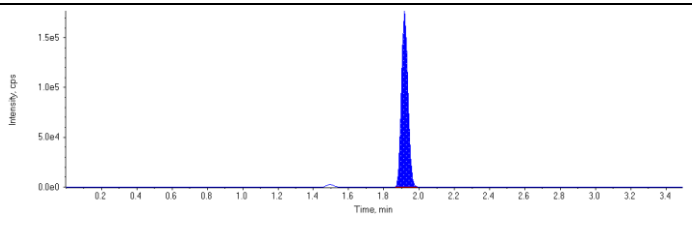
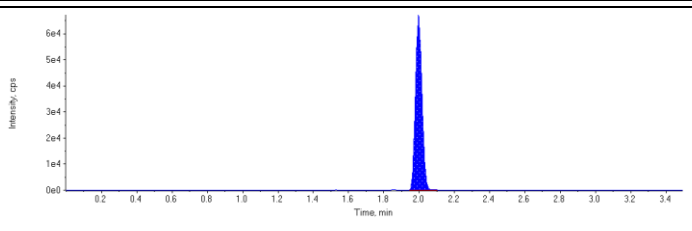
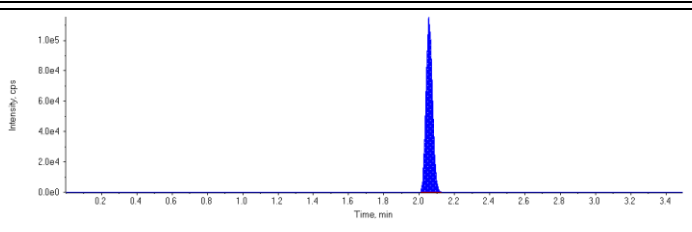
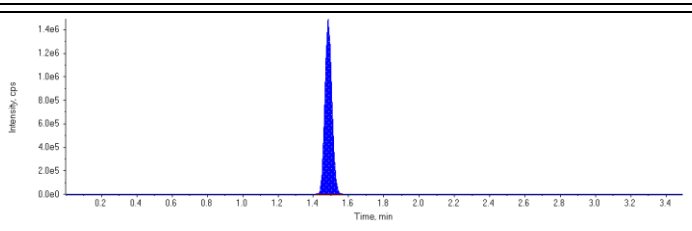
Sample Name	STD 4	Injection Vial	6
Sample ID	STD 4	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:00:24 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	144000.	1.71	1.00	-
MPFHpA	467000.	1.74	1.00	-
MPFOA	447000.	1.92	1.00	-
MPFOS	172000.	2.00	1.00	-
MPFNA	296000.	2.06	1.00	-
13C6-PFHxA IS	4090000.	1.48	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	1290000	1.16	30.0	29.3	97.5
PFHxS 1	1470000	1.71	30.0	31.3	104.0
PFHpA 1	2080000	1.74	30.0	33.2	111.0
PFOA 1	2220000	1.92	30.0	30.3	101.0
PFOS 1	944000	1.99	30.0	30.3	101.0
PFNA 1	1500000	2.06	30.0	30.6	102.0
18O2-PFHxS	144000	1.71	100.	95.4	95.4
13C4-PFHpA	467000	1.74	100.	92.3	92.3
13C4-PFOA	447000	1.92	100.	101.	101.0
13C4-PFOS	172000	2.00	100.	97.3	97.3
13C5-PFNA	296000	2.06	100.	98.3	98.3
13C6-PFHxA	4090000	1.48	100.	102.	102.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

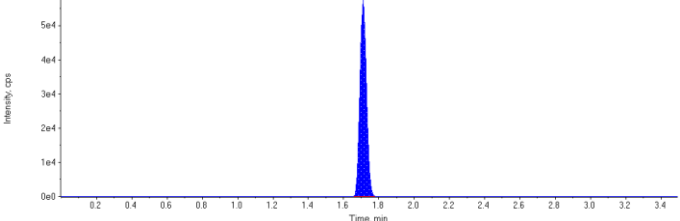
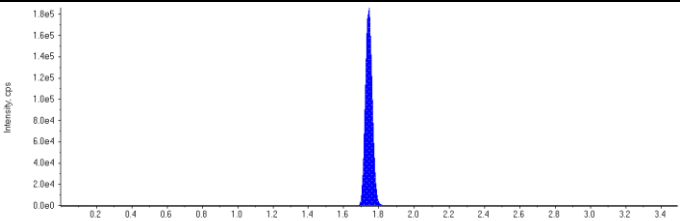
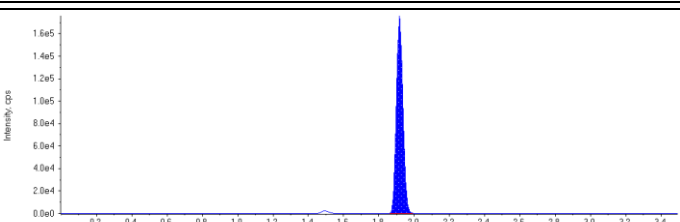
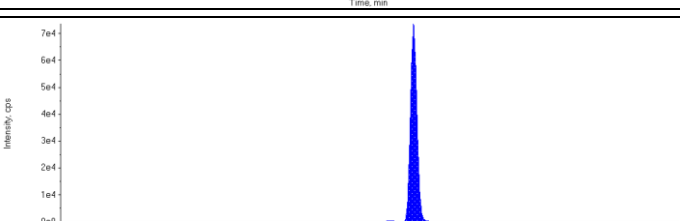
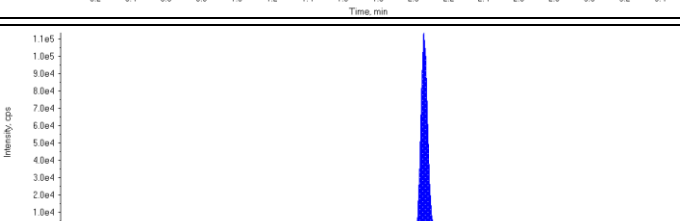
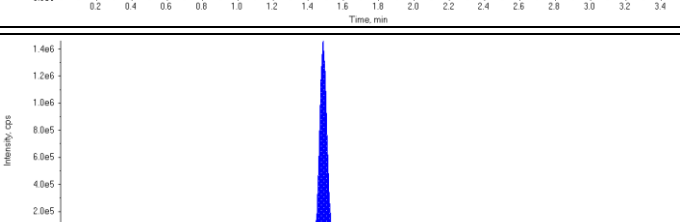
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 29.3 ng/L Area Ratio: 8.98 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 31.3 ng/L Area Ratio: 10.2 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 33.2 ng/L Area Ratio: 4.46 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 30.3 ng/L Area Ratio: 4.97 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 30.3 ng/L Area Ratio: 5.49 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 30.6 ng/L Area Ratio: 5.07 Sample Type: (Standard)	

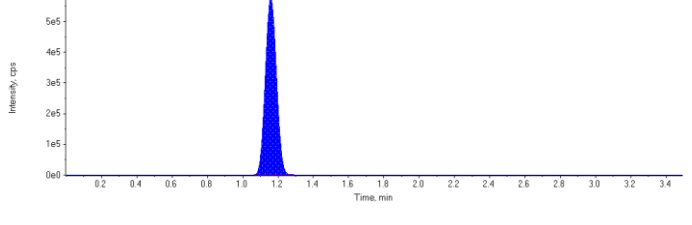
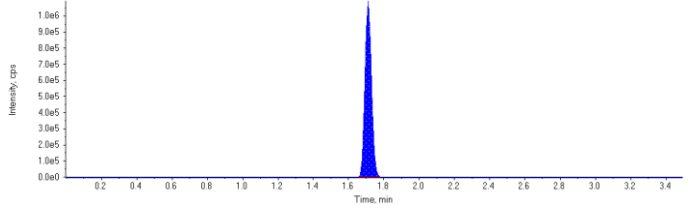
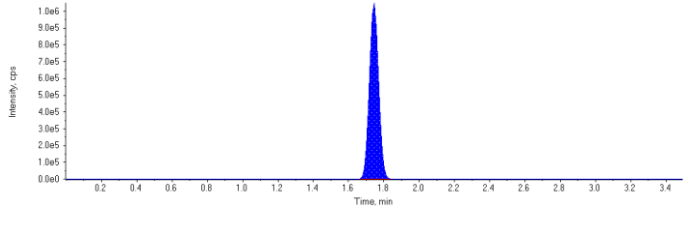
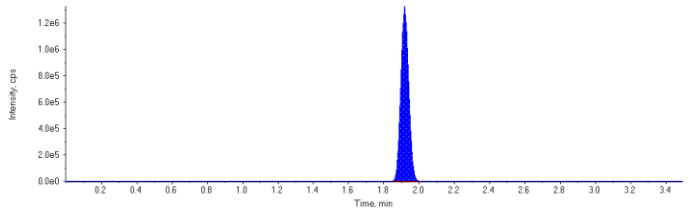
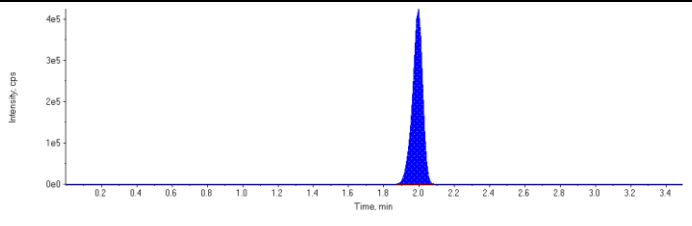
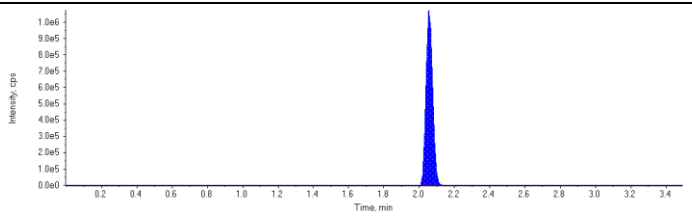
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 95.4 ng/L Area Ratio: 0.0351 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 92.3 ng/L Area Ratio: 0.114 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.109 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 97.3 ng/L Area Ratio: 0.0420 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 98.3 ng/L Area Ratio: 0.0723 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

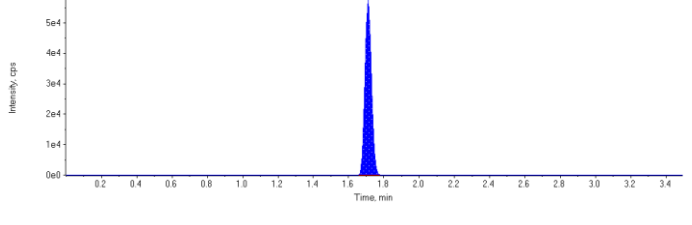
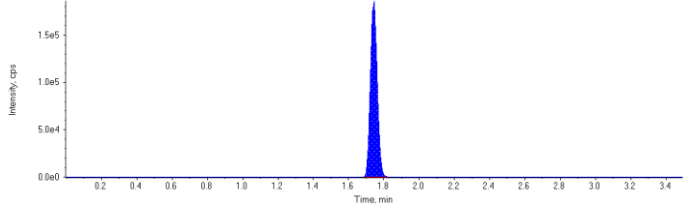
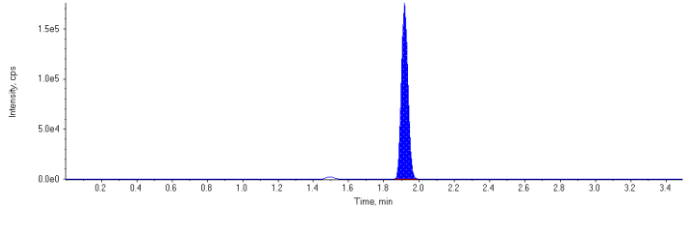
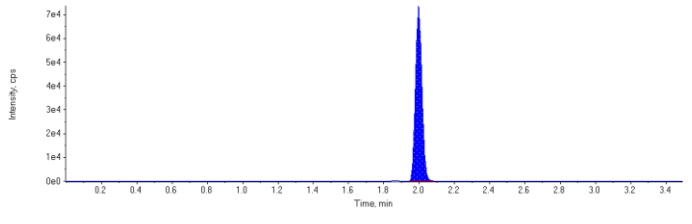
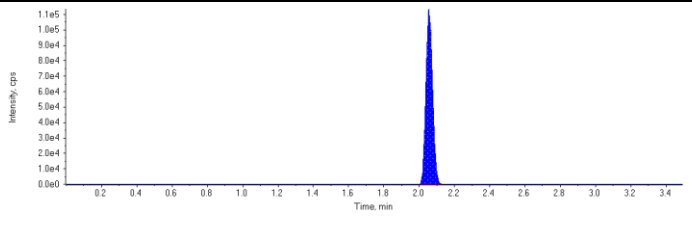
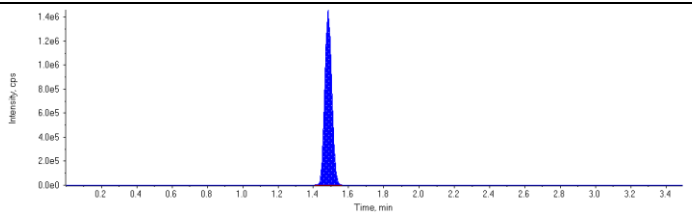
Sample Name	STD 5	Injection Vial	7
Sample ID	STD 5	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:05:30 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	147000.	1.71	1.00	-
MPFHpA	499000.	1.74	1.00	-
MPFOA	448000.	1.92	1.00	-
MPFOS	186000.	2.00	1.00	-
MPFNA	296000.	2.06	1.00	-
13C6-PFHxA IS	4060000.	1.48	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	2520000	1.16	60.0	55.2	92.0
PFHxS 1	2760000	1.71	60.0	57.0	95.1
PFHpA 1	3790000	1.74	60.0	56.5	94.2
PFOA 1	4130000	1.92	60.0	56.1	93.5
PFOS 1	1700000	1.99	60.0	50.5	84.1
PFNA 1	2810000	2.06	60.0	57.2	95.3
18O2-PFHxS	147000	1.71	100.	98.3	98.3
13C4-PFHpA	499000	1.74	100.	99.2	99.2
13C4-PFOA	448000	1.92	100.	102.	102.0
13C4-PFOS	186000	2.00	100.	106.	106.0
13C5-PFNA	296000	2.06	100.	99.1	99.1
13C6-PFHxA	4060000	1.48	100.	102.	102.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

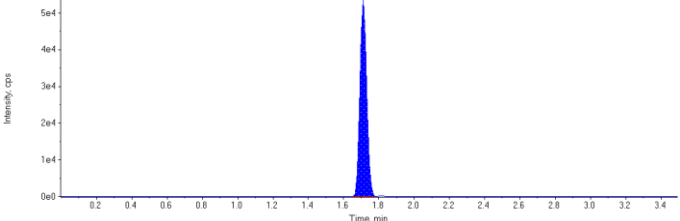
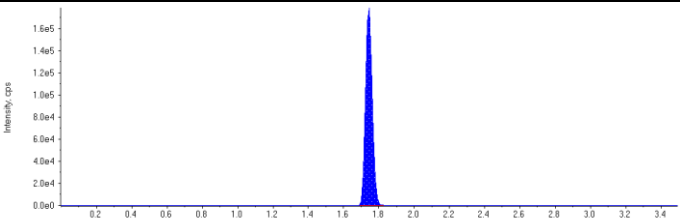
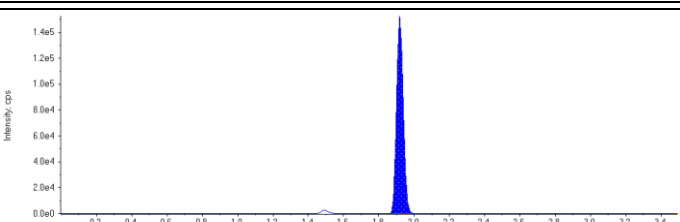
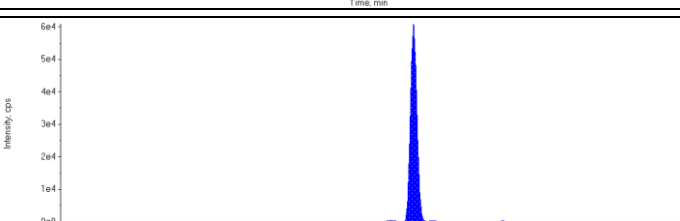
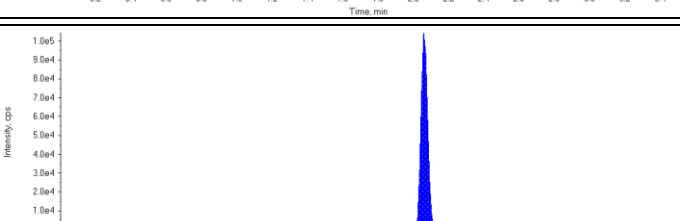
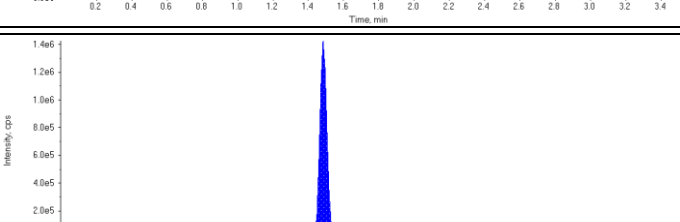
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 55.2 ng/L Area Ratio: 17.1 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 57.0 ng/L Area Ratio: 18.8 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 56.5 ng/L Area Ratio: 7.60 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 56.1 ng/L Area Ratio: 9.23 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 50.5 ng/L Area Ratio: 9.16 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 57.2 ng/L Area Ratio: 9.50 Sample Type: (Standard)	

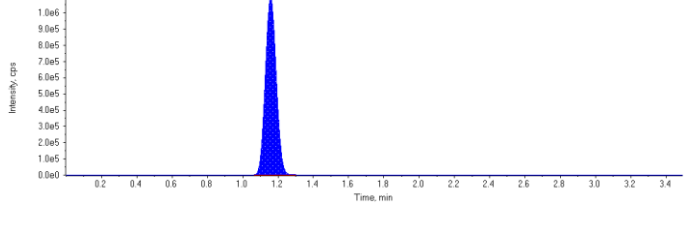
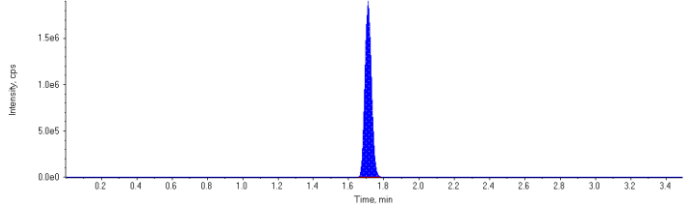
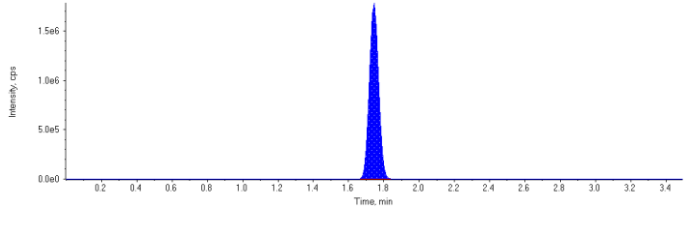
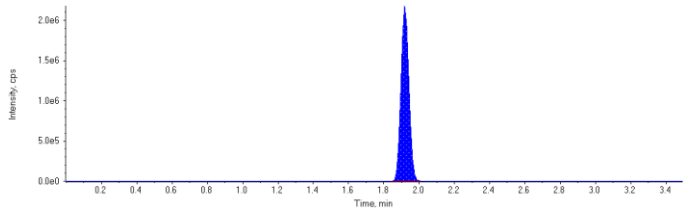
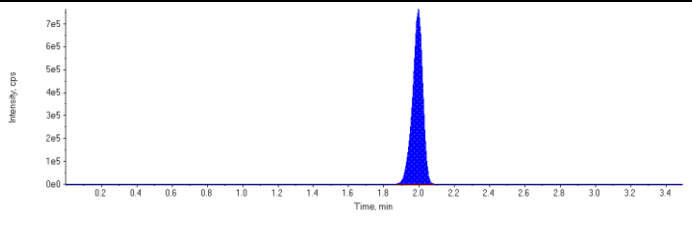
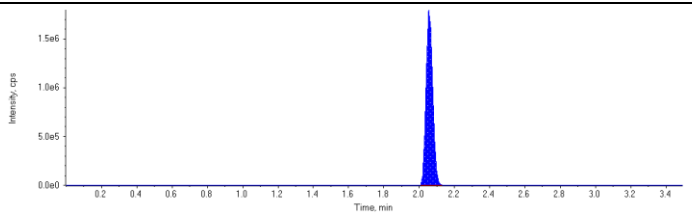
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 98.3 ng/L Area Ratio: 0.0362 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 99.2 ng/L Area Ratio: 0.123 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.110 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 106. ng/L Area Ratio: 0.0458 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 99.1 ng/L Area Ratio: 0.0729 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

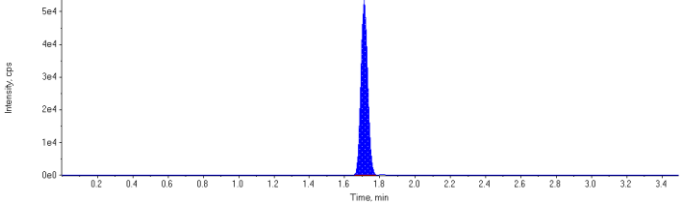
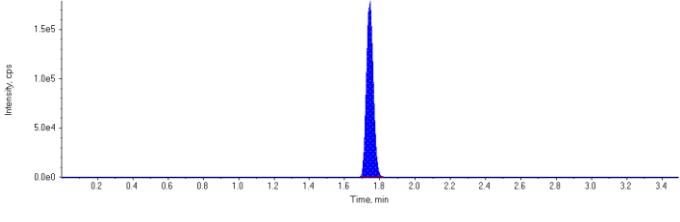
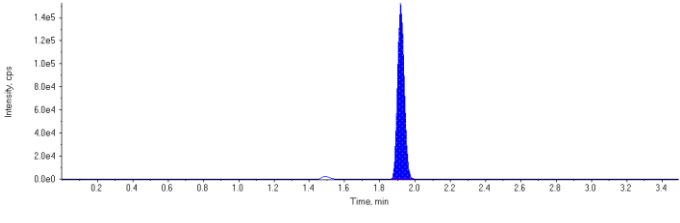
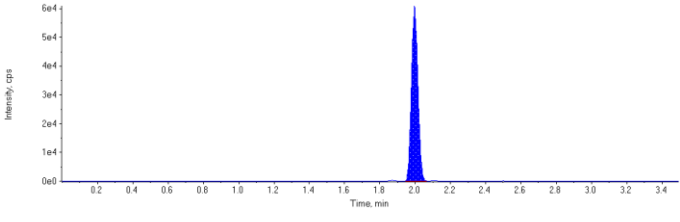
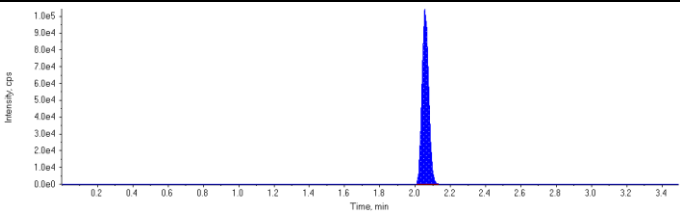
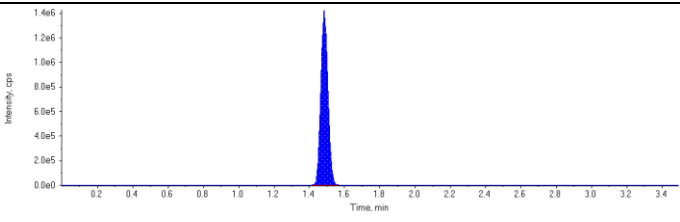
Sample Name	STD 6	Injection Vial	8
Sample ID	STD 6	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:10:36 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	142000.	1.71	1.00	-
MPFHpA	477000.	1.74	1.00	-
MPFOA	398000.	1.92	1.00	-
MPFOS	154000.	2.00	1.00	-
MPFNA	275000.	2.06	1.00	-
13C6-PFHxA IS	3980000.	1.48	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	4720000	1.16	100.	107.	107.0
PFHxS 1	4830000	1.71	100.	103.	103.0
PFHpA 1	6480000	1.74	100.	101.	101.0
PFOA 1	6810000	1.92	100.	104.	104.0
PFOS 1	3060000	2.00	100.	109.	109.0
PFNA 1	4710000	2.06	100.	103.	103.0
18O2-PFHxS	142000	1.71	100.	96.8	96.8
13C4-PFHpA	477000	1.74	100.	96.9	96.9
13C4-PFOA	398000	1.92	100.	92.7	92.7
13C4-PFOS	154000	2.00	100.	89.4	89.4
13C5-PFNA	275000	2.06	100.	94.0	94.0
13C6-PFHxA	3980000	1.48	100.	99.7	99.7

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

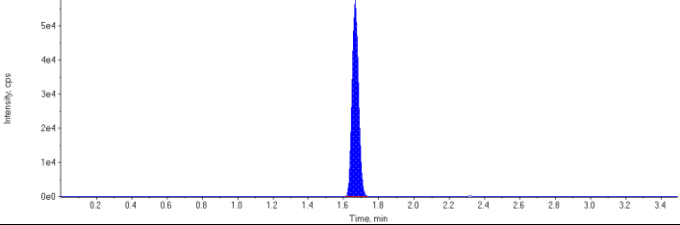
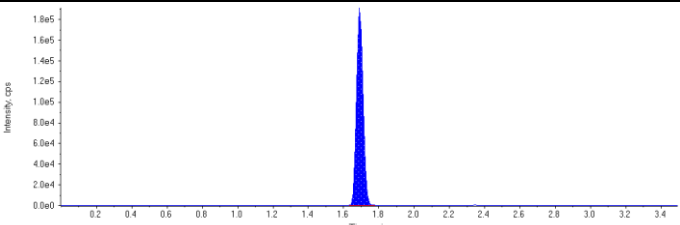
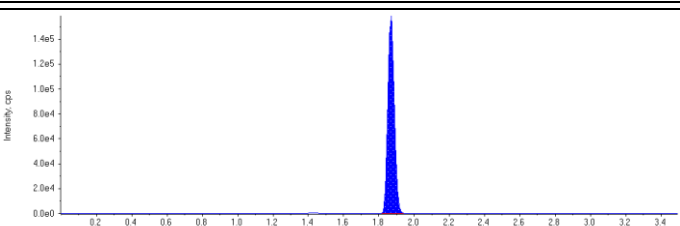
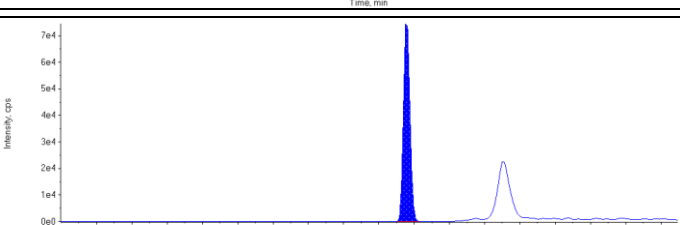
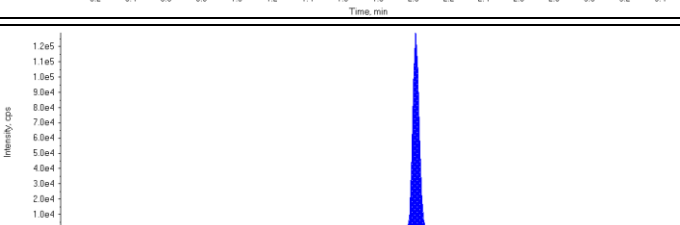
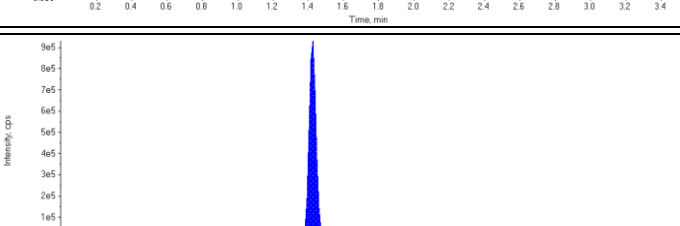
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 107. ng/L Area Ratio: 33.3 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 34.1 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 101. ng/L Area Ratio: 13.6 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 104. ng/L Area Ratio: 17.1 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 109. ng/L Area Ratio: 19.9 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 17.1 Sample Type: (Standard)	

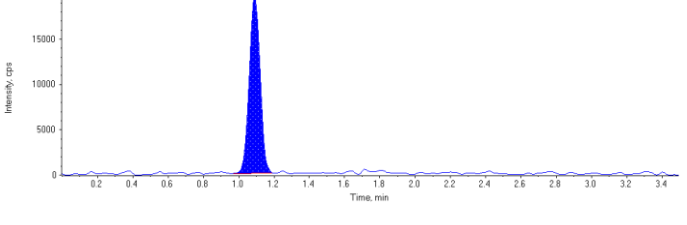
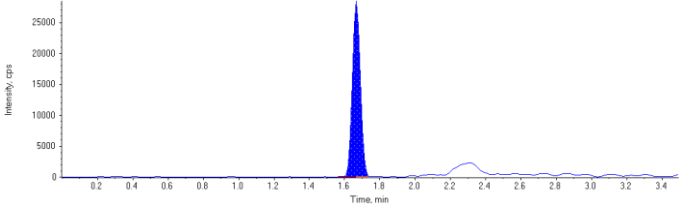
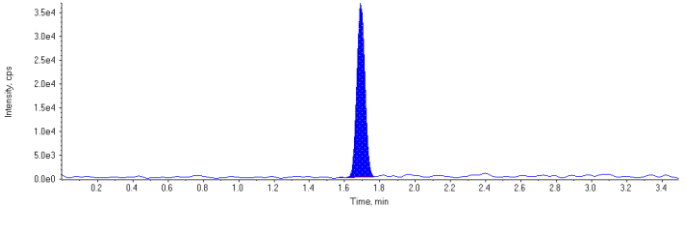
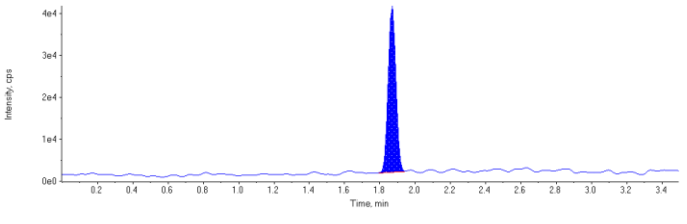
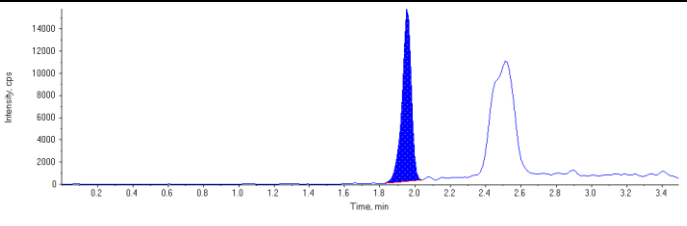
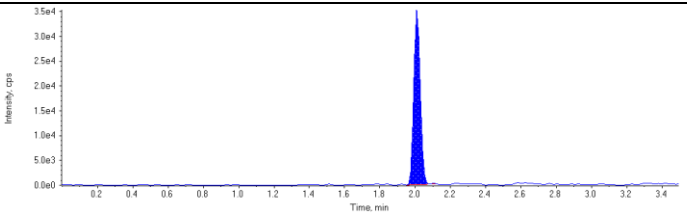
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 96.8 ng/L Area Ratio: 0.0356 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 96.9 ng/L Area Ratio: 0.120 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 92.7 ng/L Area Ratio: 0.100 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 89.4 ng/L Area Ratio: 0.0386 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 94.0 ng/L Area Ratio: 0.0692 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 99.7 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

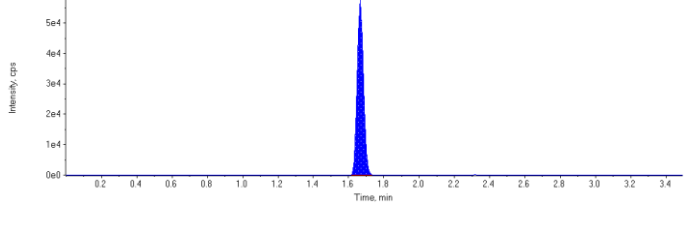
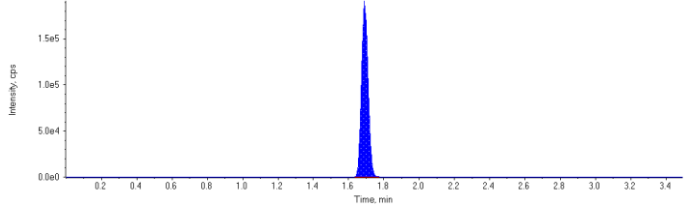
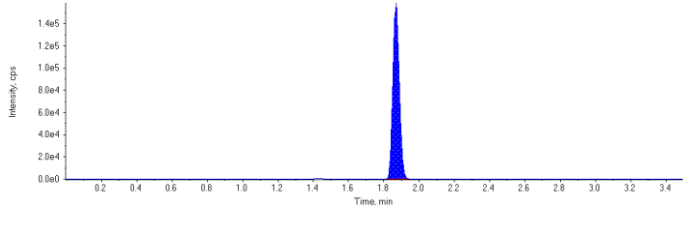
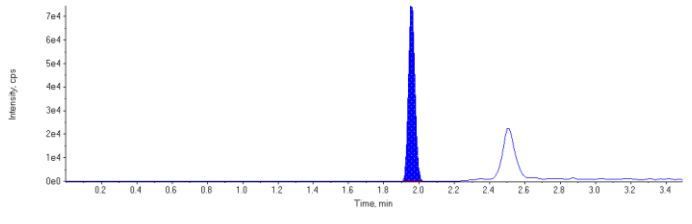
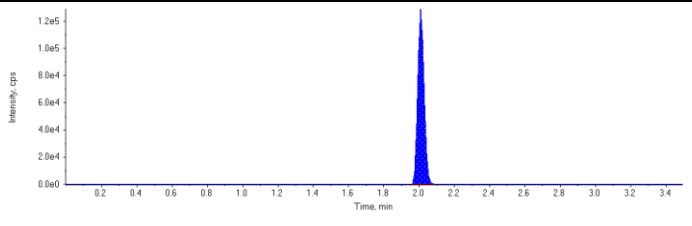
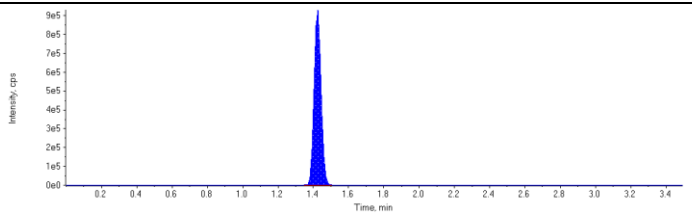
Sample Name	STD 1	Injection Vial	3
Sample ID	STD 1	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:00:47 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	143000.	1.67	1.00	-
MPFHpA	491000.	1.69	1.00	-
MPFOA	404000.	1.87	1.00	-
MPFOS	192000.	1.96	1.00	-
MPFNA	325000.	2.01	1.00	-
13C6-PFHxA IS	2590000.	1.42	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	83500	1.09	2.00	2.50	125.0
PFHxS 1	88300	1.67	2.00	2.37	119.0
PFHpA 1	116000	1.69	2.00	2.07	104.0
PFOA 1	120000	1.87	2.00	2.10	105.0
PFOS 1	56300	1.96	2.00	2.26	113.0
PFNA 1	89800	2.01	2.00	2.08	104.0
18O2-PFHxS	143000	1.67	100.	85.3	85.3
13C4-PFHpA	491000	1.69	100.	98.9	98.9
13C4-PFOA	404000	1.87	100.	93.3	93.3
13C4-PFOS	192000	1.96	100.	93.9	93.9
13C5-PFNA	325000	2.01	100.	93.9	93.9
13C6-PFHxA	2590000	1.42	100.	104.	104.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

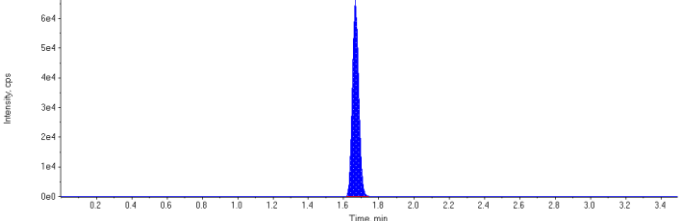
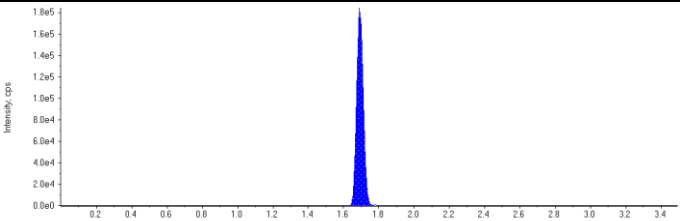
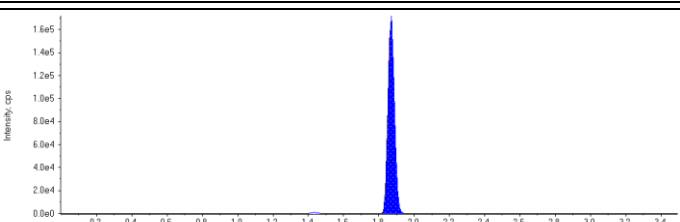
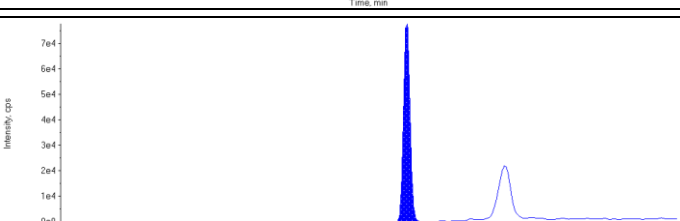
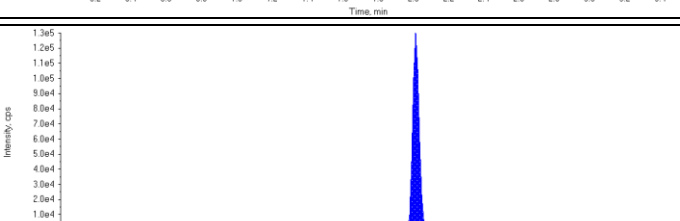
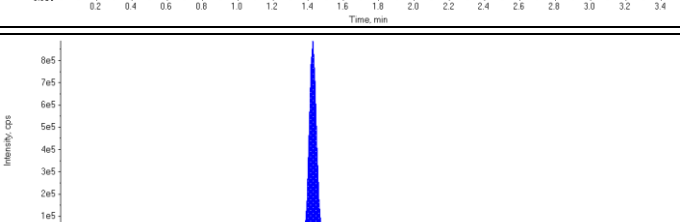
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 2.50 ng/L Area Ratio: 0.586 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 2.37 ng/L Area Ratio: 0.620 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 2.07 ng/L Area Ratio: 0.236 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 2.10 ng/L Area Ratio: 0.297 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 2.26 ng/L Area Ratio: 0.294 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 2.08 ng/L Area Ratio: 0.276 Sample Type: (Standard)	

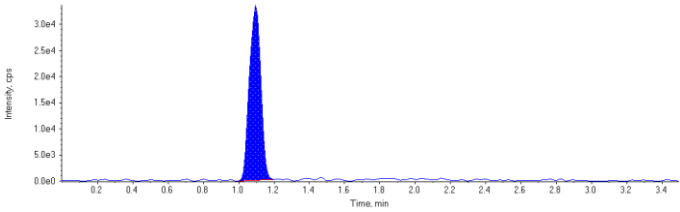
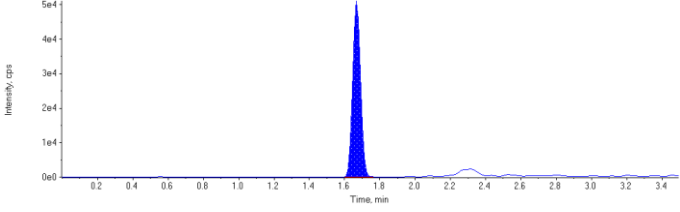
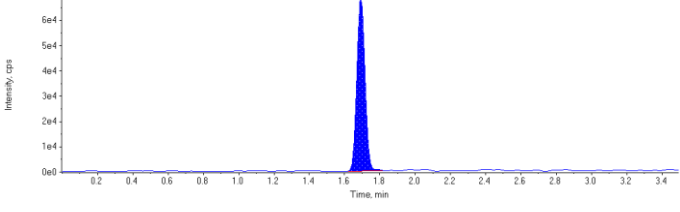
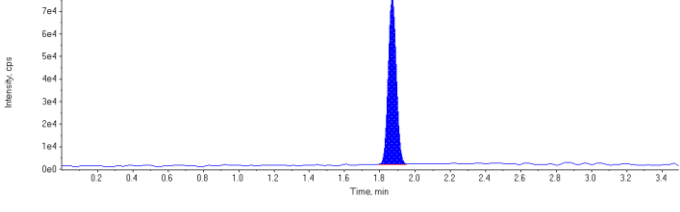
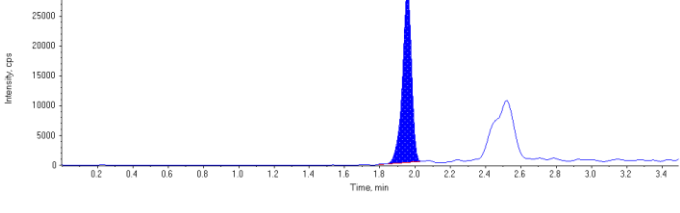
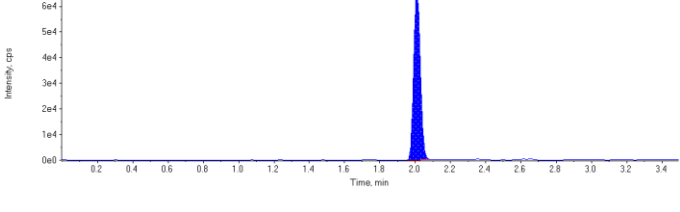
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 85.3 ng/L Area Ratio: 0.0551 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.9 ng/L Area Ratio: 0.190 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.3 ng/L Area Ratio: 0.156 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 93.9 ng/L Area Ratio: 0.0740 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 93.9 ng/L Area Ratio: 0.126 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 104. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

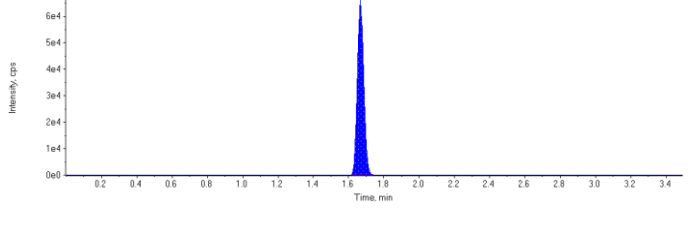
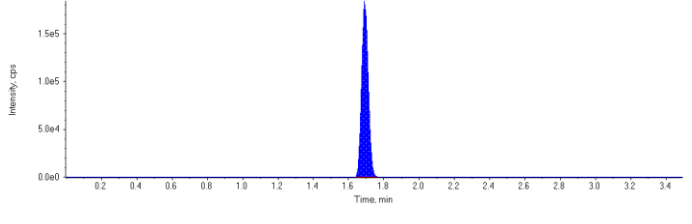
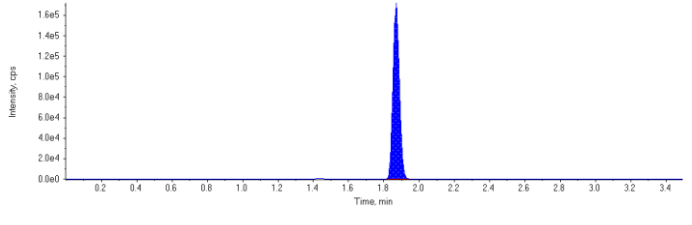
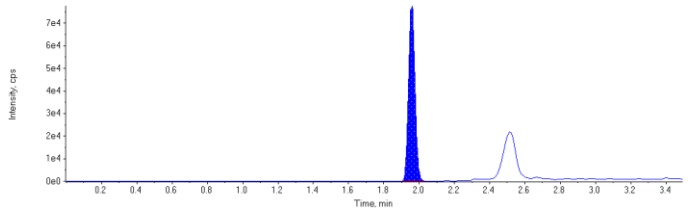
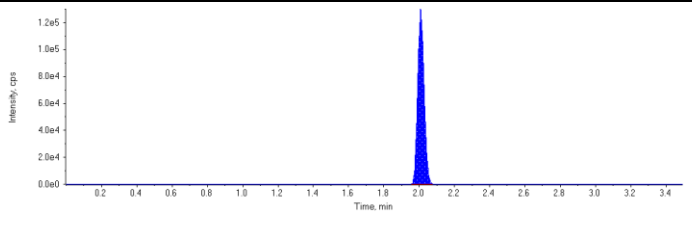
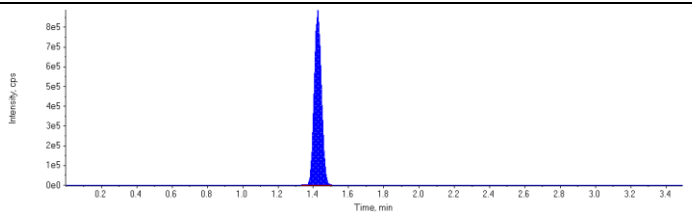
Sample Name	STD 2	Injection Vial	4
Sample ID	STD 2	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:05:58 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	165000.	1.67	1.00	-
MPFHpA	475000.	1.69	1.00	-
MPFOA	434000.	1.87	1.00	-
MPFOS	198000.	1.96	1.00	-
MPFNA	328000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	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	149000	1.10	4.00	3.62	90.5
PFHxS 1	157000	1.67	4.00	3.50	87.5
PFHpA 1	221000	1.69	4.00	3.99	99.7
PFOA 1	234000	1.87	4.00	3.75	93.8
PFOS 1	104000	1.96	4.00	3.72	93.0
PFNA 1	173000	2.01	4.00	3.97	99.3
18O2-PFHxS	165000	1.67	100.	101.	101.0
13C4-PFHpA	475000	1.69	100.	98.0	98.0
13C4-PFOA	434000	1.87	100.	103.	103.0
13C4-PFOS	198000	1.96	100.	99.7	99.7
13C5-PFNA	328000	2.01	100.	97.1	97.1
13C6-PFHxA	2530000	1.43	100.	102.	102.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.43(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

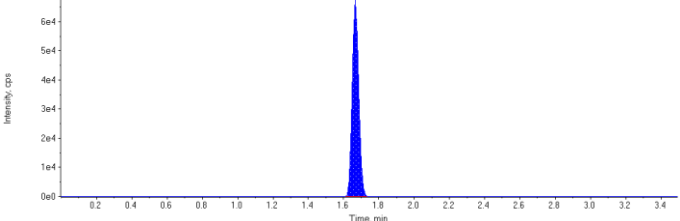
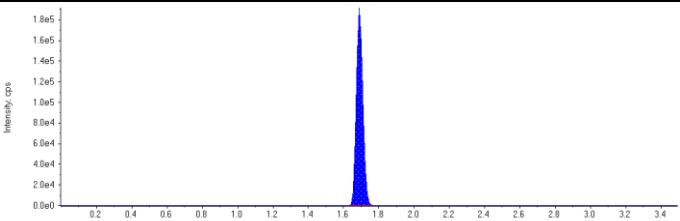
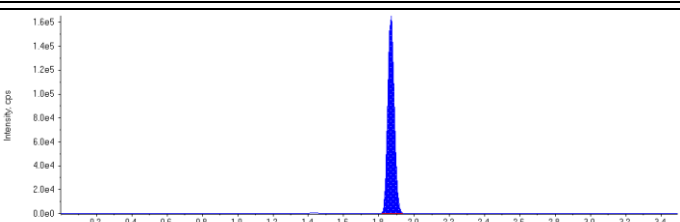
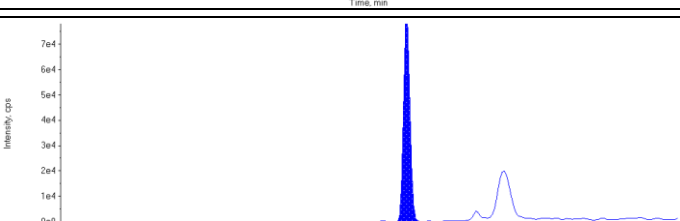
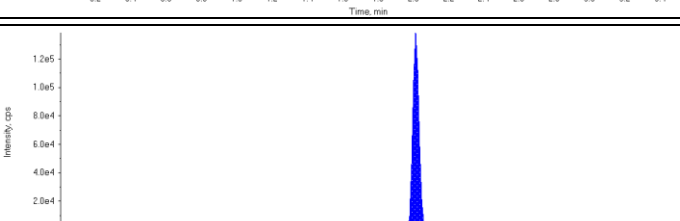
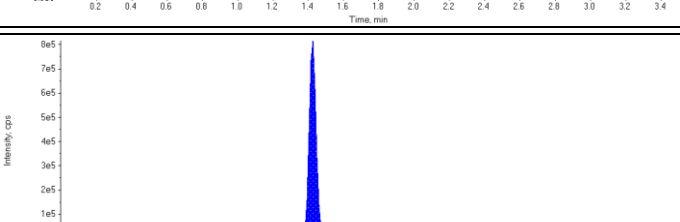
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 3.62 ng/L Area Ratio: 0.903 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 3.50 ng/L Area Ratio: 0.948 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 3.99 ng/L Area Ratio: 0.466 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 3.75 ng/L Area Ratio: 0.539 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 3.72 ng/L Area Ratio: 0.523 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 3.97 ng/L Area Ratio: 0.526 Sample Type: (Standard)	

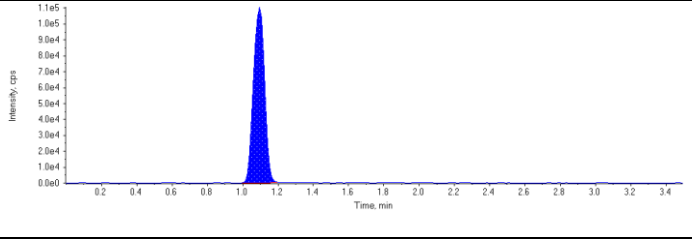
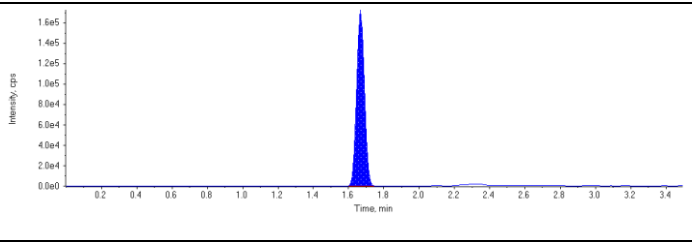
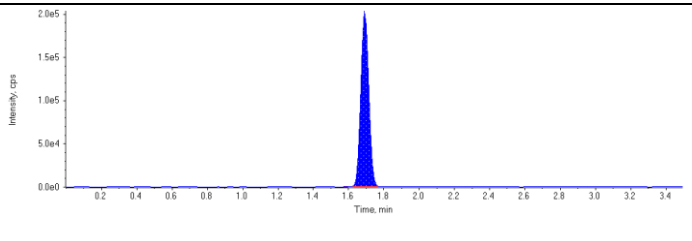
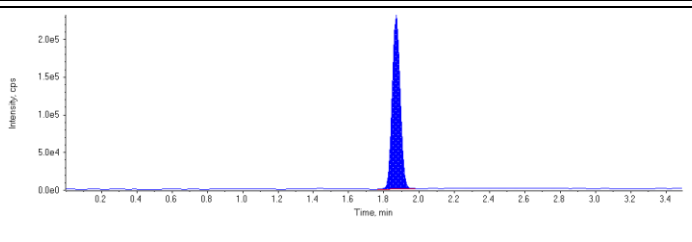
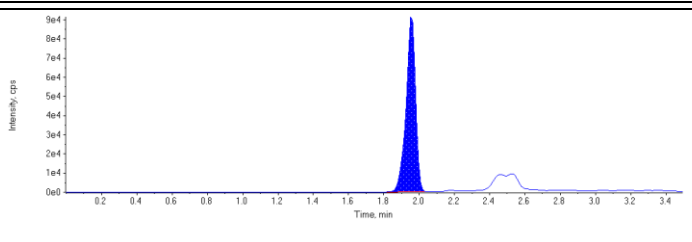
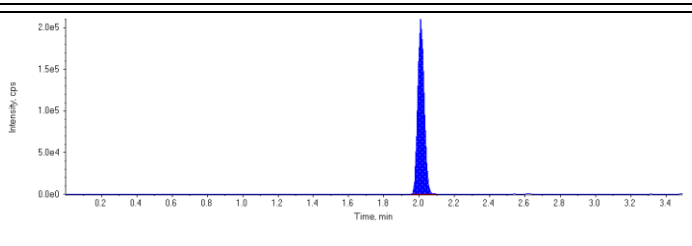
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0655 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.0 ng/L Area Ratio: 0.188 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 103. ng/L Area Ratio: 0.172 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 99.7 ng/L Area Ratio: 0.0786 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 97.1 ng/L Area Ratio: 0.130 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

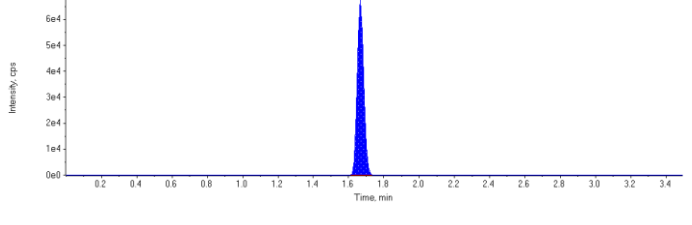
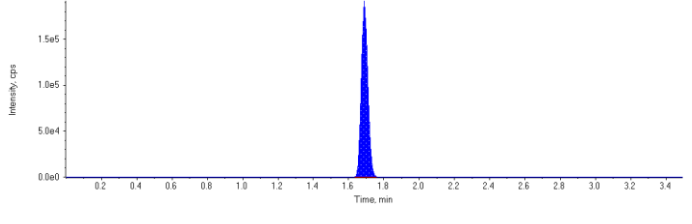
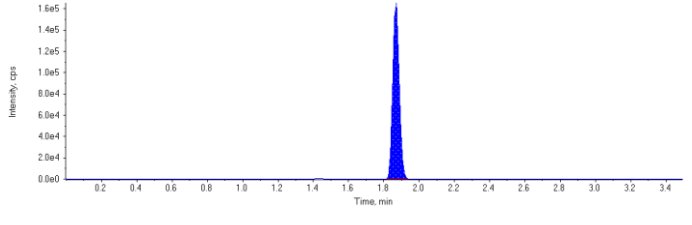
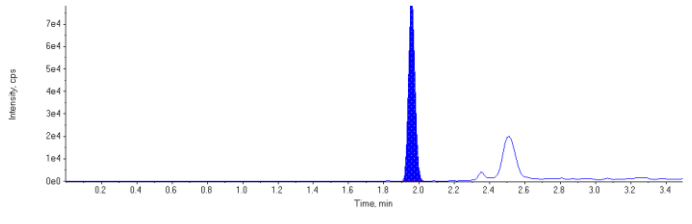
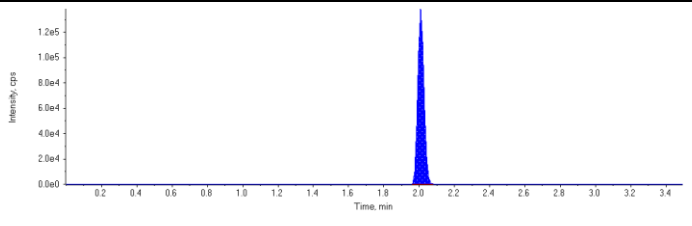
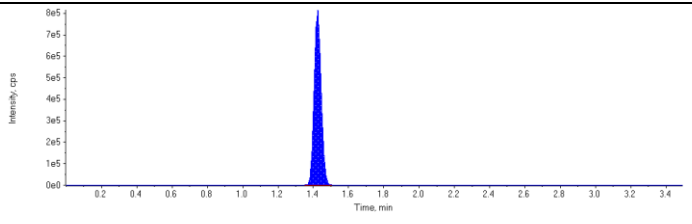
Sample Name	STD 3	Injection Vial	5
Sample ID	STD 3	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:11:03 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	171000.	1.67	1.00	-
MPFHpA	484000.	1.69	1.00	-
MPFOA	424000.	1.87	1.00	-
MPFOS	204000.	1.96	1.00	-
MPFNA	340000.	2.01	1.00	-
13C6-PFHxA IS	2270000.	1.42	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	490000	1.10	12.0	10.5	87.8
PFHxS 1	526000	1.67	12.0	10.8	89.9
PFHpA 1	633000	1.69	12.0	11.0	91.7
PFOA 1	719000	1.87	12.0	11.7	97.3
PFOS 1	342000	1.96	12.0	11.1	92.6
PFNA 1	527000	2.01	12.0	11.7	97.7
18O2-PFHxS	171000	1.67	100.	117.	117.0
13C4-PFHpA	484000	1.69	100.	111.	111.0
13C4-PFOA	424000	1.87	100.	111.	111.0
13C4-PFOS	204000	1.96	100.	114.	114.0
13C5-PFNA	340000	2.01	100.	112.	112.0
13C6-PFHxA	2270000	1.42	100.	91.7	91.7

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

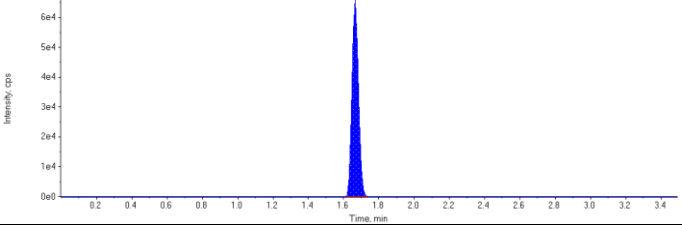
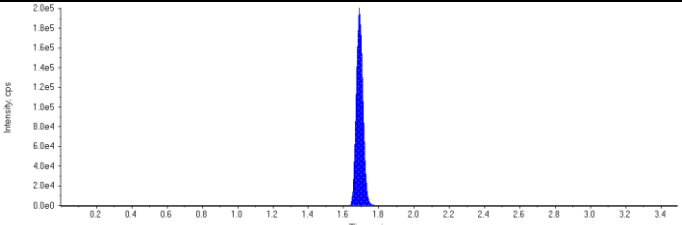
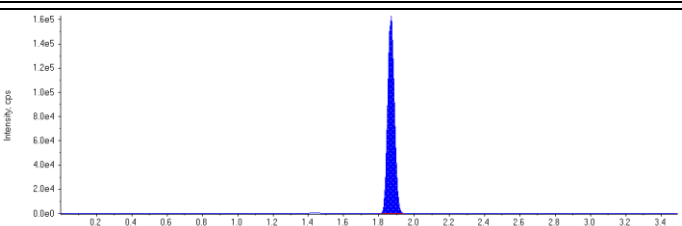
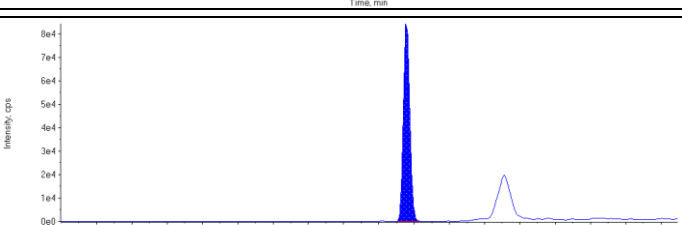
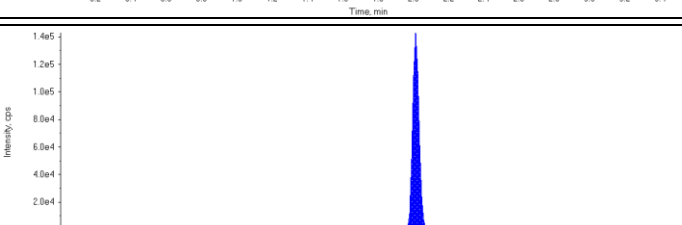
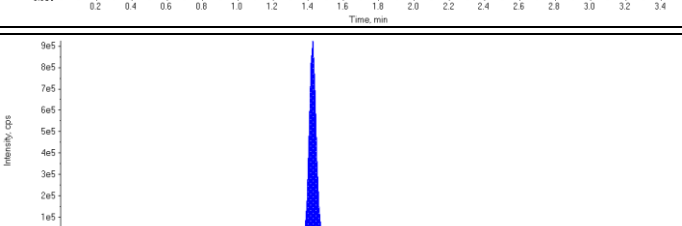
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 10.5 ng/L Area Ratio: 2.86 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 10.8 ng/L Area Ratio: 3.07 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 11.0 ng/L Area Ratio: 1.31 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 11.7 ng/L Area Ratio: 1.70 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 11.1 ng/L Area Ratio: 1.68 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 11.7 ng/L Area Ratio: 1.55 Sample Type: (Standard)	

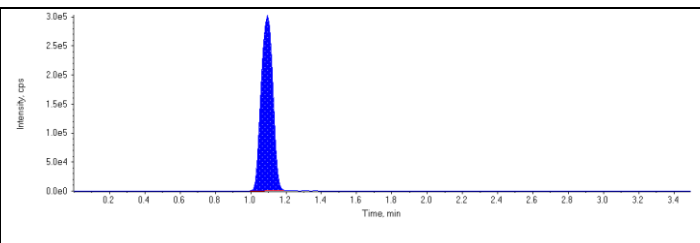
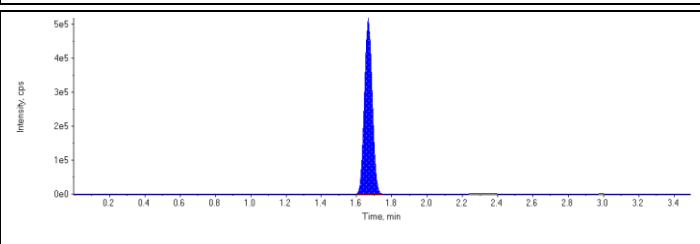
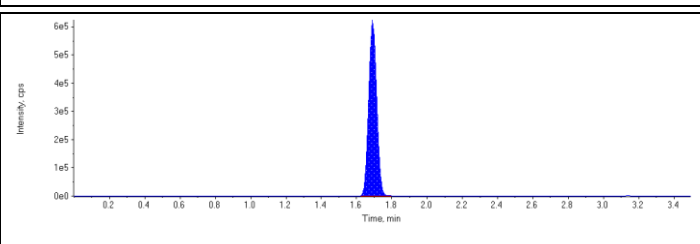
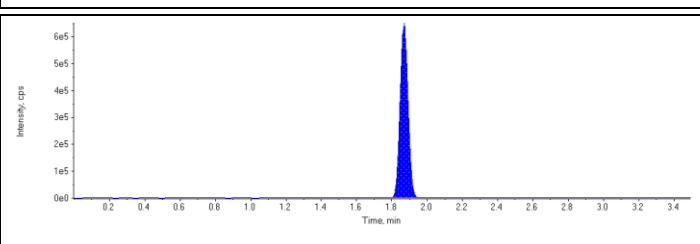
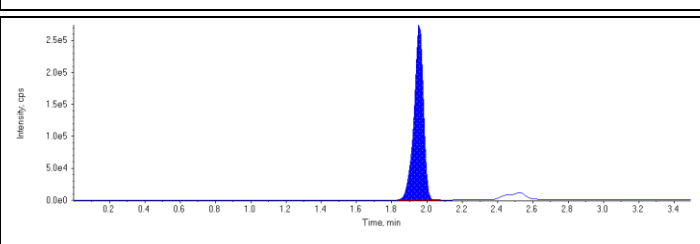
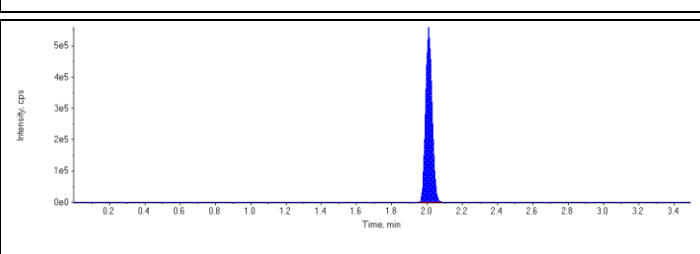
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 117. ng/L Area Ratio: 0.0754 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 111. ng/L Area Ratio: 0.213 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 111. ng/L Area Ratio: 0.186 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 114. ng/L Area Ratio: 0.0897 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 112. ng/L Area Ratio: 0.150 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 91.7 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

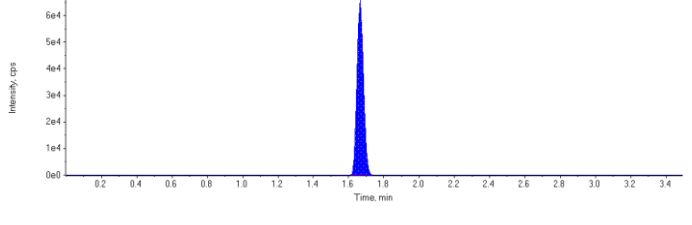
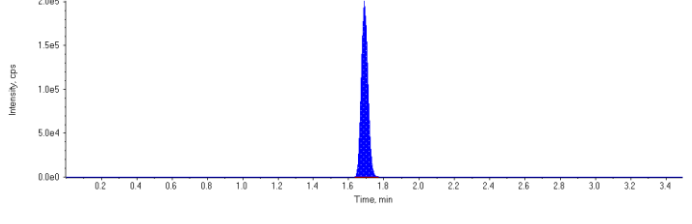
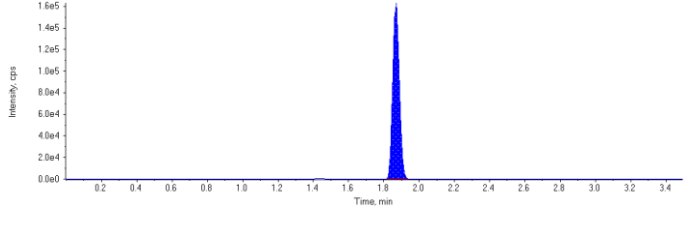
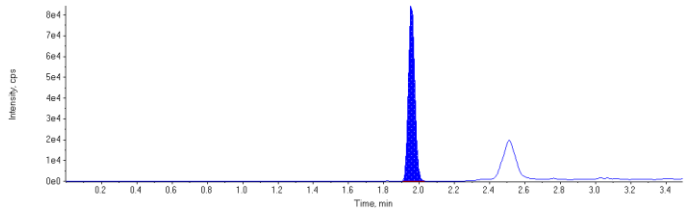
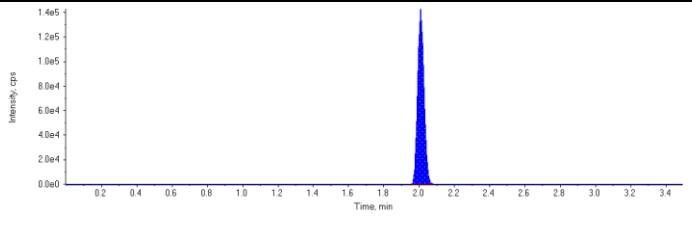
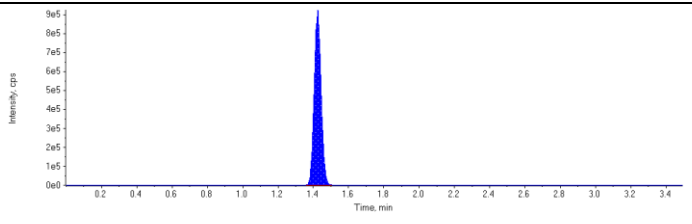
Sample Name	STD 4	Injection Vial	6
Sample ID	STD 4	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:16:09 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	167000.	1.67	1.00	-
MPFHpA	516000.	1.69	1.00	-
MPFOA	425000.	1.87	1.00	-
MPFOS	214000.	1.96	1.00	-
MPFNA	359000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	1.42	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	1390000	1.09	30.0	29.9	99.5
PFHxS 1	1570000	1.67	30.0	32.4	108.0
PFHpA 1	1950000	1.69	30.0	31.6	105.0
PFOA 1	2020000	1.87	30.0	32.5	108.0
PFOS 1	1010000	1.96	30.0	30.5	102.0
PFNA 1	1420000	2.01	30.0	30.0	100.0
18O2-PFHxS	167000	1.67	100.	102.	102.0
13C4-PFHpA	516000	1.69	100.	106.	106.0
13C4-PFOA	425000	1.87	100.	100.	100.0
13C4-PFOS	214000	1.96	100.	107.	107.0
13C5-PFNA	359000	2.01	100.	106.	106.0
13C6-PFHxA	2530000	1.42	100.	102.	102.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

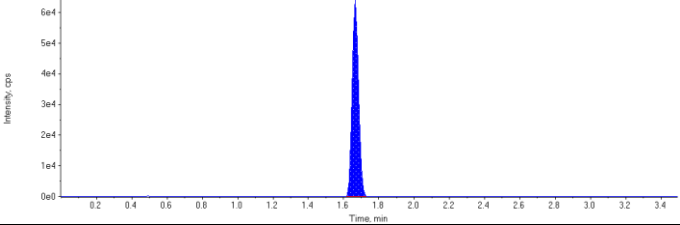
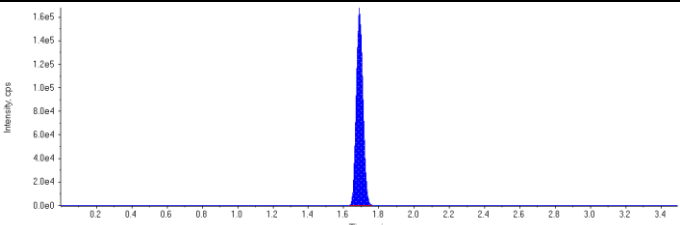
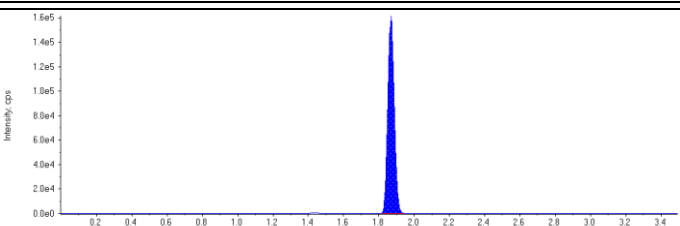
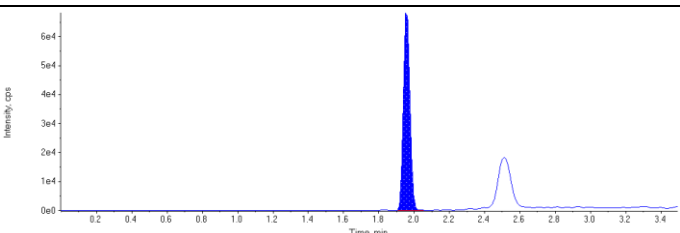
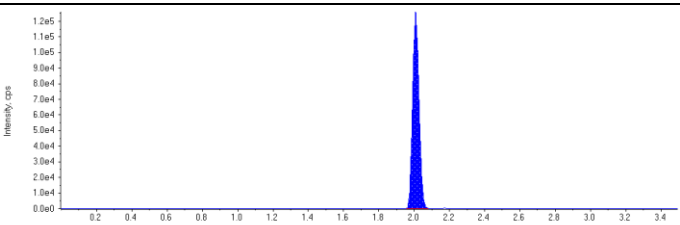
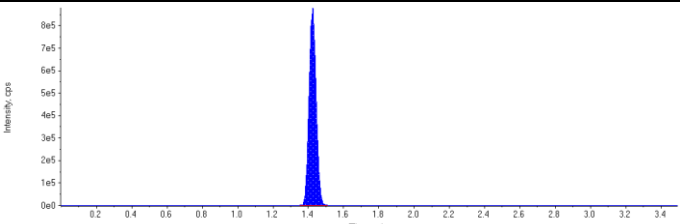
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 29.9 ng/L Area Ratio: 8.31 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 32.4 ng/L Area Ratio: 9.37 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 31.6 ng/L Area Ratio: 3.77 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 32.5 ng/L Area Ratio: 4.74 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 30.5 ng/L Area Ratio: 4.71 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 30.0 ng/L Area Ratio: 3.97 Sample Type: (Standard)	

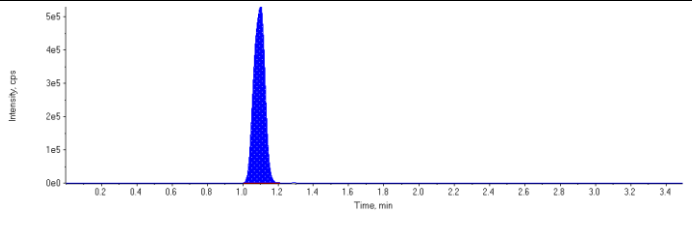
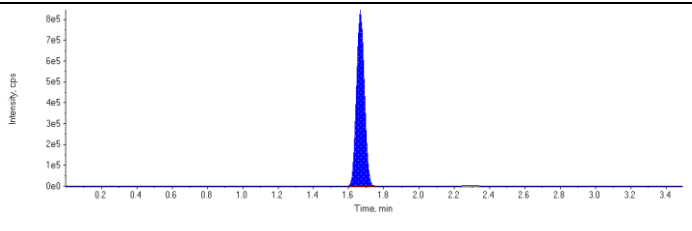
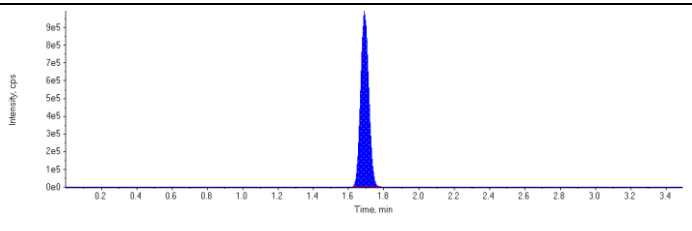
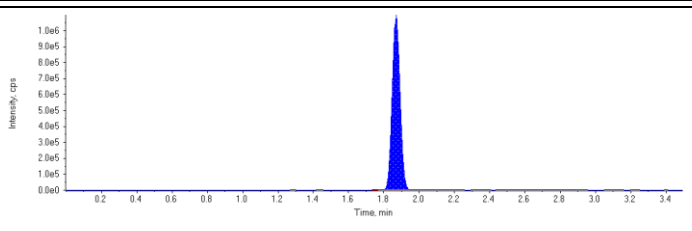
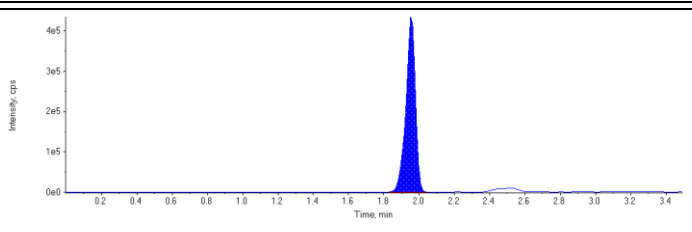
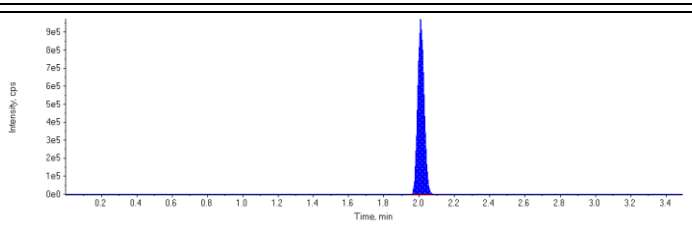
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 102. ng/L Area Ratio: 0.0660 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 106. ng/L Area Ratio: 0.204 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 100. ng/L Area Ratio: 0.168 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 107. ng/L Area Ratio: 0.0844 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 106. ng/L Area Ratio: 0.142 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

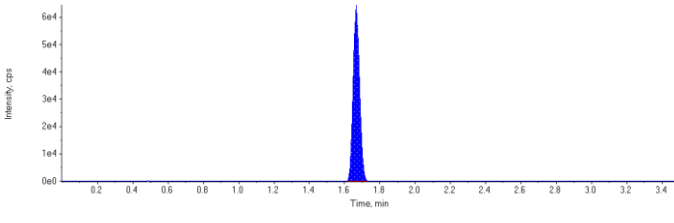
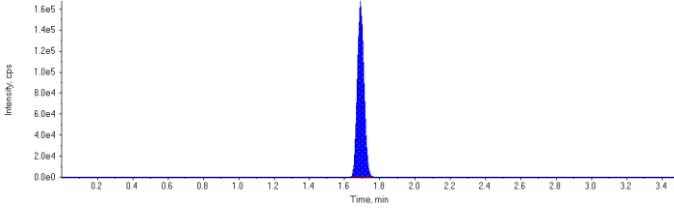
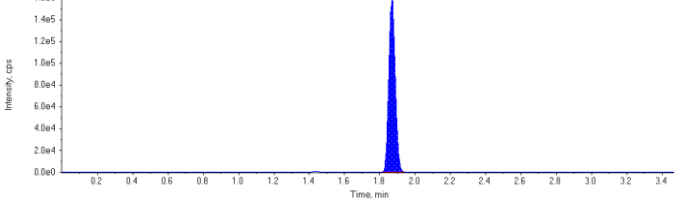
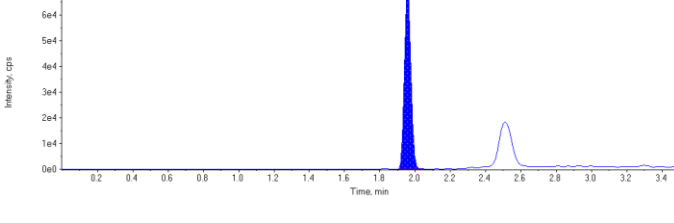
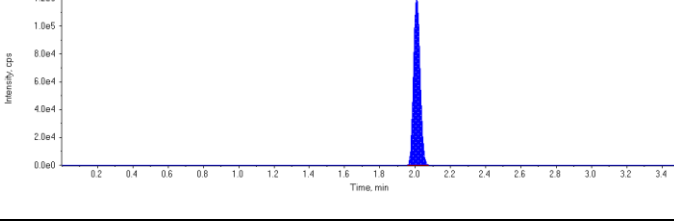
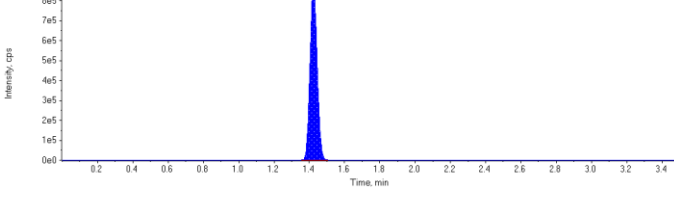
Sample Name	STD 5	Injection Vial	7
Sample ID	STD 5	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:21:15 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	160000.	1.67	1.00	-
MPFHpA	431000.	1.69	1.00	-
MPFOA	409000.	1.87	1.00	-
MPFOS	177000.	1.96	1.00	-
MPFNA	316000.	2.01	1.00	-
13C6-PFHxA IS	2470000.	1.42	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	2410000	1.10	60.0	53.6	89.3
PFHxS 1	2580000	1.67	60.0	55.6	92.6
PFHpA 1	3110000	1.69	60.0	60.5	101.0
PFOA 1	3370000	1.87	60.0	56.4	94.0
PFOS 1	1630000	1.96	60.0	59.0	98.4
PFNA 1	2430000	2.01	60.0	58.2	97.0
18O2-PFHxS	160000	1.67	100.	101.	101.0
13C4-PFHpA	431000	1.69	100.	90.9	90.9
13C4-PFOA	409000	1.87	100.	99.0	99.0
13C4-PFOS	177000	1.96	100.	91.2	91.2
13C5-PFNA	316000	2.01	100.	95.6	95.6
13C6-PFHxA	2470000	1.42	100.	99.6	99.6

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

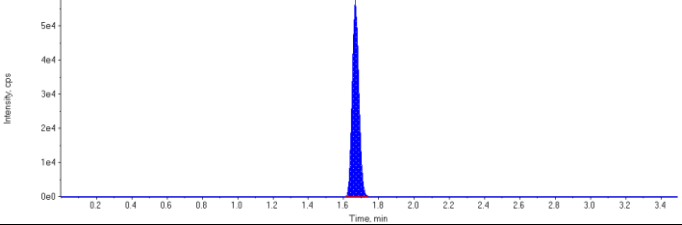
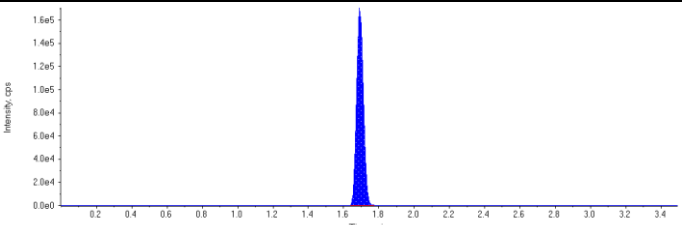
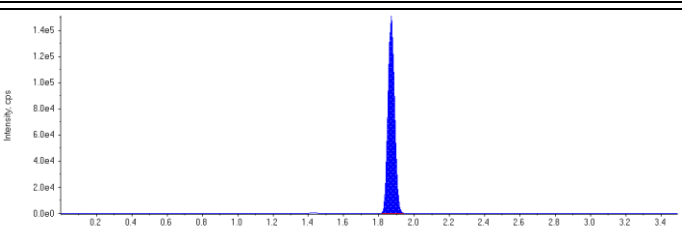
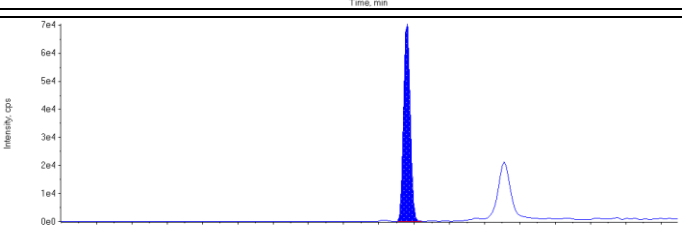
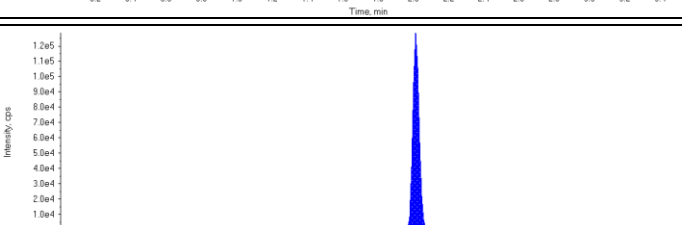
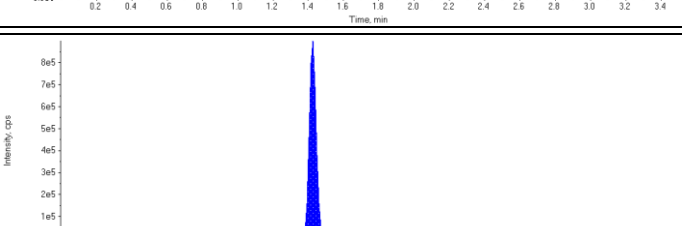
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 53.6 ng/L Area Ratio: 15.0 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 55.6 ng/L Area Ratio: 16.1 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 60.5 ng/L Area Ratio: 7.23 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 56.4 ng/L Area Ratio: 8.24 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 59.0 ng/L Area Ratio: 9.17 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 58.2 ng/L Area Ratio: 7.70 Sample Type: (Standard)	

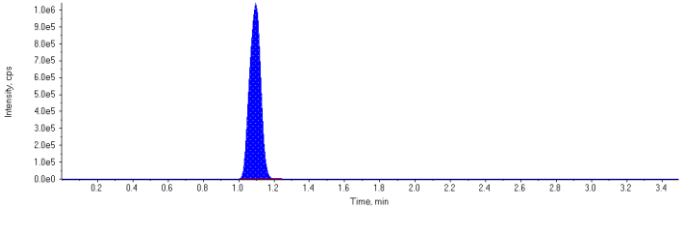
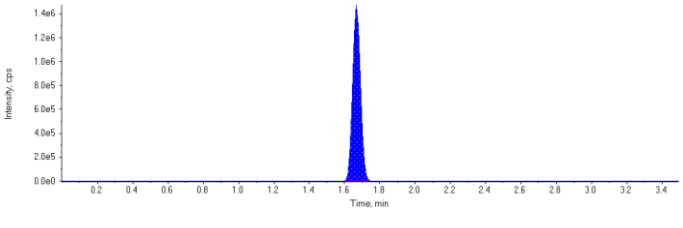
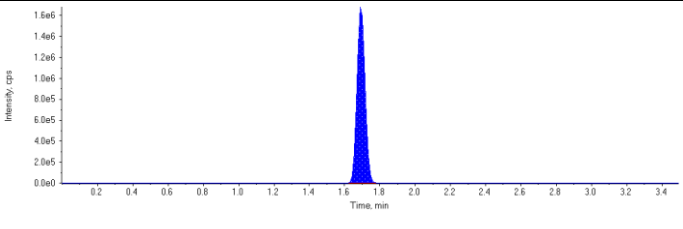
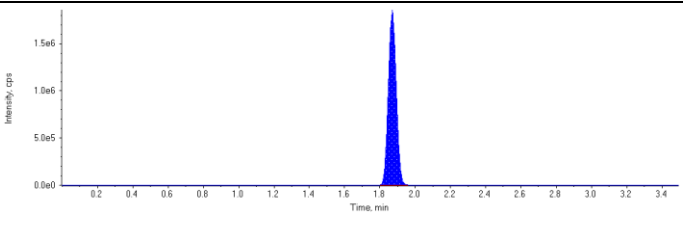
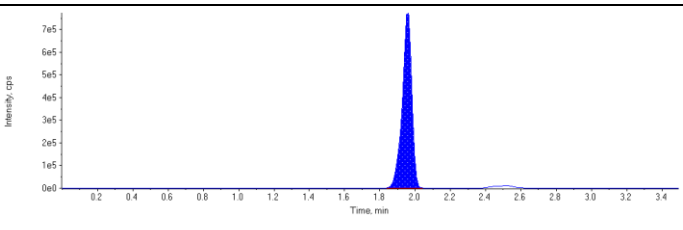
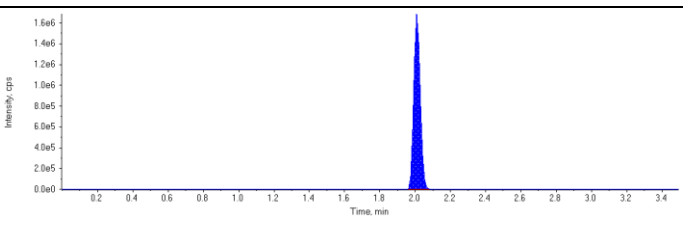
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0650 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 90.9 ng/L Area Ratio: 0.174 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 99.0 ng/L Area Ratio: 0.166 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 91.2 ng/L Area Ratio: 0.0719 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 95.6 ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 99.6 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

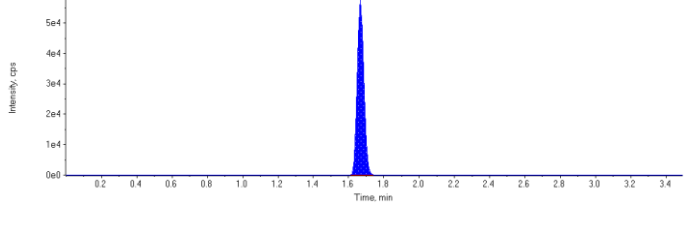
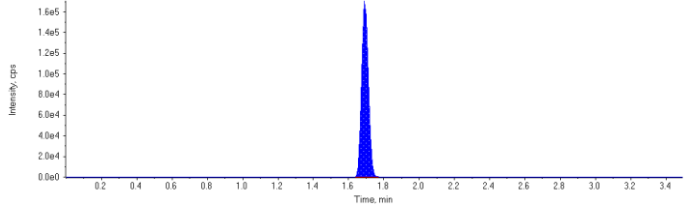
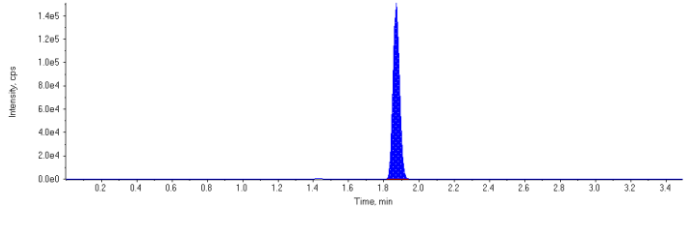
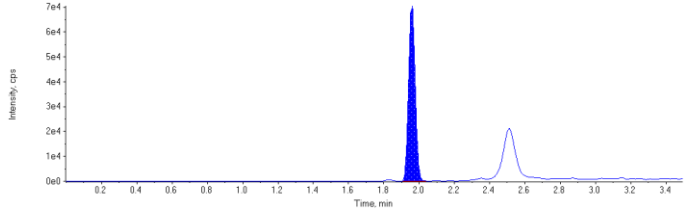
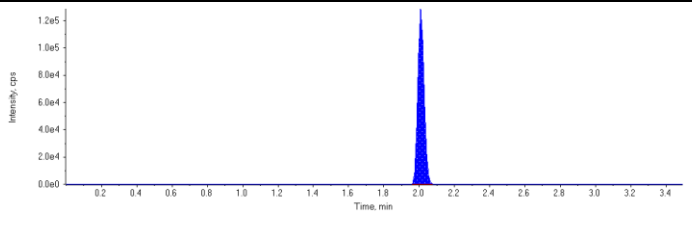
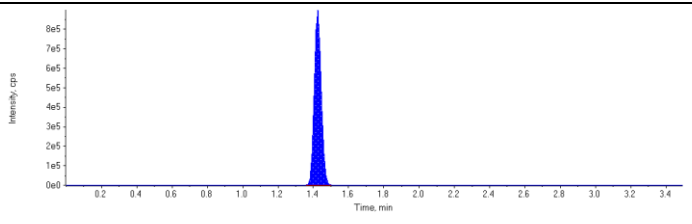
Sample Name	STD 6	Injection Vial	8
Sample ID	STD 6	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:26:22 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	150000.	1.67	1.00	-
MPFHpA	453000.	1.69	1.00	-
MPFOA	386000.	1.87	1.00	-
MPFOS	185000.	1.96	1.00	-
MPFNA	318000.	2.01	1.00	-
13C6-PFHxA IS	2480000.	1.42	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	4540000	1.10	100.	108.	108.0
PFHxS 1	4500000	1.67	100.	103.	103.0
PFHpA 1	5360000	1.69	100.	98.9	98.9
PFOA 1	5740000	1.87	100.	102.	102.0
PFOS 1	2920000	1.96	100.	101.	101.0
PFNA 1	4290000	2.01	100.	102.	102.0
18O2-PFHxS	150000	1.67	100.	93.4	93.4
13C4-PFHpA	453000	1.69	100.	95.1	95.1
13C4-PFOA	386000	1.87	100.	93.1	93.1
13C4-PFOS	185000	1.96	100.	94.4	94.4
13C5-PFNA	318000	2.01	100.	95.8	95.8
13C6-PFHxA	2480000	1.42	100.	100.	100.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Standard)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Standard)	This image is not available

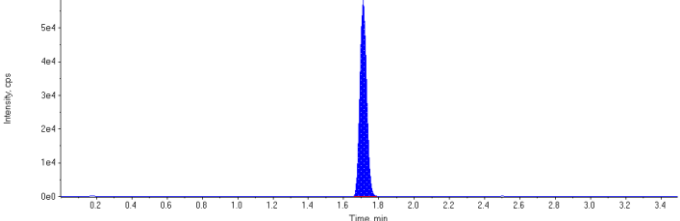
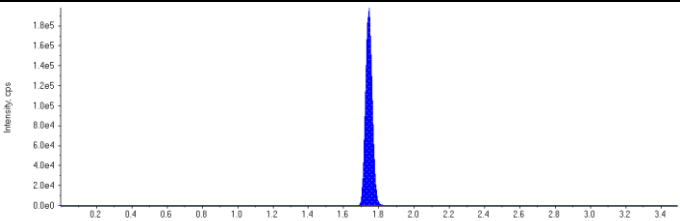
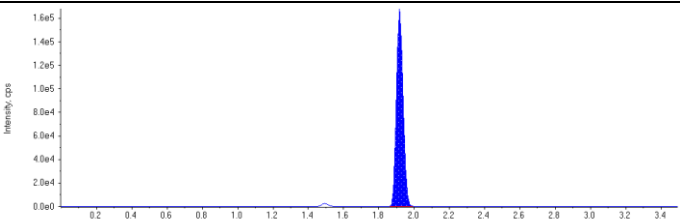
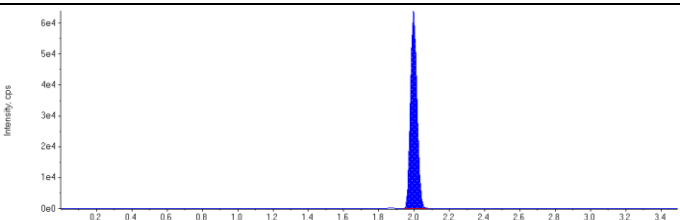
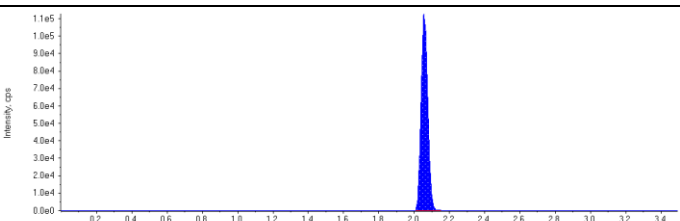
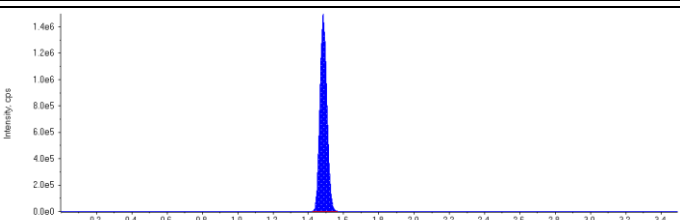
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 108. ng/L Area Ratio: 30.3 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 30.1 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 98.9 ng/L Area Ratio: 11.8 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 14.8 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 101. ng/L Area Ratio: 15.8 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 13.5 Sample Type: (Standard)	

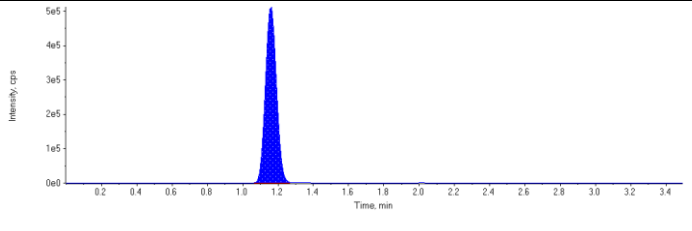
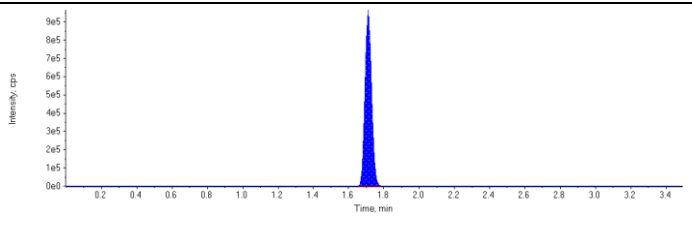
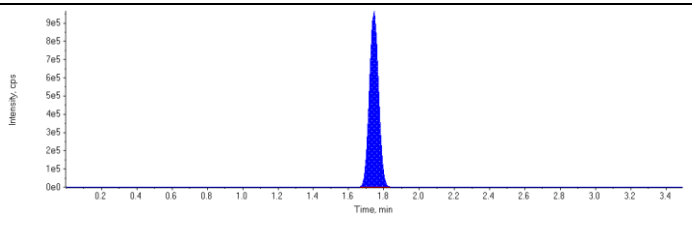
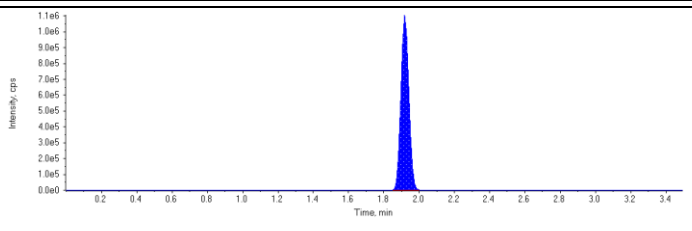
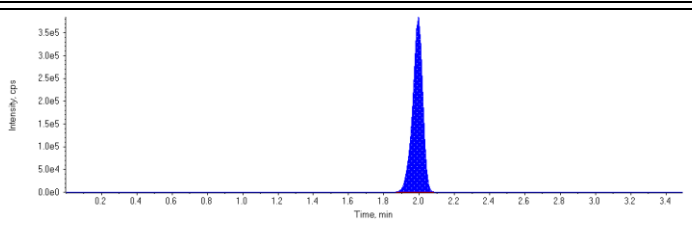
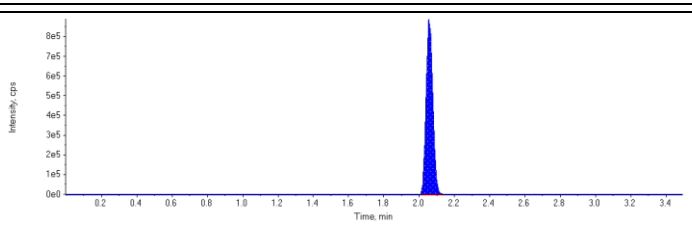
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 93.4 ng/L Area Ratio: 0.0603 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 95.1 ng/L Area Ratio: 0.182 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.1 ng/L Area Ratio: 0.156 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 94.4 ng/L Area Ratio: 0.0744 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 95.8 ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 100. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

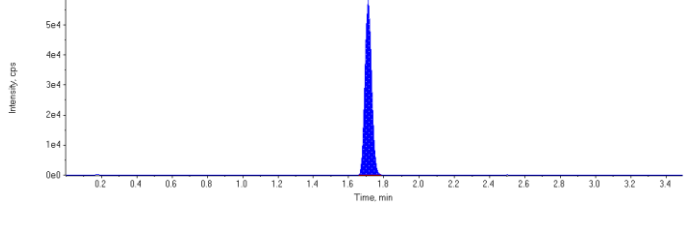
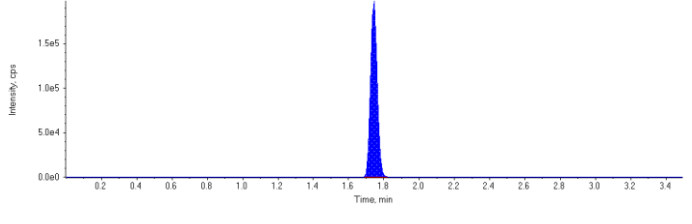
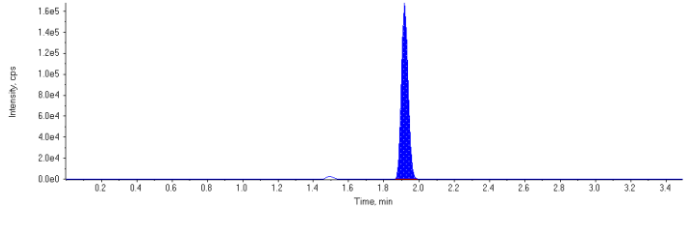
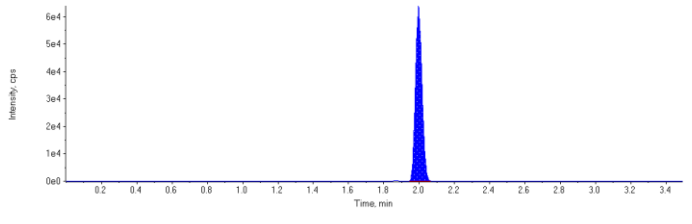
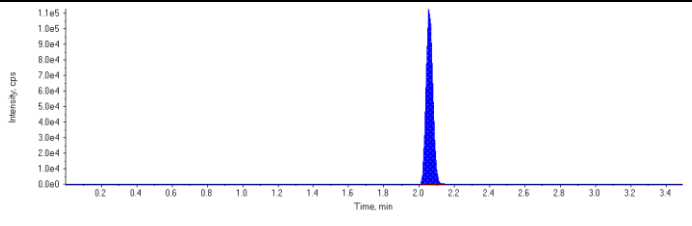
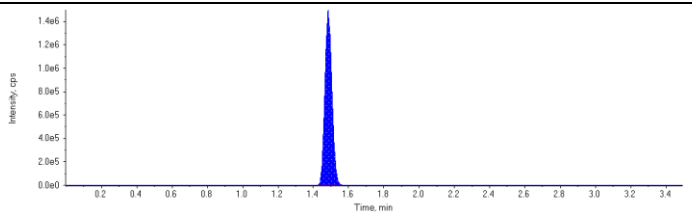
Sample Name	ICV	Injection Vial	9
Sample ID	ICV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:15:41 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	152000.	1.71	1.00	-
MPFHpA	517000.	1.74	1.00	-
MPFOA	437000.	1.92	1.00	-
MPFOS	163000.	2.00	1.00	-
MPFNA	297000.	2.06	1.00	-
13C6-PFHxA IS	4130000.	1.48	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	1.16	50.0	47.6	95.3
PFHxS 1	2450000	1.71	50.0	49.2	98.4
PFHpA 1	3460000	1.74	50.0	49.7	99.5
PFOA 1	3460000	1.92	50.0	48.2	96.3
PFOS 1	1530000	2.00	50.0	51.5	103.0
PFNA 1	2340000	2.06	50.0	47.6	95.1
18O2-PFHxS	152000	1.71	100.	99.7	99.7
13C4-PFHpA	517000	1.74	100.	101.	101.0
13C4-PFOA	437000	1.92	100.	98.0	98.0
13C4-PFOS	163000	2.00	100.	91.5	91.5
13C5-PFNA	297000	2.06	100.	97.6	97.6
13C6-PFHxA	4130000	1.48	100.	104.	104.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

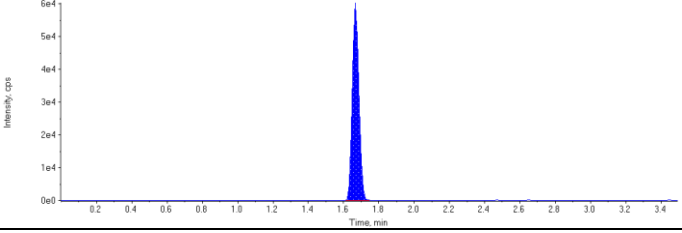
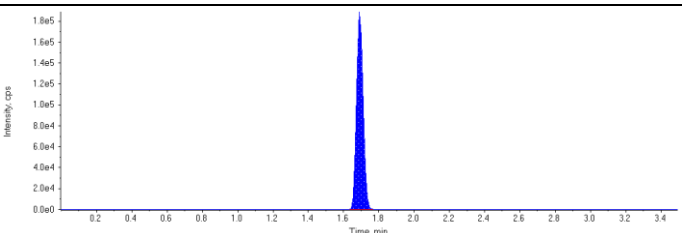
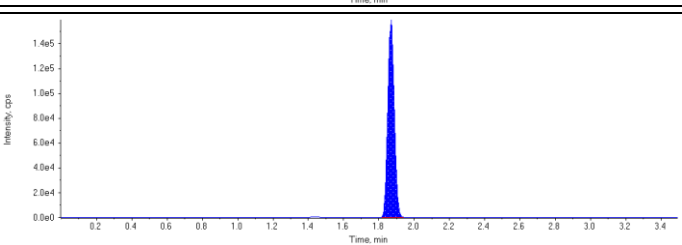
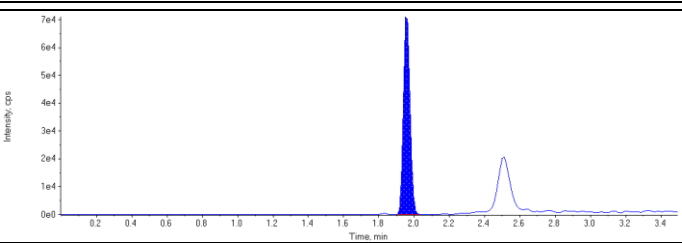
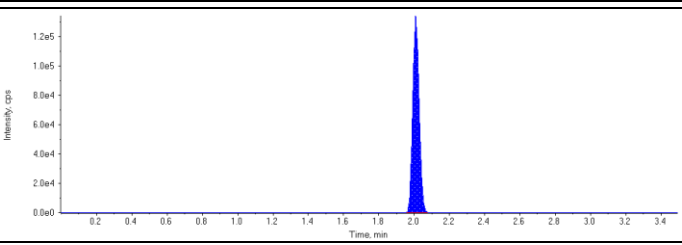
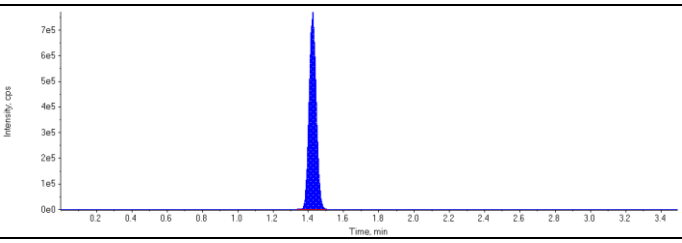
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 47.6 ng/L Area Ratio: 14.7 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 49.2 ng/L Area Ratio: 16.2 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 49.7 ng/L Area Ratio: 6.69 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 48.2 ng/L Area Ratio: 7.92 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 51.5 ng/L Area Ratio: 9.34 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 47.6 ng/L Area Ratio: 7.89 Sample Type: (Quality Control)	

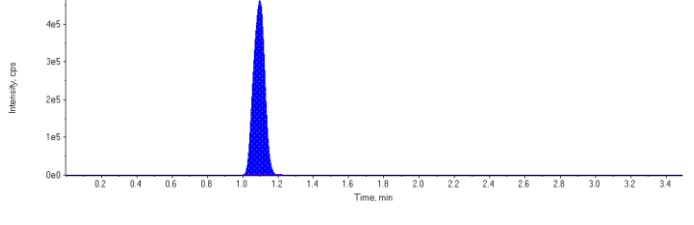
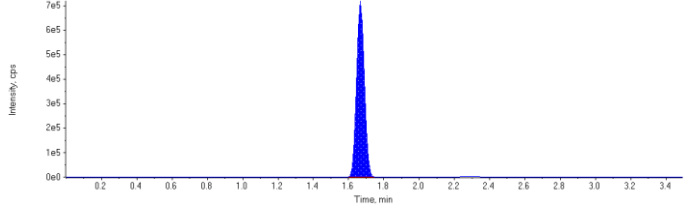
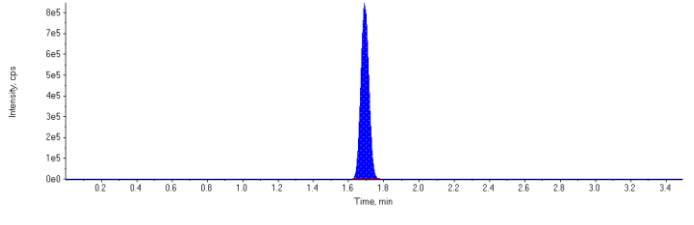
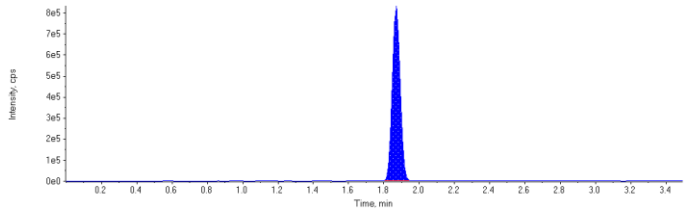
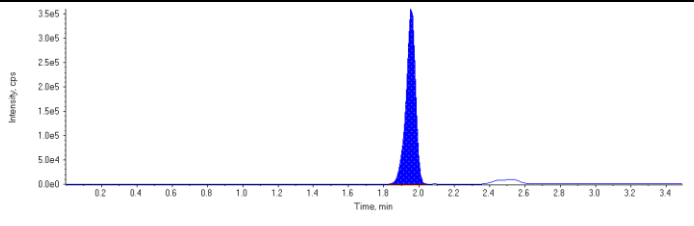
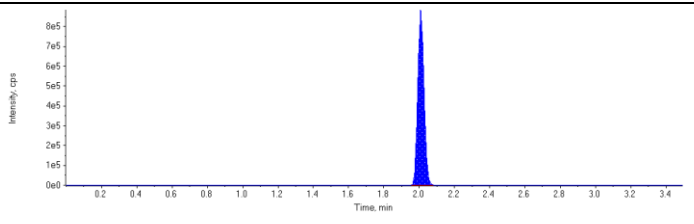
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 99.7 ng/L Area Ratio: 0.0367 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 101. ng/L Area Ratio: 0.125 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 98.0 ng/L Area Ratio: 0.106 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 91.5 ng/L Area Ratio: 0.0395 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 97.6 ng/L Area Ratio: 0.0719 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 104. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

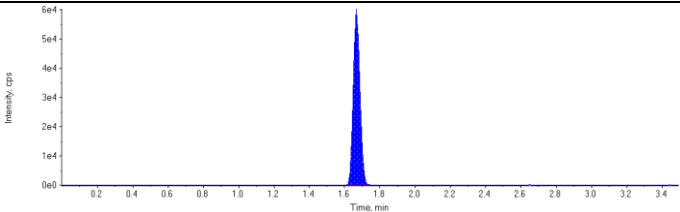
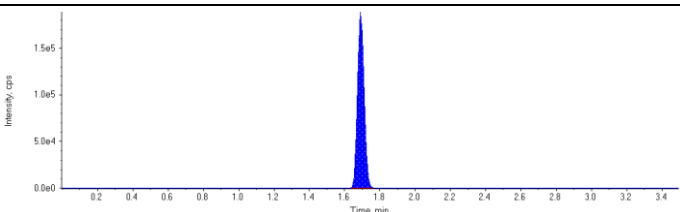
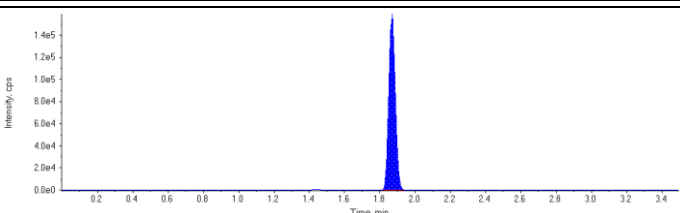
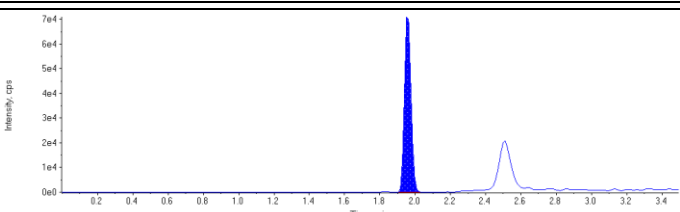
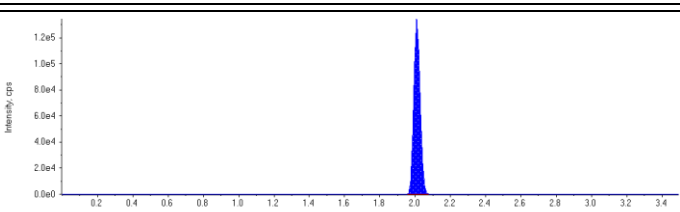
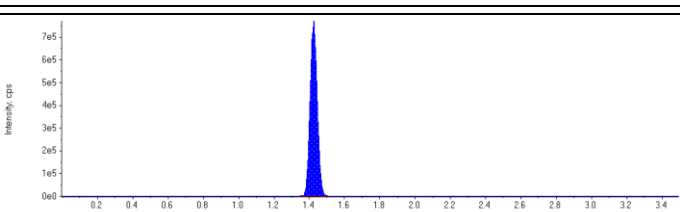
Sample Name	ICV	Injection Vial	9
Sample ID	ICV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:41:39 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.67	1.00	-
MPFHpA	489000.	1.69	1.00	-
MPFOA	406000.	1.87	1.00	-
MPFOS	186000.	1.96	1.00	-
MPFNA	338000.	2.01	1.00	-
13C6-PFHxA IS	2180000.	1.42	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	2090000	1.10	50.0	47.9	95.9
PFHxS 1	2190000	1.67	50.0	48.6	97.2
PFHpA 1	2650000	1.69	50.0	45.3	90.7
PFOA 1	2580000	1.87	50.0	43.5	87.0
PFOS 1	1340000	1.96	50.0	46.4	92.8
PFNA 1	2170000	2.01	50.0	48.4	96.9
18O2-PFHxS	156000	1.67	100.	111.	111.0
13C4-PFHpA	489000	1.69	100.	117.	117.0
13C4-PFOA	406000	1.87	100.	112.	112.0
13C4-PFOS	186000	1.96	100.	108.	108.0
13C5-PFNA	338000	2.01	100.	116.	116.0
13C6-PFHxA	2180000	1.42	100.	87.9	87.9

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 47.9 ng/L Area Ratio: 13.4 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 48.6 ng/L Area Ratio: 14.1 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 45.3 ng/L Area Ratio: 5.42 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 43.5 ng/L Area Ratio: 6.35 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 46.4 ng/L Area Ratio: 7.20 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 48.4 ng/L Area Ratio: 6.41 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 111. ng/L Area Ratio: 0.0715 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 117. ng/L Area Ratio: 0.225 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 112. ng/L Area Ratio: 0.187 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 108. ng/L Area Ratio: 0.0855 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 116. ng/L Area Ratio: 0.155 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 87.9 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	147000		147000		493500		430500		172500		293500	
		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)
4386408~BLANK		130000	88	130000	88	375000	76	327000	76	146000	85	228000	78
STD 1		146000	99	146000	99	517000	105	413000	96	179000	104	291000	99
STD 2		147000	100	147000	100	503000	102	442000	103	177000	103	296000	101
STD 3		156000	106	156000	106	498000	101	435000	101	167000	97	307000	105
STD 4		144000	98	144000	98	467000	95	447000	104	172000	100	296000	101
STD 5		147000	100	147000	100	499000	101	448000	104	186000	108	296000	101
STD 6		142000	97	142000	97	477000	97	398000	92	154000	89	275000	94
ICV		152000	103	152000	103	517000	105	437000	102	163000	94	297000	101
CCV		156000	106	156000	106	500000	101	423000	98	177000	103	314000	107
4386408~MTRX SPK		112000	76	112000	76	335000	68	321000	75	127000	74	227000	77
4386408~MTRX SPK:D1		110000	75	110000	75	331000	67	363000	84	141000	82	263000	90
4386408~SPIKE		123000	84	123000	84	336000	68	305000	71	135000	78	218000	74
4386408~BVX814-01 (10x)		113000	77	113000	77	340000	69	322000	75	139000	81	236000	80
4386408~BVX817-01 (10x)		134000	91	134000	91	372000	75	336000	78	145000	84	240000	82
4386408~BVX818-01 (20x)		115000	78	115000	78	355000	72	335000	78	147000	85	235000	80
4386408~BVX819-01 (10x)		109000	74	109000	74	212000	43	228000	53	136000	79	183000	62
4386408~BVX769-01		103000	70	103000	70	315000	64	302000	70	137000	79	225000	77
4386408~BVX770-01		116000	79	116000	79	281000	57	273000	63	138000	80	222000	76
4386408~BVX771-01		101000	69	101000	69	263000	53	257000	60	126000	73	208000	71
4386408~BVX772-01		95400	65	95400	65	287000	58	261000	61	120000	70	205000	70
4386408~BVX773-01		97200	66	97200	66	312000	63	297000	69	124000	72	206000	70
4386408~BVX774-01		101000	69	101000	69	301000	61	286000	66	117000	68	207000	71
CCV		118000	80	118000	80	376000	76	350000	81	153000	89	275000	94
4386408~BVX775-01		83400	57	83400	57	241000	49	243000	56	93300	54	170000	58
4386408~BVX776-01		116000	79	116000	79	334000	68	322000	75	129000	75	248000	84
4386408~BVX779-01		97700	66	97700	66	321000	65	300000	70	129000	75	224000	76
4386408~BVX780-01		98900	67	98900	67	257000	52	252000	59	113000	66	190000	65
4386408~BVX781-01		89500	61	89500	61	261000	53	244000	57	101000	59	179000	61
4386408~BVX826-01		104000	71	104000	71	272000	55	256000	59	105000	61	186000	63
4386408~BVX827-01		84400	57	84400	57	229000	46	217000	50	98200	57	170000	58
4386408~BVX828-01		92800	63	92800	63	289000	59	269000	62	98300	57	188000	64
4386408~BVX829-01		79900	54	79900	54	286000	58	252000	59	110000	64	180000	61
4386408~BVX830-01		82200	56	82200	56	275000	56	249000	58	102000	59	189000	64
CCV		122000	83	122000	83	400000	81	381000	89	150000	87	266000	91
4386408~MTRX SPK		95600	65	95600	65	303000	61	307000	71	126000	73	222000	76
4386408~BVX830-01		96600	66	96600	66	277000	56	258000	60	103000	60	188000	64
CCV		123000	84	123000	84	413000	84	372000	86	165000	96	267000	91

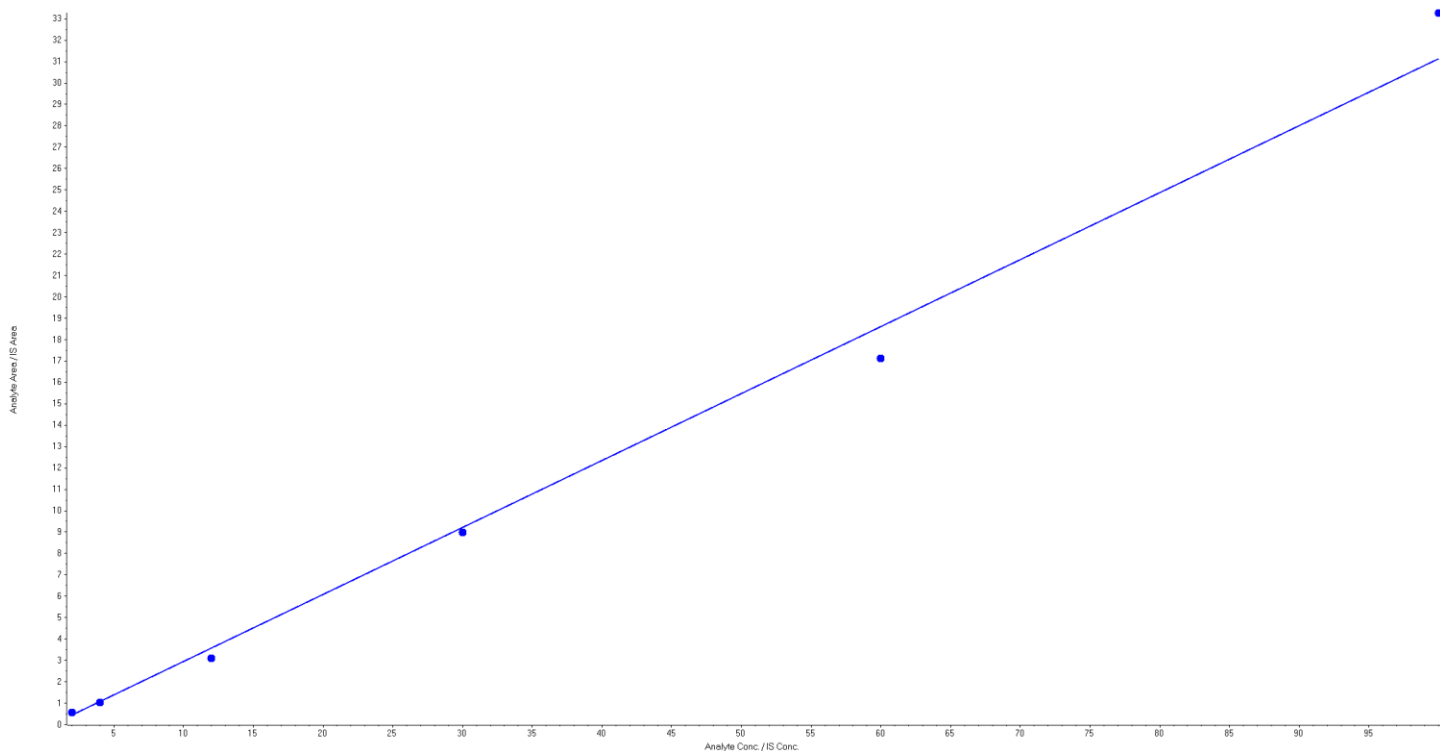
Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	159333		159333		475000		413667		195000		331000	
		IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)
4394558~BLANK		166000	104	166000	104	539000	113	466000	113	189000	97	350000	106
STD 1		143000	90	143000	90	491000	103	404000	98	192000	98	325000	98
STD 2		165000	104	165000	104	475000	100	434000	105	198000	102	328000	99
STD 3		171000	107	171000	107	484000	102	424000	102	204000	105	340000	103
STD 4		167000	105	167000	105	516000	109	425000	103	214000	110	359000	108
STD 5		160000	100	160000	100	431000	91	409000	99	177000	91	316000	95
STD 6		150000	94	150000	94	453000	95	386000	93	185000	95	318000	96
ICV		156000	98	156000	98	489000	103	406000	98	186000	95	338000	102
CCV		166000	104	166000	104	500000	105	470000	114	215000	110	366000	111
4394558~MTRX SPK		180000	113	180000	113	422000	89	348000	84	155000	79	261000	79
4394558~MTRX SPK:D1		153000	96	153000	96	434000	91	376000	91	161000	83	275000	83
4394558~SPIKE		178000	112	178000	112	483000	102	464000	112	199000	102	335000	101
4394558~BVX747-01		145000	91	145000	91	416000	88	379000	92	166000	85	287000	87
4394558~BVX752-01		156000	98	156000	98	446000	94	412000	100	182000	93	295000	89
4394558~BVX753-01		139000	87	139000	87	396000	83	325000	79	131000	67	227000	69
4394558~BVX754-01		143000	90	143000	90	407000	86	359000	87	157000	81	274000	83
4394558~BVX755-01		158000	99	158000	99	500000	105	455000	110	182000	93	294000	89
4394558~BVX756-01		146000	92	146000	92	482000	101	448000	108	178000	91	319000	96
4394558~BVX770-01(10X)		164000	103	164000	103	486000	102	443000	107	185000	95	332000	100
4394558~BVX771-01(10X)		144000	90	144000	90	430000	91	410000	99	174000	89	288000	87
4394558~BVX844-01(50X)		144000	90	144000	90	445000	94	396000	96	177000	91	299000	90
4394558~BVX845-01(50X)		150000	94	150000	94	447000	94	410000	99	187000	96	321000	97
CCV		162000	102	162000	102	482000	101	419000	101	204000	105	340000	103
4394558~MTRX SPK		131000	82	131000	82	405000	85	373000	90	164000	84	275000	83
4394558~MTRX SPK:D1		146000	92	146000	92	404000	85	398000	96	174000	89	298000	90
CCV		159000	100	159000	100	477000	100	425000	103	223000	114	354000	107

Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.313x + -0.179$ ($r = 0.9966$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.40	120.2
4	1	3.86	96.4
12	1	10.44	87.0
30	1	29.26	97.5
60	1	55.22	92.0
100	1	106.82	106.8

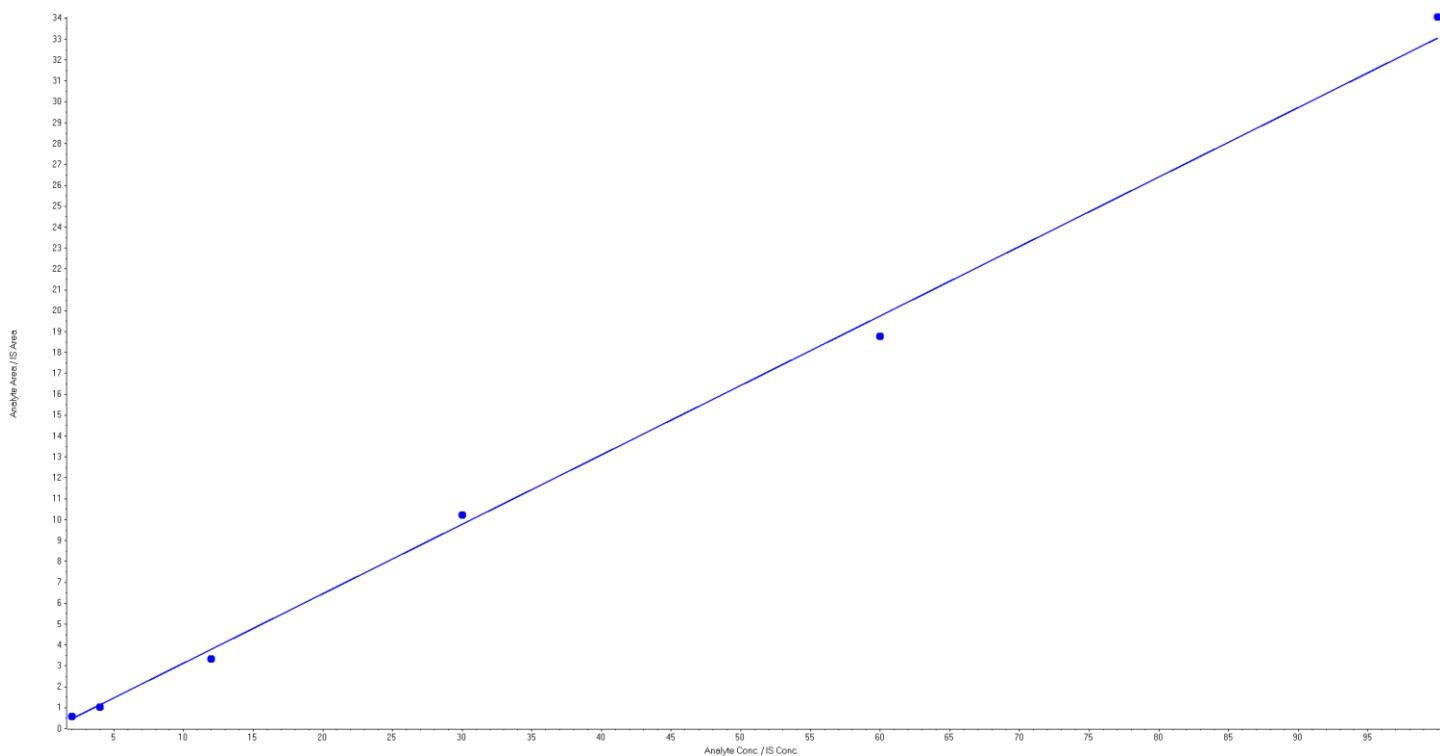


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.333 x + -0.197$ ($r = 0.9984$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.35	117.3
4	1	3.68	92.1
12	1	10.57	88.1
30	1	31.33	104.4
60	1	57.04	95.1
100	1	103.02	103.0

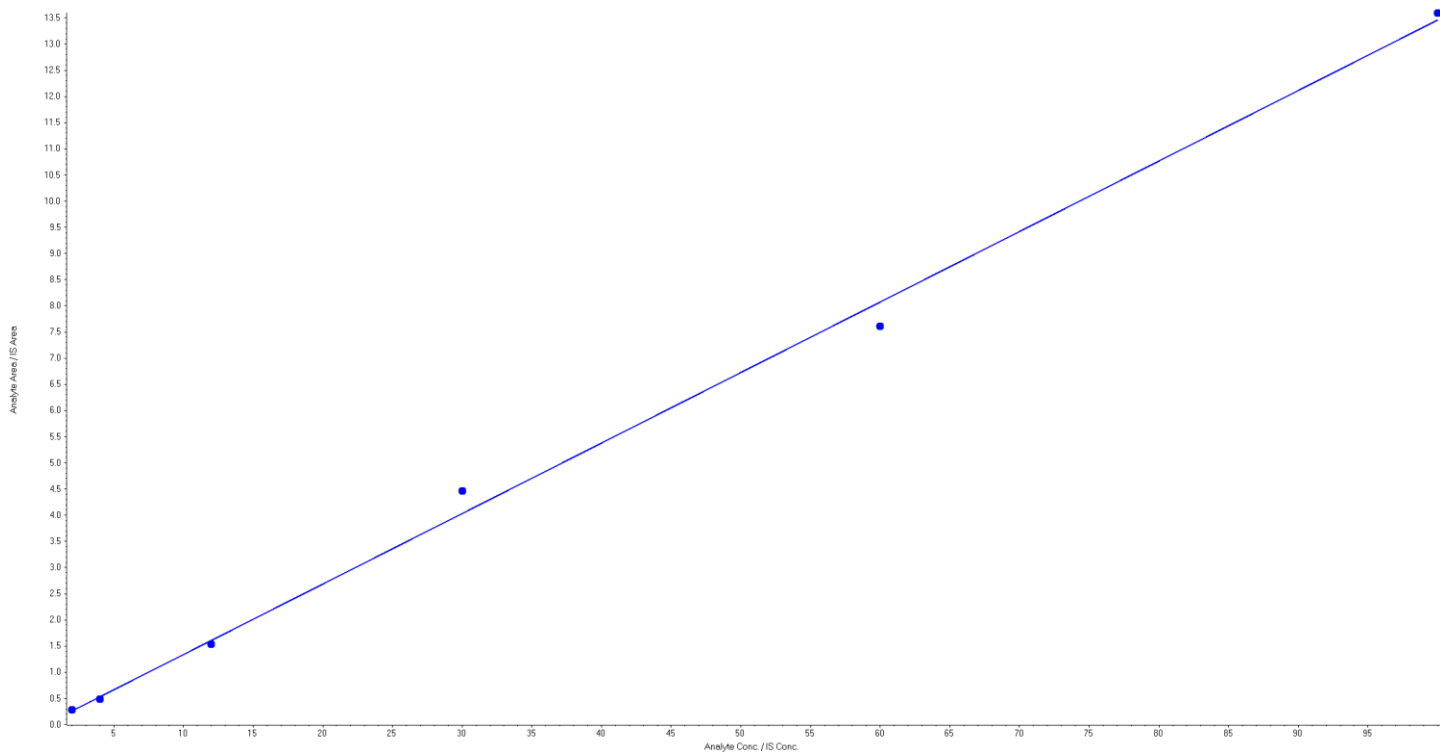


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.135x + -0.0098$ ($r = 0.9982$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.11	105.7
4	1	3.72	92.9
12	1	11.45	95.5
30	1	33.21	110.7
60	1	56.52	94.2
100	1	100.98	101.0

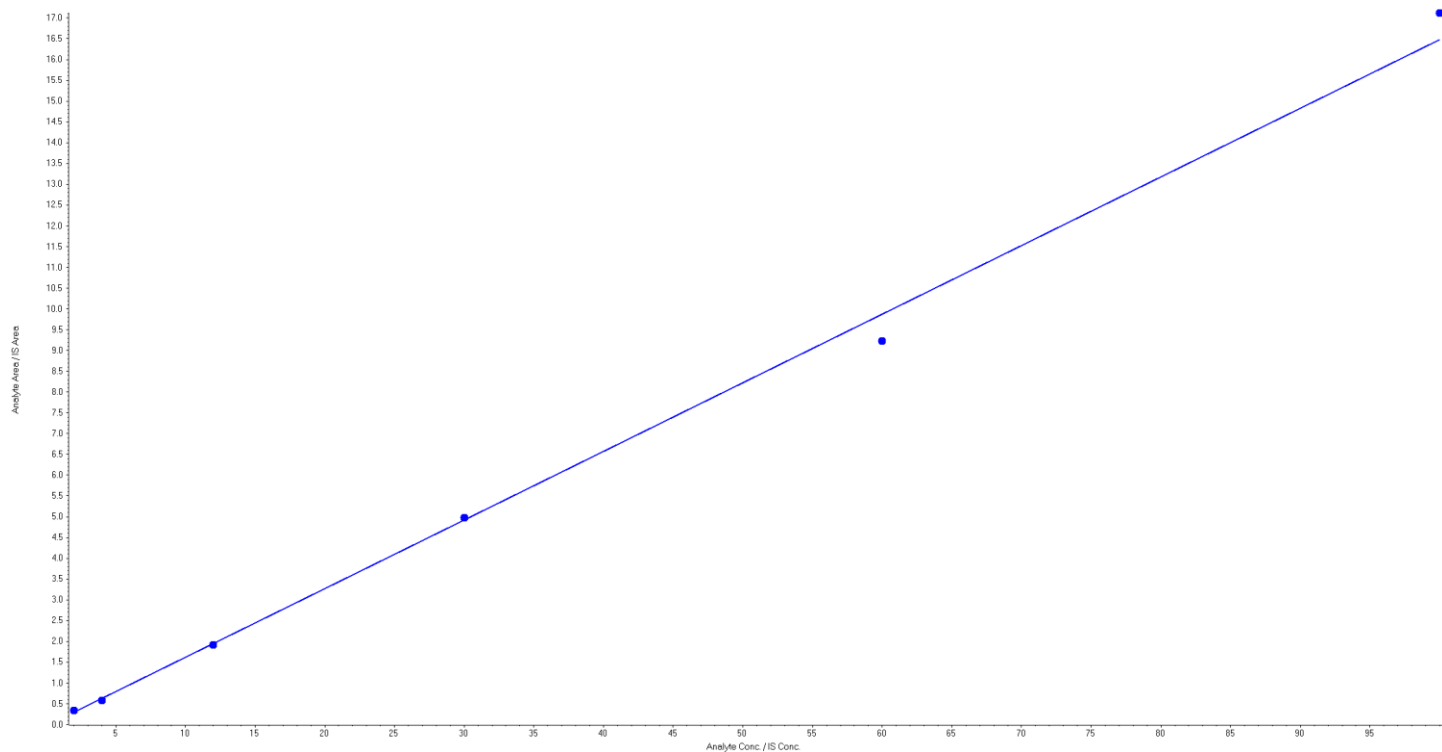


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.165x + -0.0324$ ($r = 0.9987$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.20	109.9
4	1	3.73	93.3
12	1	11.81	98.4
30	1	30.30	101.0
60	1	56.08	93.5
100	1	103.88	103.9

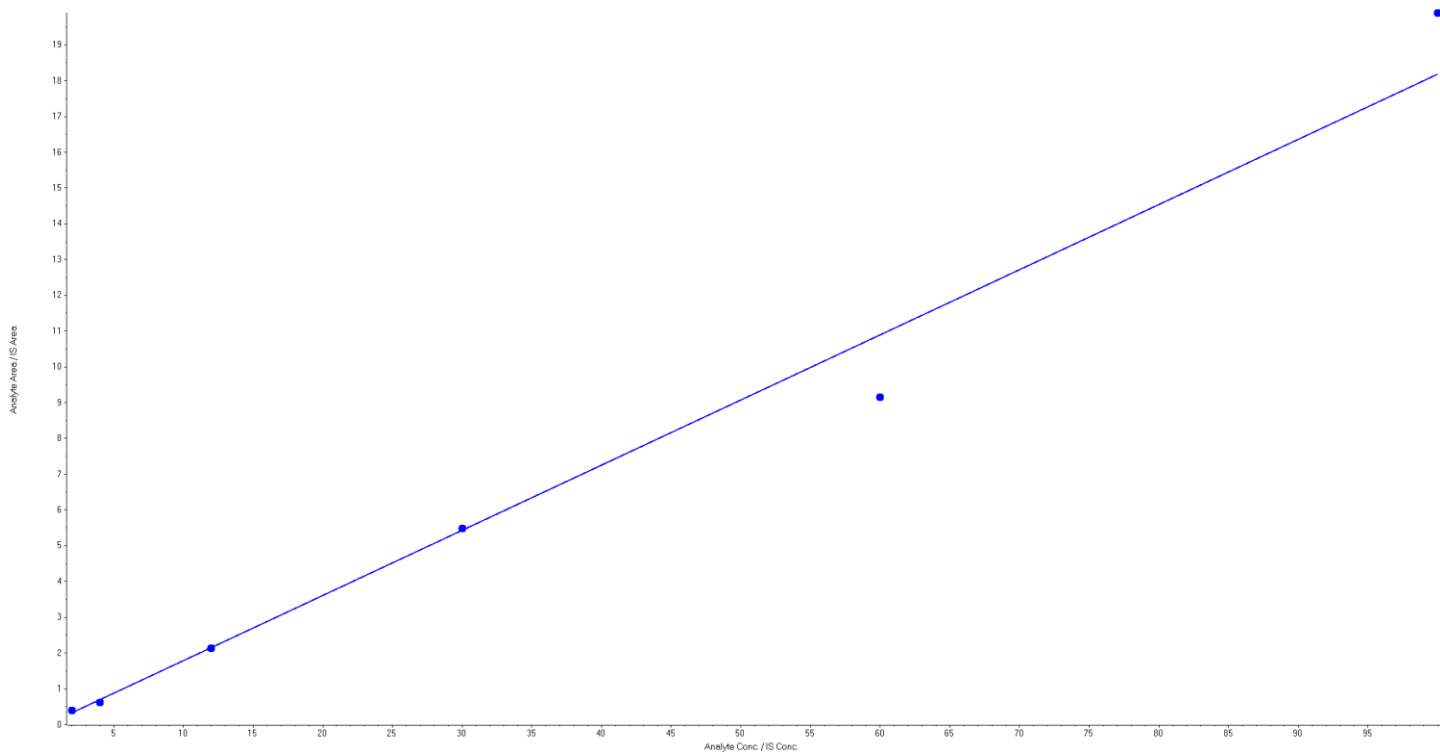


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.182 x + -0.034$ ($r = 0.9927$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.31	115.6
4	1	3.63	90.7
12	1	11.90	99.2
30	1	30.32	101.1
60	1	50.45	84.1
100	1	109.38	109.4

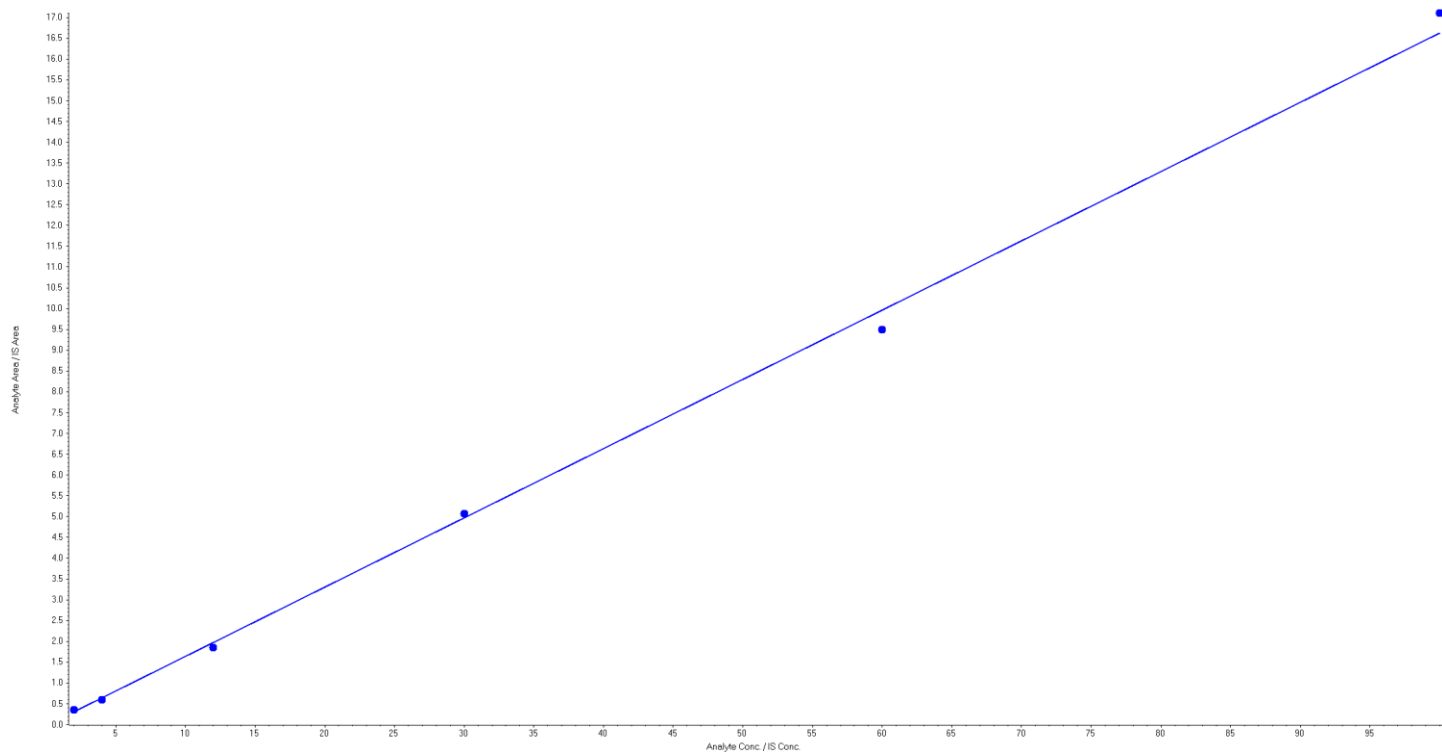


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.167x + -0.0262$ ($r = 0.9991$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.24	111.9
4	1	3.74	93.6
12	1	11.30	94.2
30	1	30.63	102.1
60	1	57.19	95.3
100	1	102.89	102.9

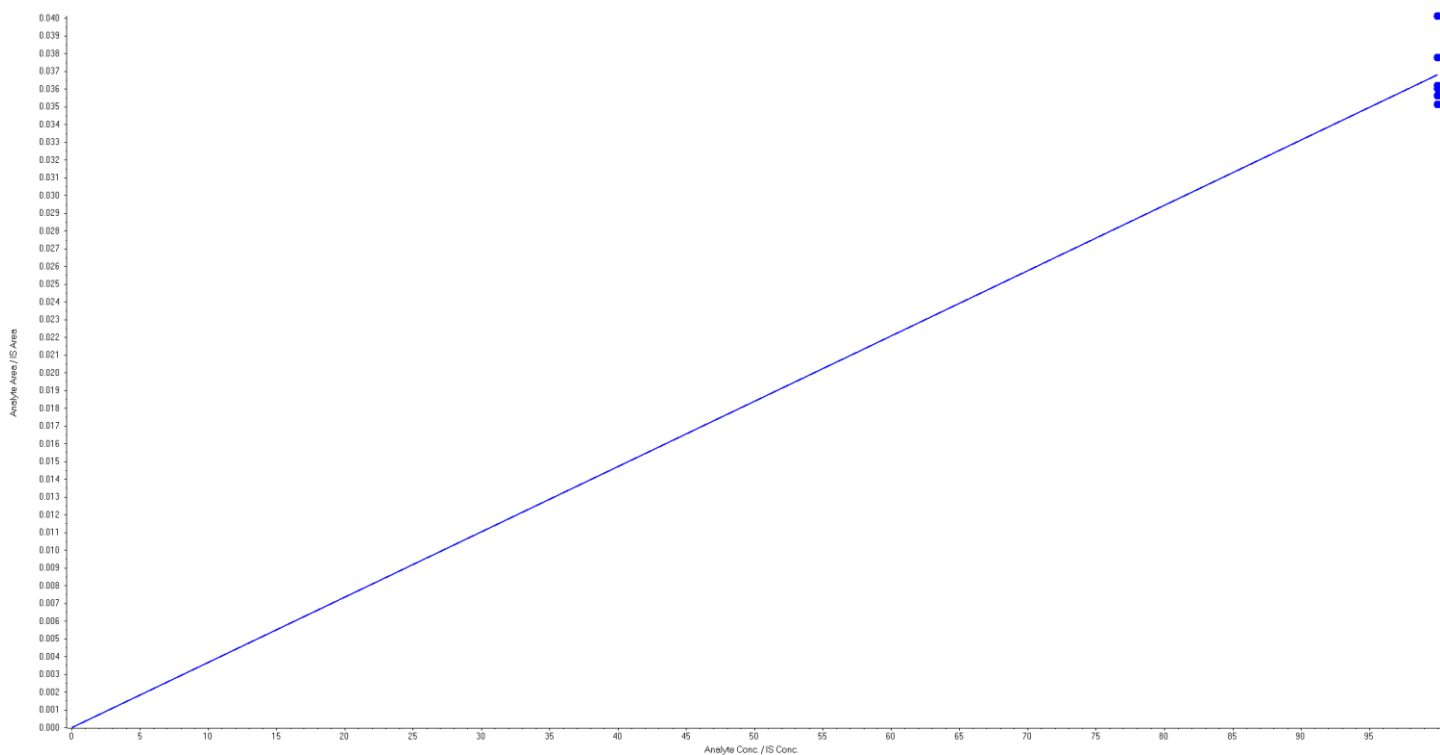


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000368 x$ ($r = 0.9990$)

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

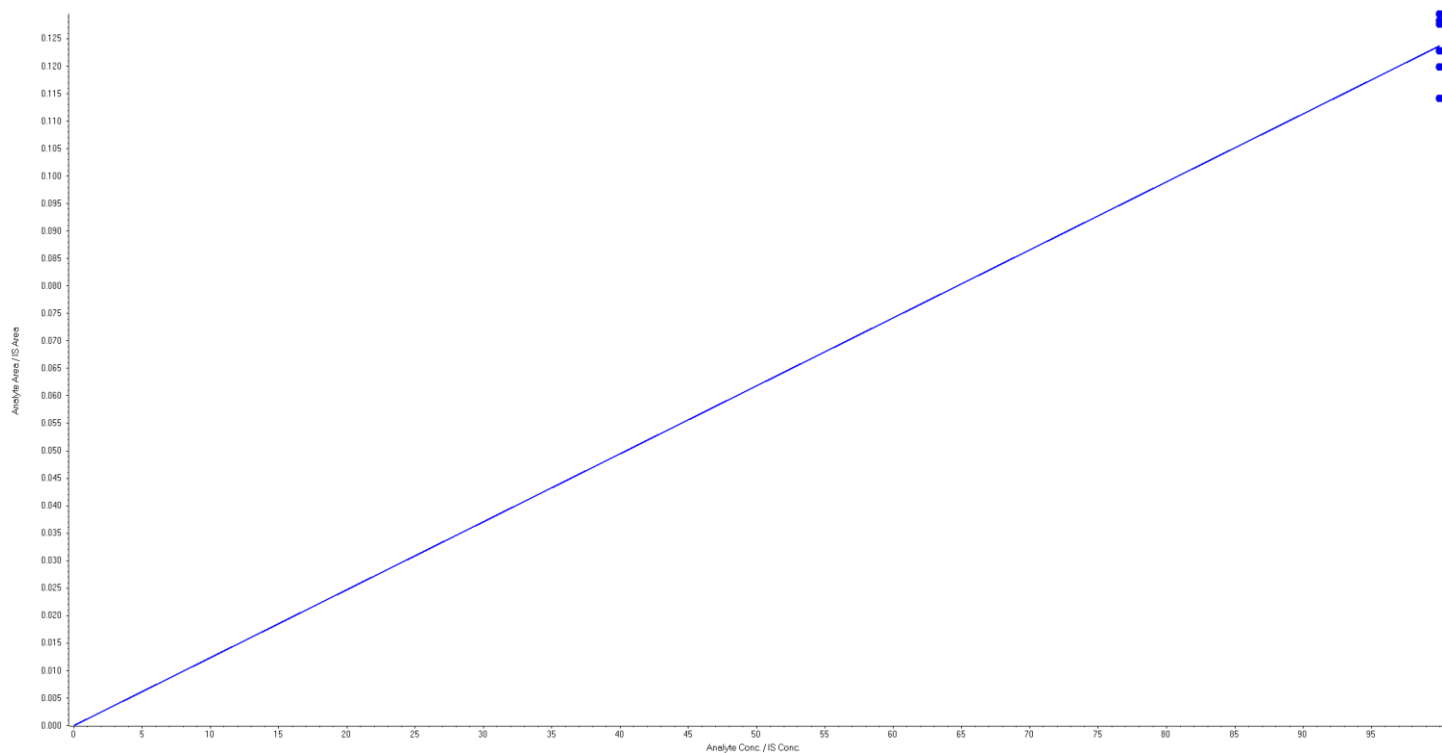


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00124 x$ ($r = 0.9990$)

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

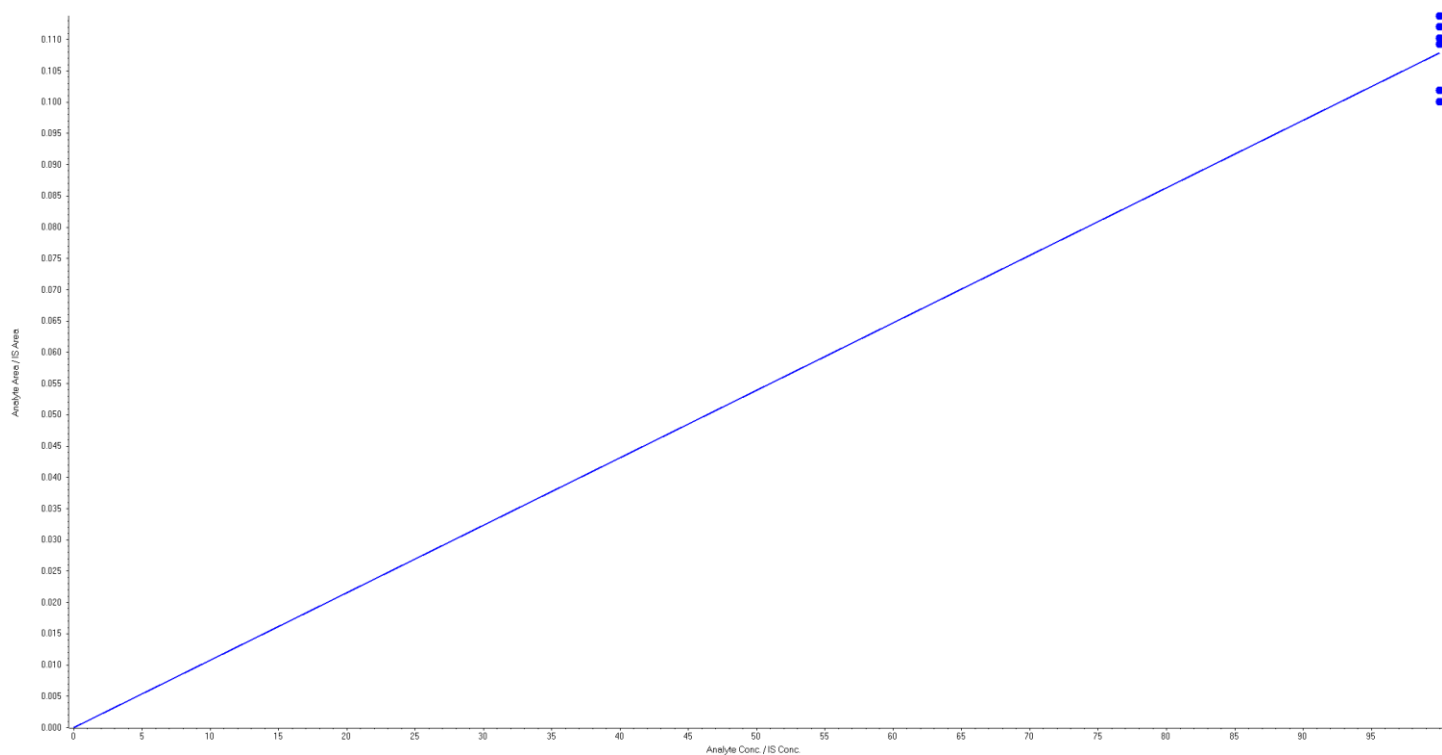


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00108 x$ ($r = 0.9989$)

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

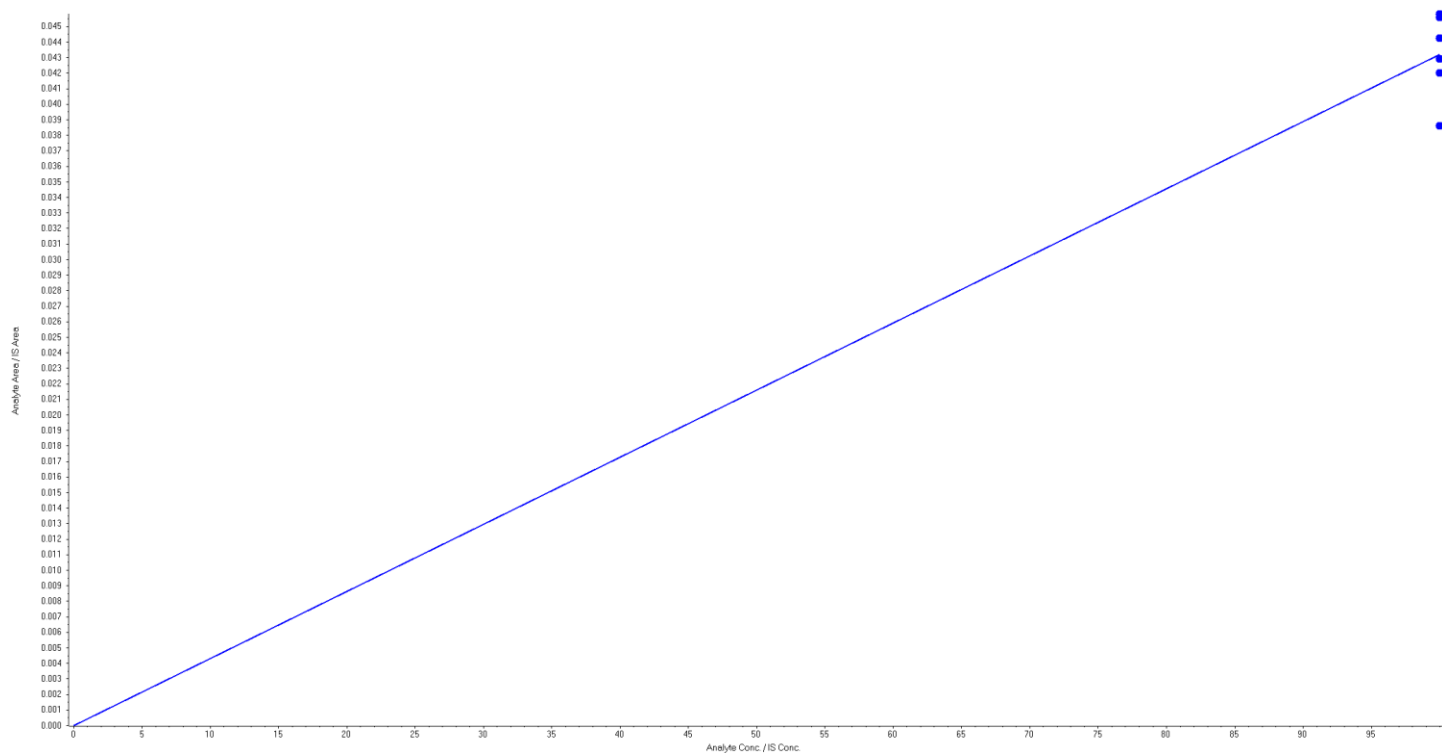


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000432 x$ ($r = 0.9984$)

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

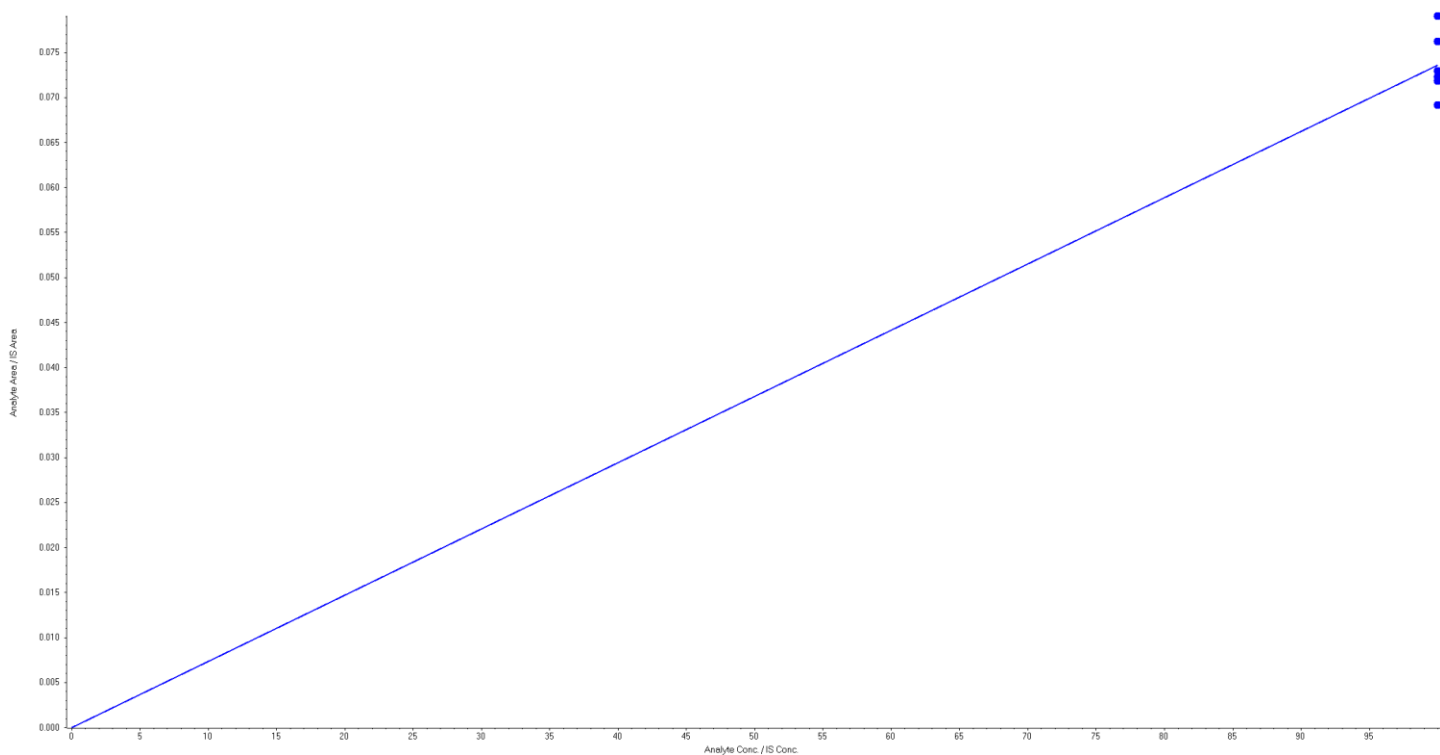


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160219\WS#4386408.wiff	Result Table	PFC_Water_160219_4386408_ULow.rdb
Acquisition Date	2016/02/19 7:39:53 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000736 x$ ($r = 0.9991$)

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

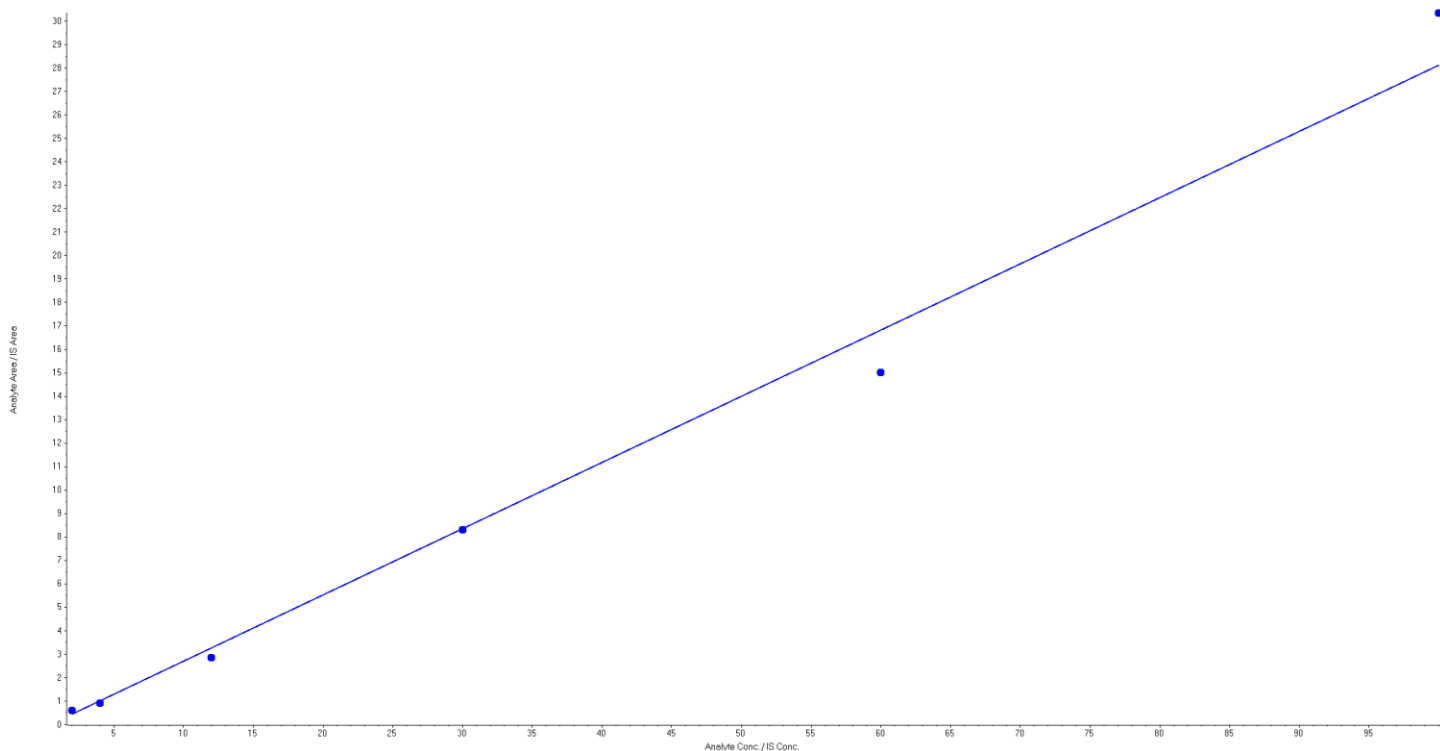


Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.282 x + -0.119$ ($r = 0.9951$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.50	124.9
4	1	3.62	90.5
12	1	10.54	87.8
30	1	29.86	99.5
60	1	53.60	89.3
100	1	107.88	107.9

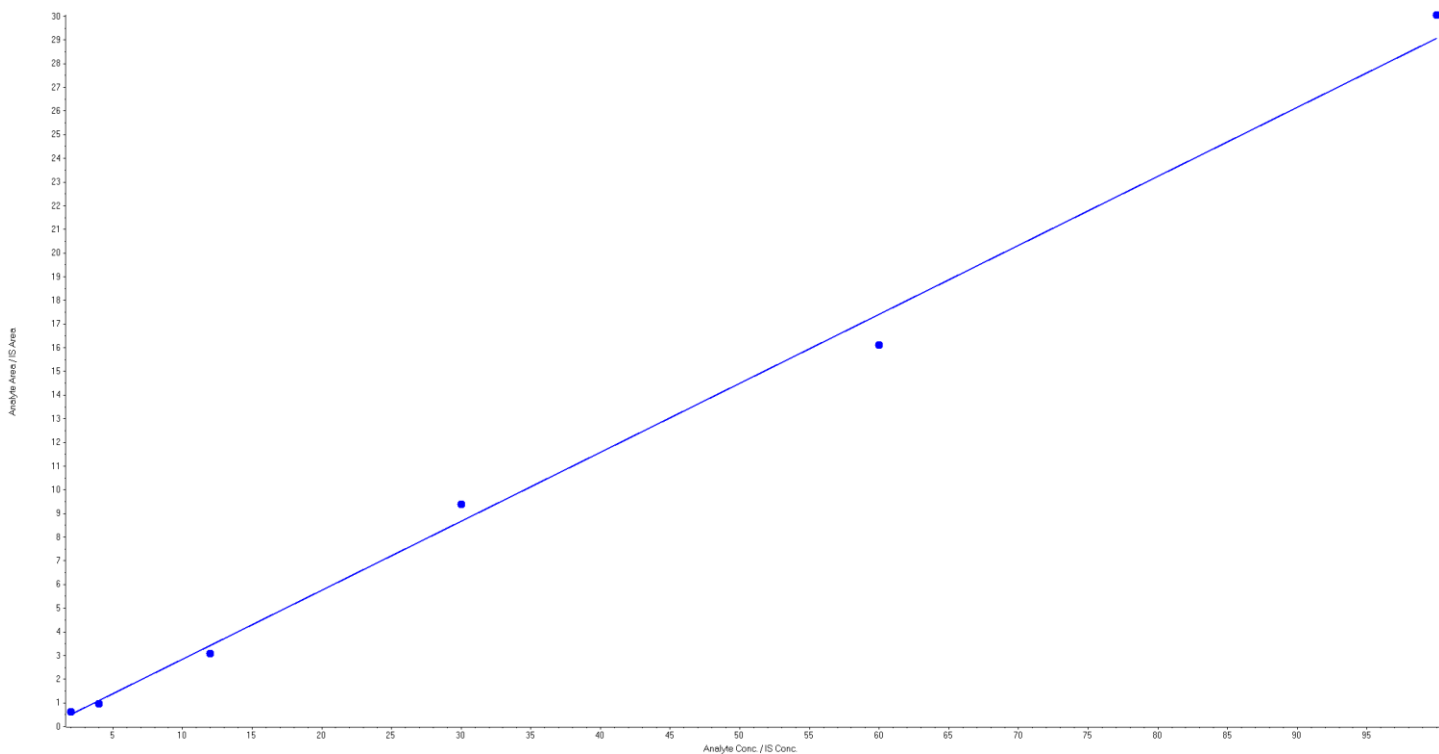


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.291 x + -0.0719$ ($r = 0.9974$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.37	118.7
4	1	3.50	87.5
12	1	10.78	89.9
30	1	32.41	108.0
60	1	55.56	92.6
100	1	103.37	103.4

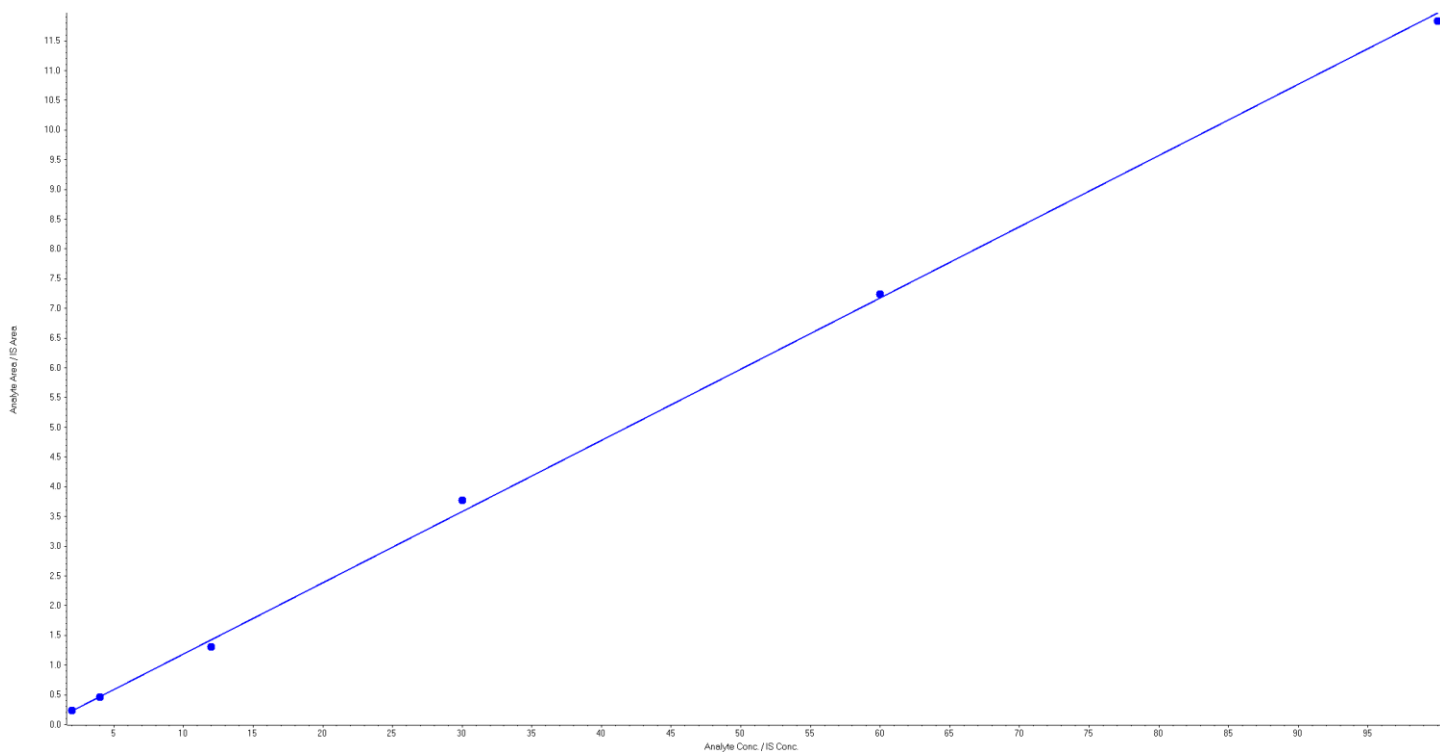


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.12 x + -0.0118$ ($r = 0.9994$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.07	103.6
4	1	3.99	99.7
12	1	11.00	91.7
30	1	31.59	105.3
60	1	60.49	100.8
100	1	98.86	98.9

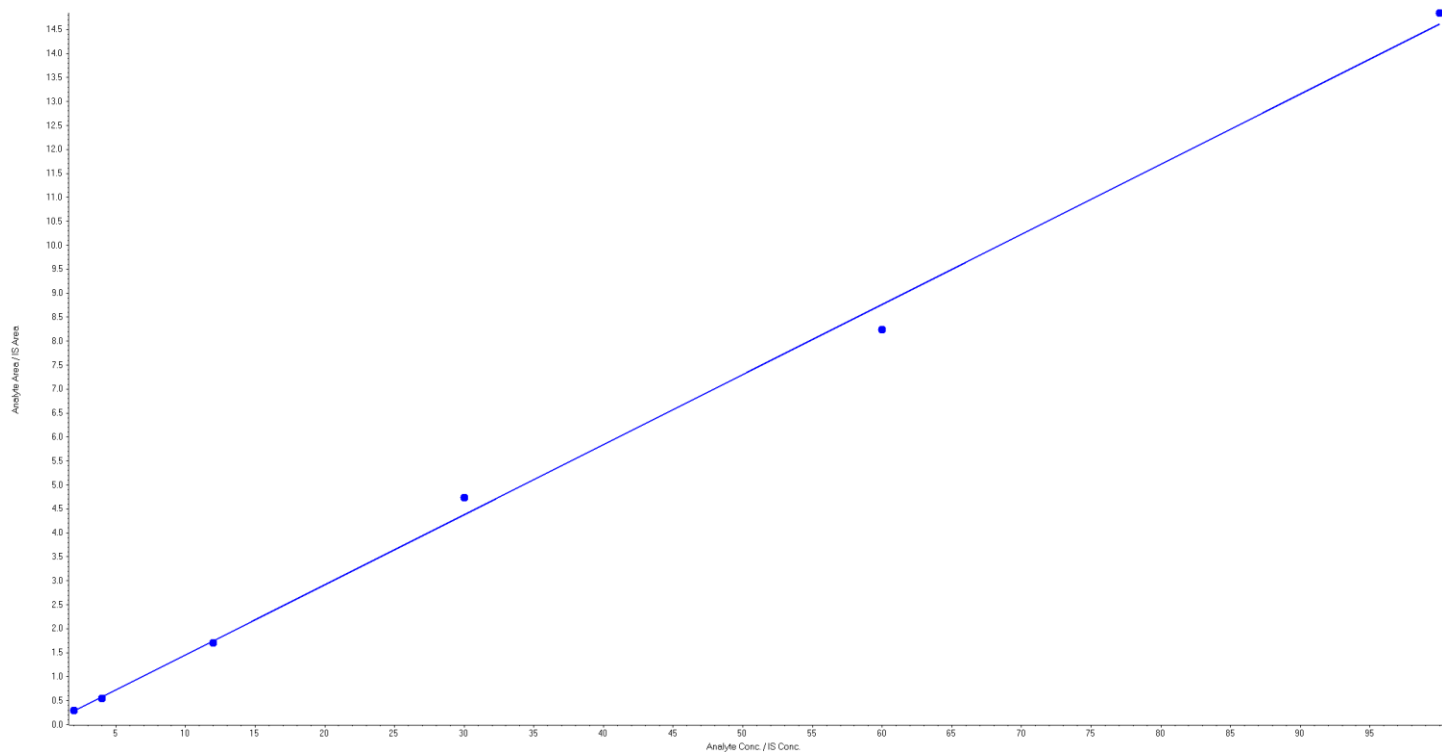


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.146x + -0.00972$ ($r = 0.9986$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.10	105.0
4	1	3.75	93.8
12	1	11.67	97.3
30	1	32.48	108.3
60	1	56.42	94.0
100	1	101.57	101.6

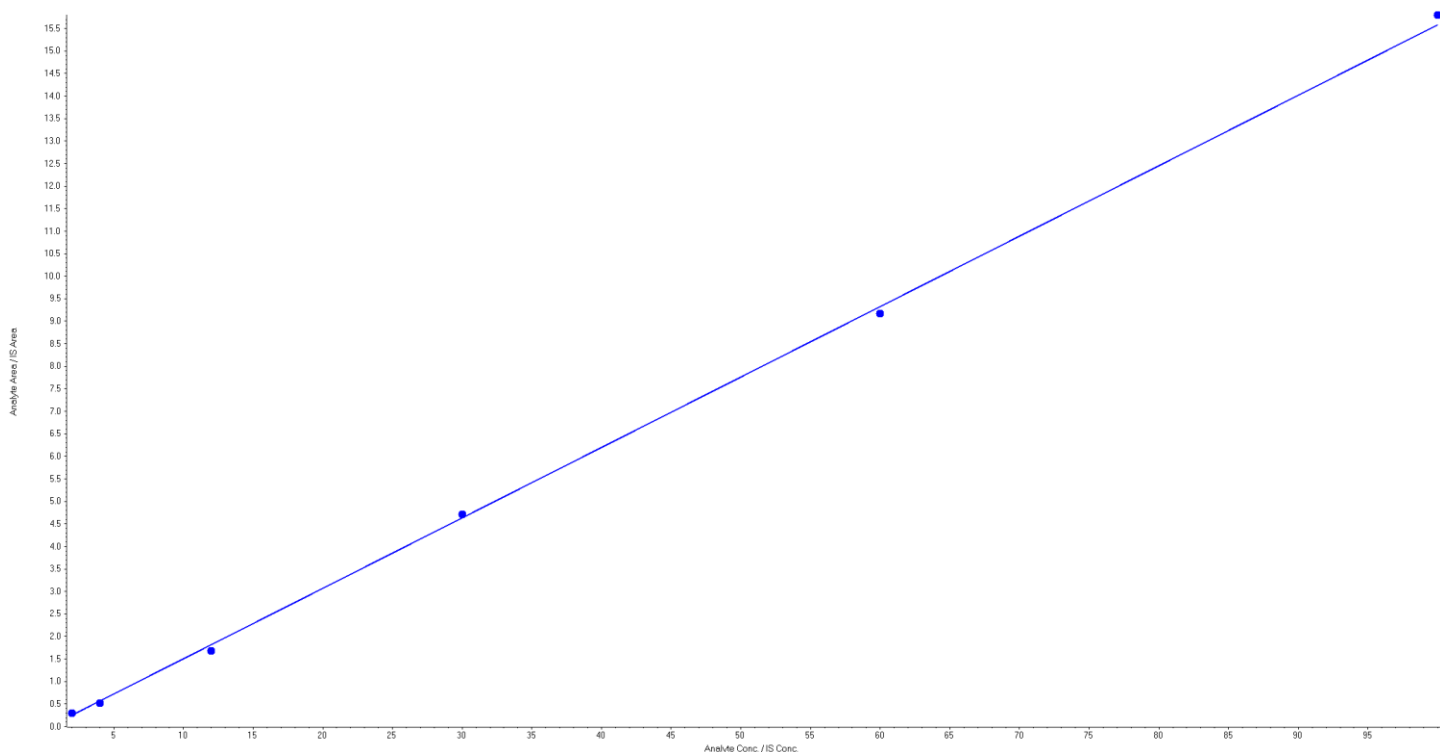


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.156 x + -0.0591$ ($r = 0.9995$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.26	112.9
4	1	3.72	93.0
12	1	11.12	92.6
30	1	30.50	101.7
60	1	59.01	98.4
100	1	101.39	101.4

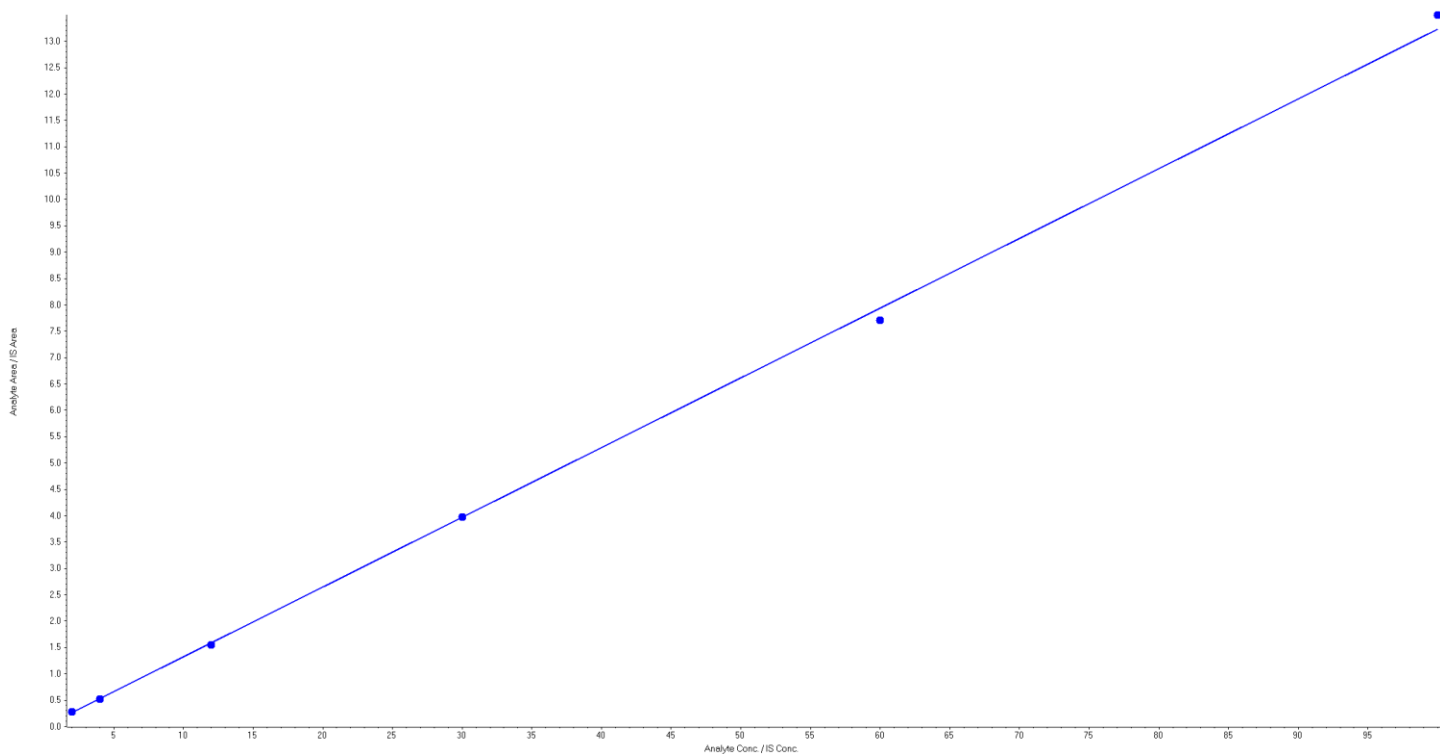


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.132x + 0.000931$ ($r = 0.9997$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.08	104.1
4	1	3.97	99.3
12	1	11.72	97.7
30	1	29.99	100.0
60	1	58.21	97.0
100	1	102.03	102.0

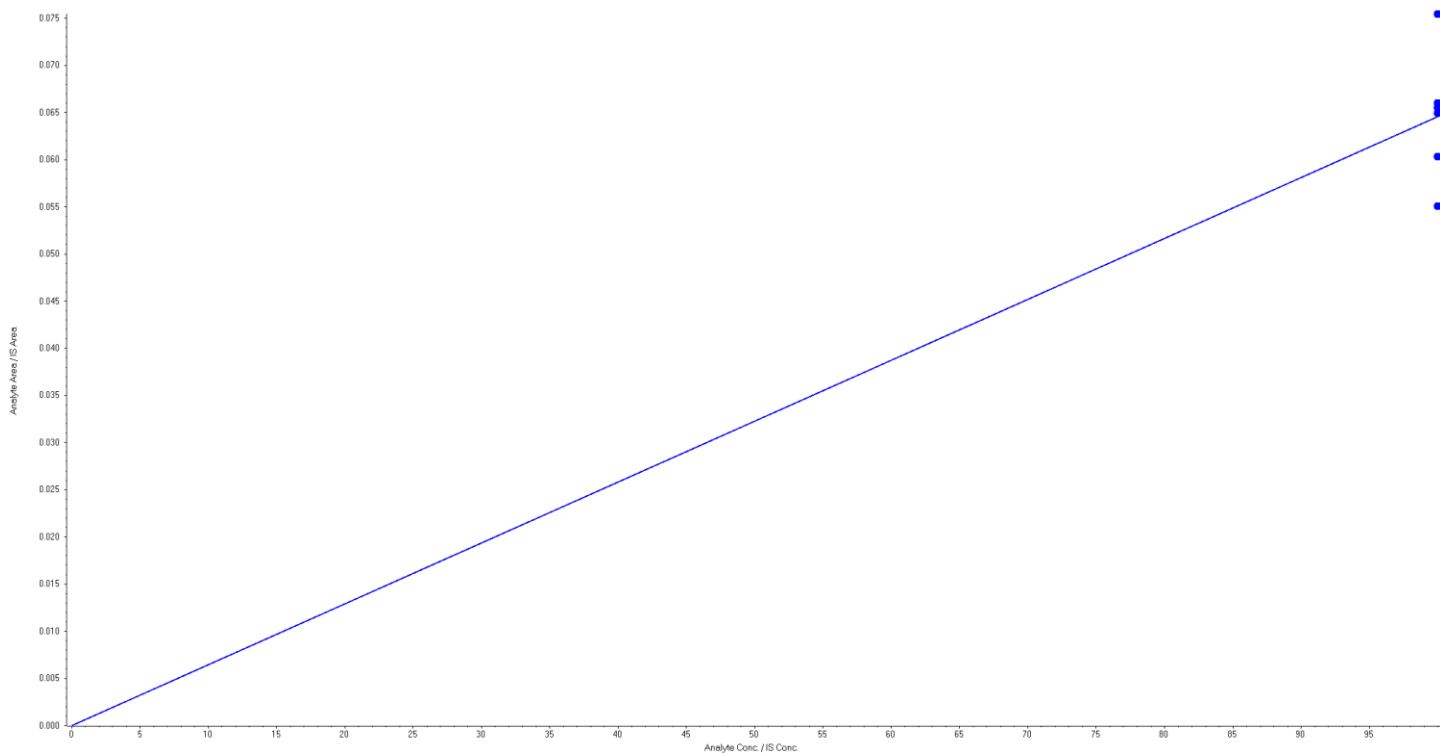


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000646 x$ ($r = 0.9954$)

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

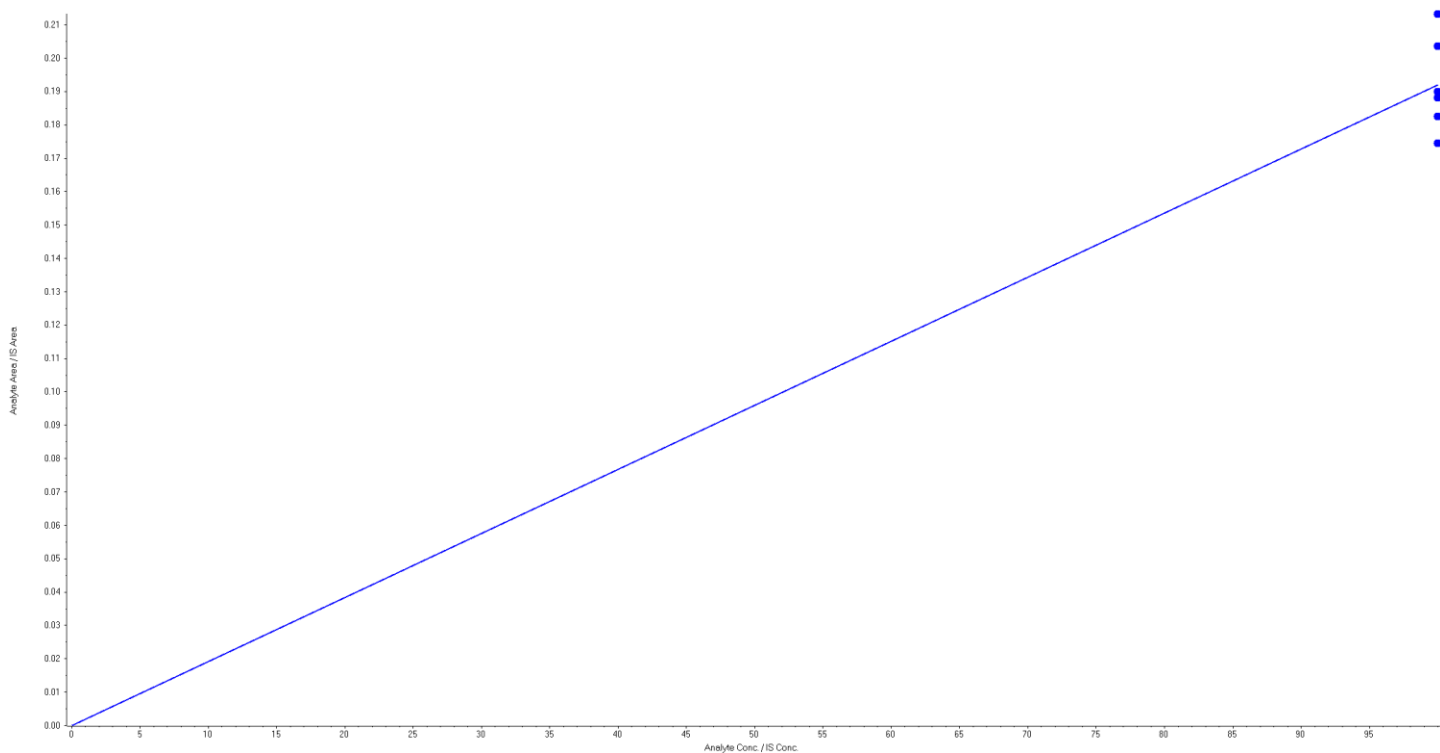


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00192 x$ ($r = 0.9977$)

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

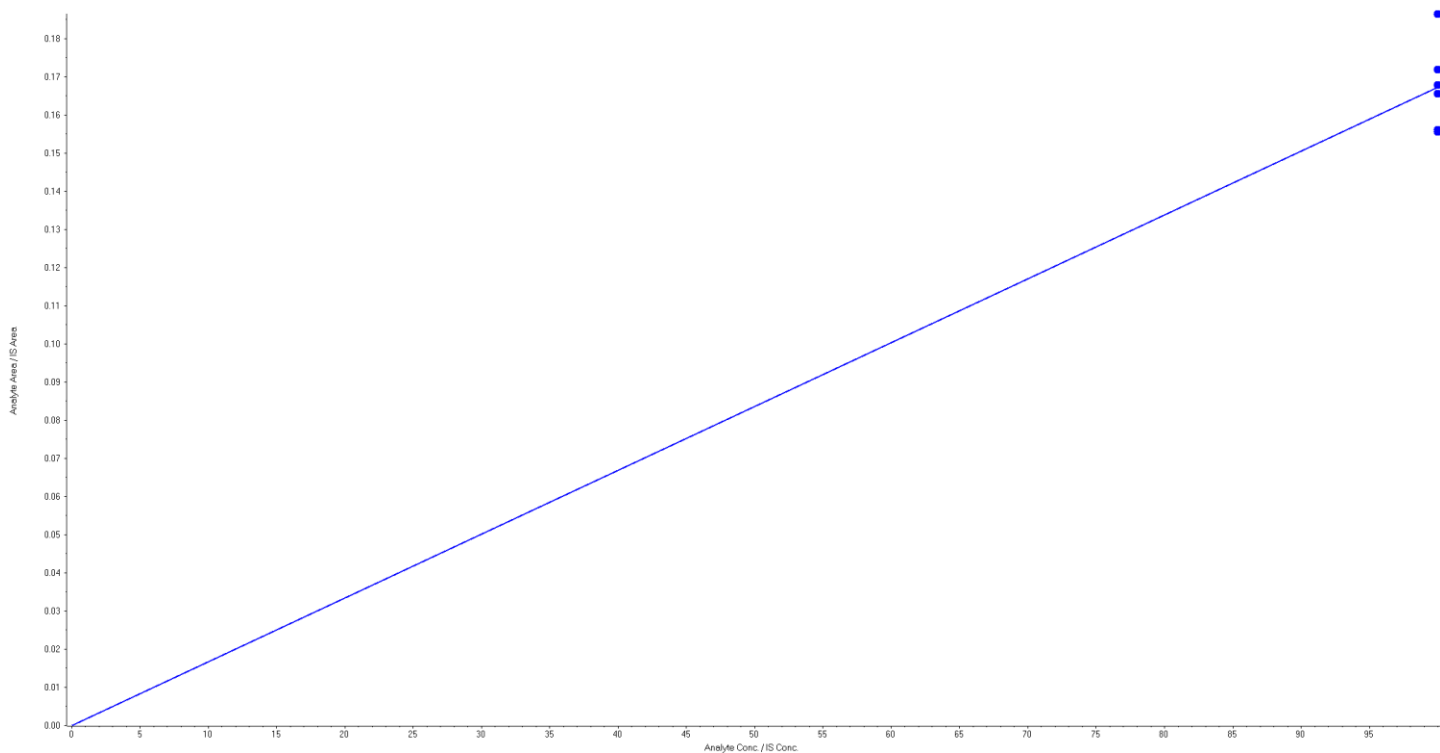


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00167 x$ ($r = 0.9981$)

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

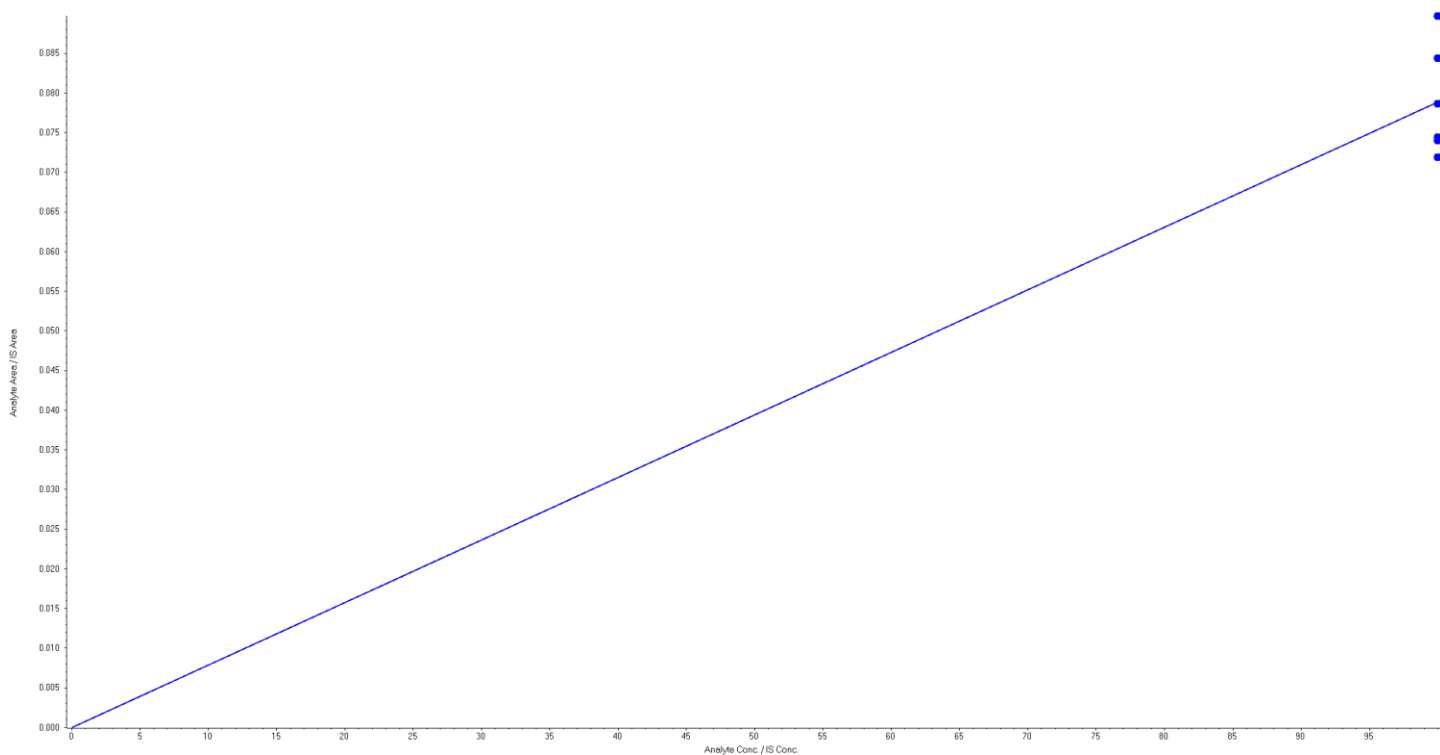


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000788 x$ ($r = 0.9968$)

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

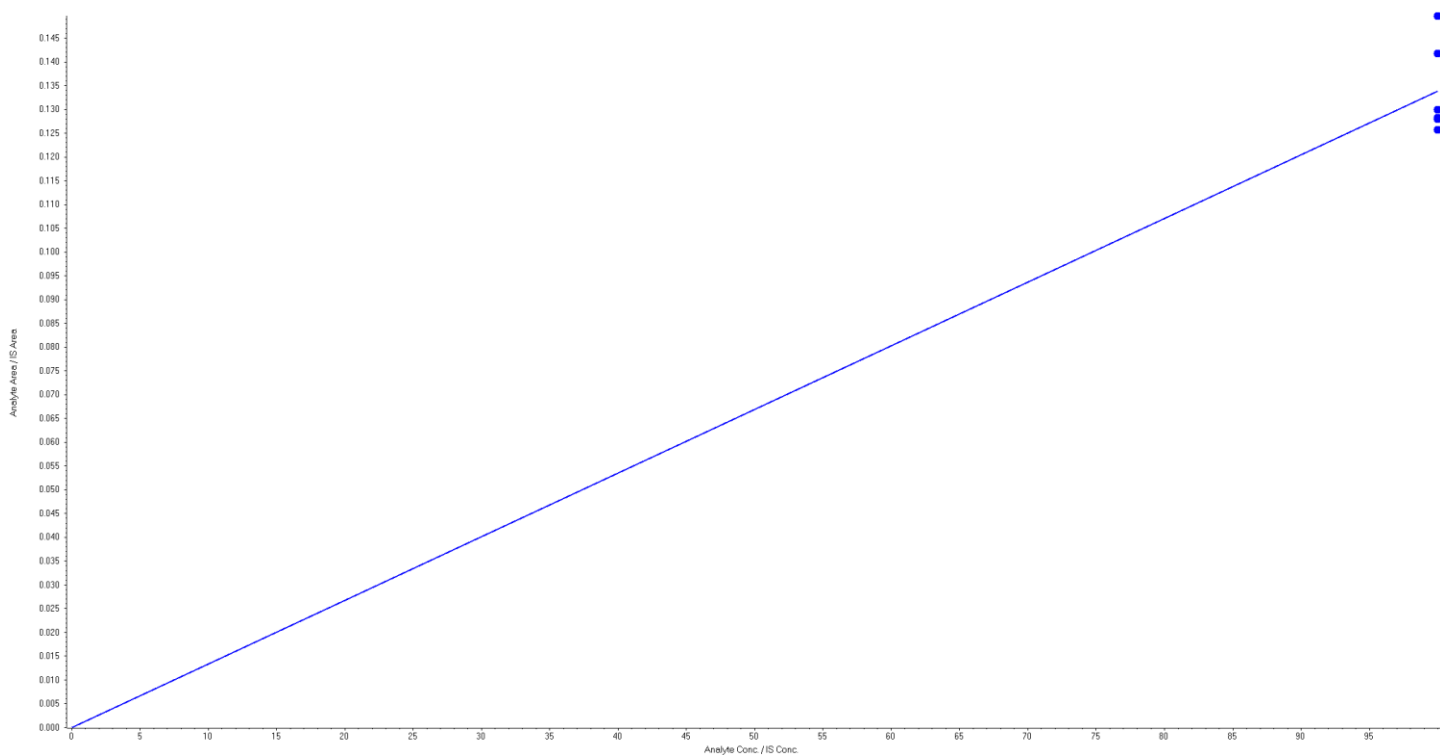


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	Result Table	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00134 x$ ($r = 0.9979$)

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





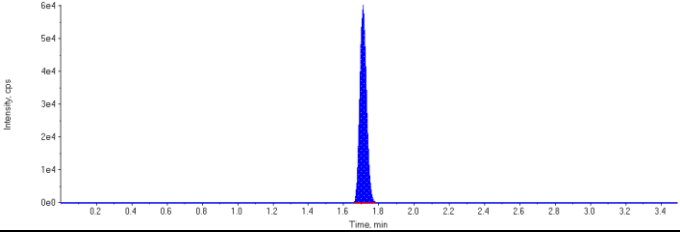
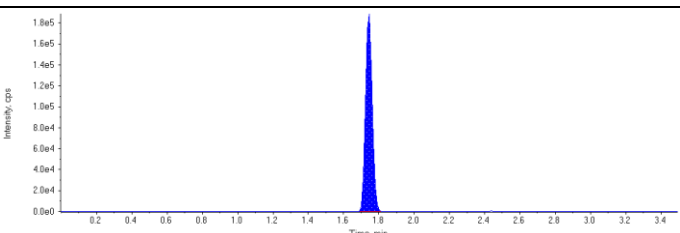
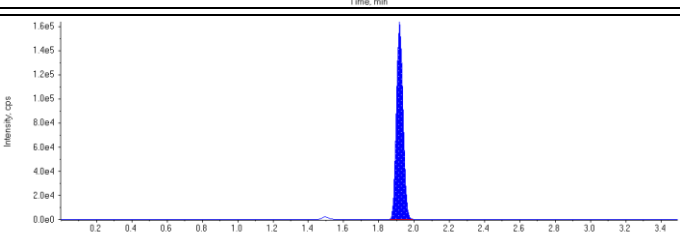
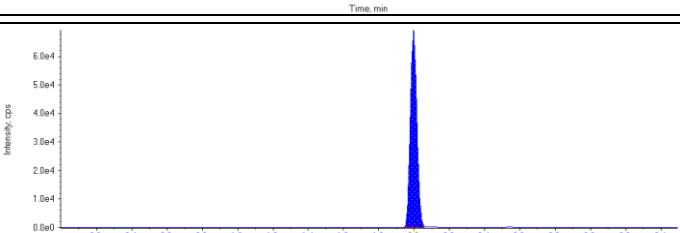
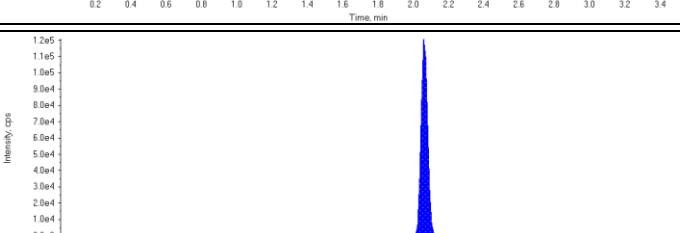
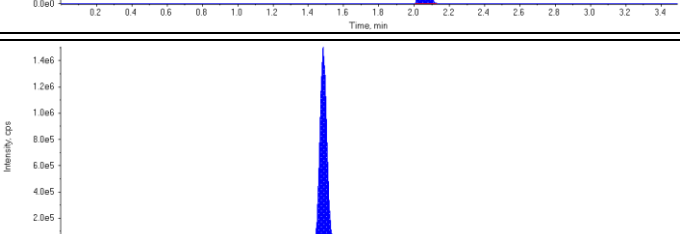
6. Continuing Calibration

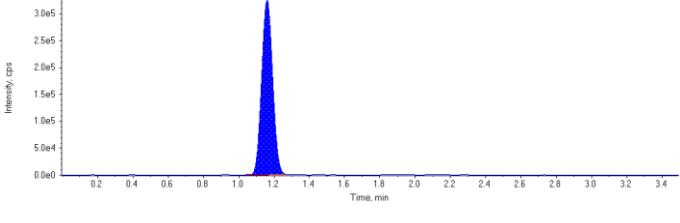
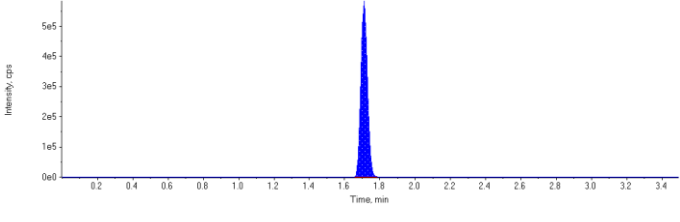
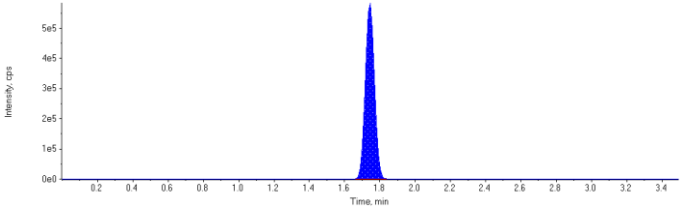
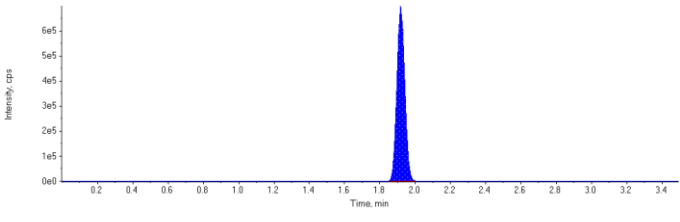
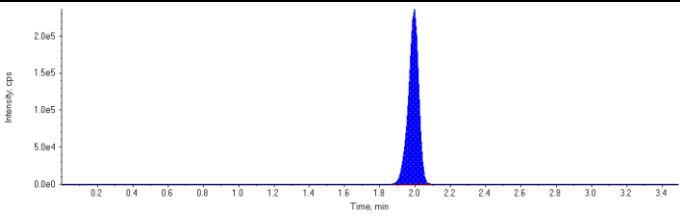
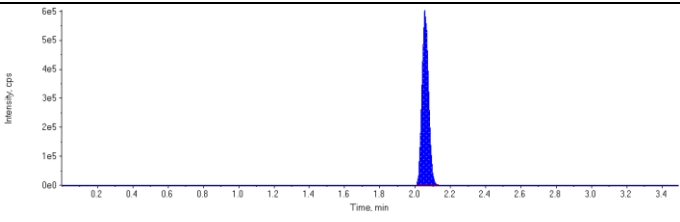
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

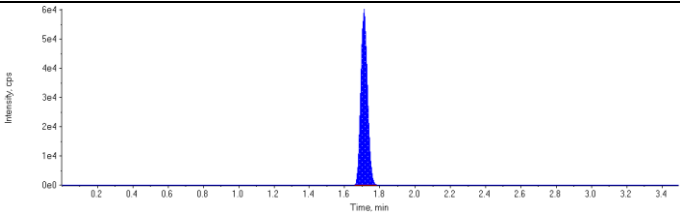
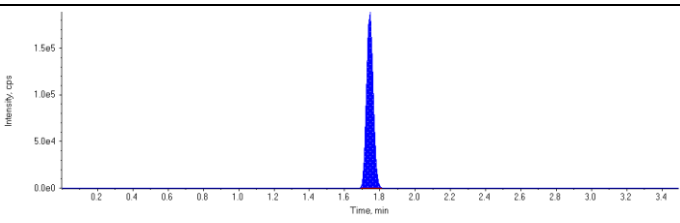
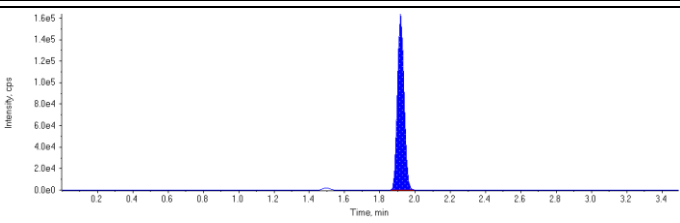
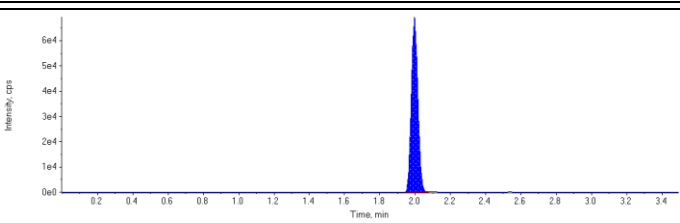
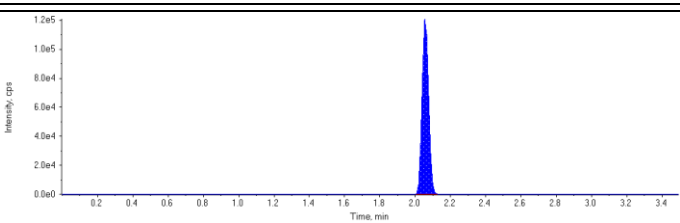
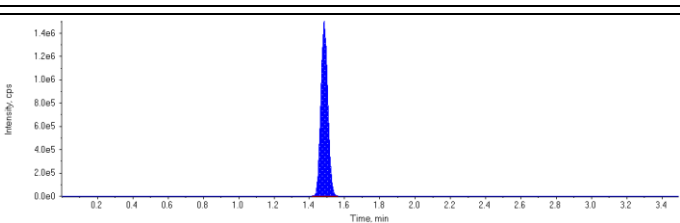
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (μL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 8:20:47 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.71	1.00	-
MPFHpA	500000.	1.74	1.00	-
MPFOA	423000.	1.92	1.00	-
MPFOS	177000.	2.00	1.00	-
MPFNA	314000.	2.06	1.00	-
13C6-PFHxA IS	4100000.	1.48	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	1410000	1.16	30.0	29.3	97.8
PFHxS 1	1500000	1.71	30.0	29.3	97.8
PFHpA 1	2110000	1.74	30.0	31.4	105.0
PFOA 1	2180000	1.92	30.0	31.3	104.0
PFOS 1	950000	1.99	30.0	29.7	99.2
PFNA 1	1570000	2.06	30.0	30.1	100.0
18O2-PFHxS	156000	1.71	100.	104.	104.0
13C4-PFHpA	500000	1.74	100.	98.6	98.6
13C4-PFOA	423000	1.92	100.	95.7	95.7
13C4-PFOS	177000	2.00	100.	99.6	99.6
13C5-PFNA	314000	2.06	100.	104.	104.0
13C6-PFHxA	4100000	1.48	100.	103.	103.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 2.00(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

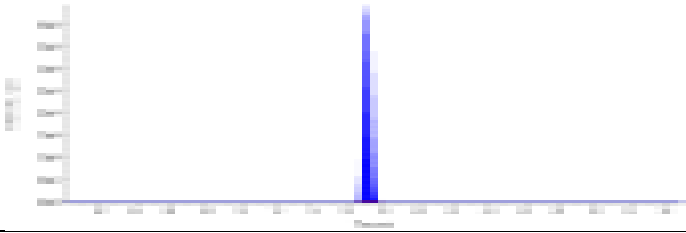
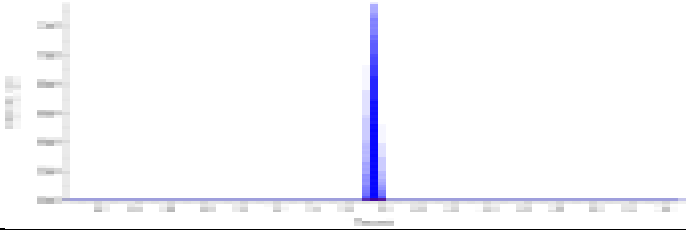
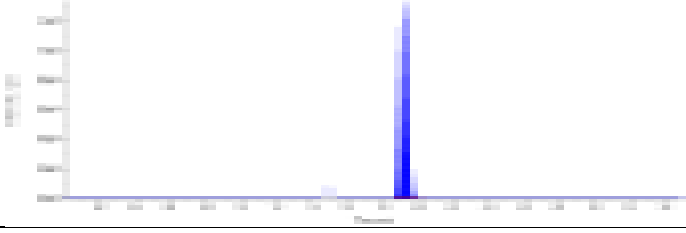
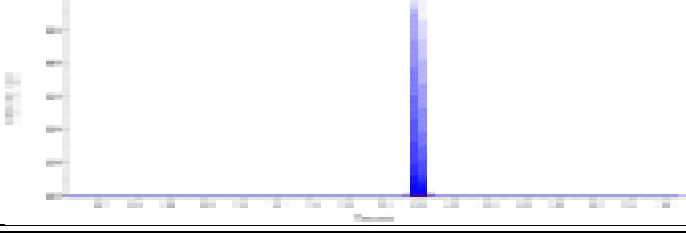
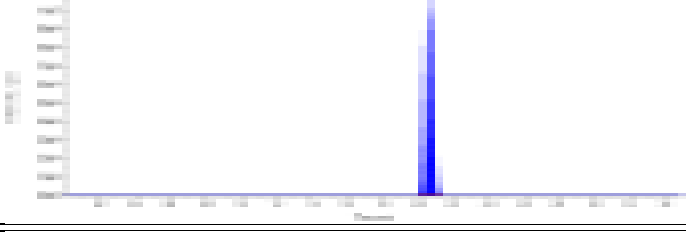
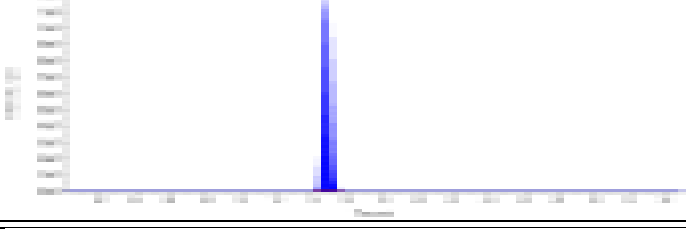
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 29.3 ng/L Area Ratio: 9.01 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 29.3 ng/L Area Ratio: 9.56 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 31.4 ng/L Area Ratio: 4.22 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 31.3 ng/L Area Ratio: 5.14 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 29.7 ng/L Area Ratio: 5.38 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 30.1 ng/L Area Ratio: 4.98 Sample Type: (Quality Control)	

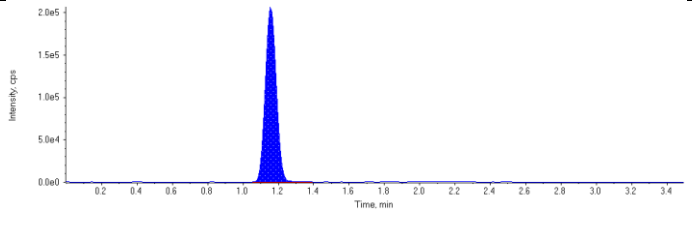
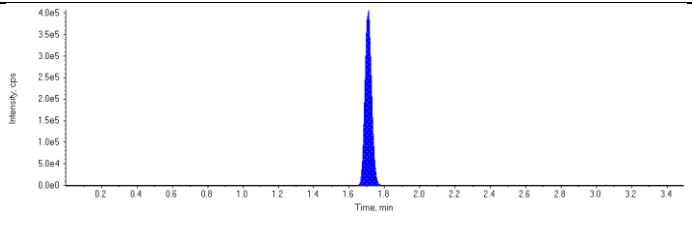
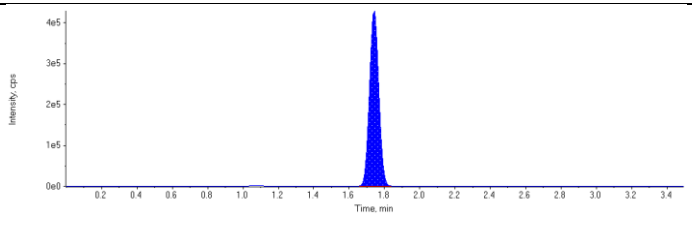
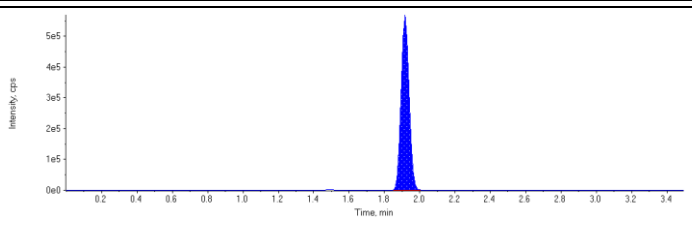
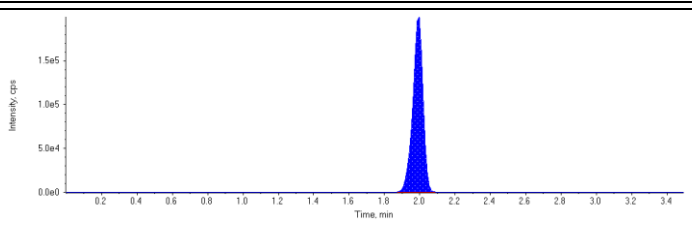
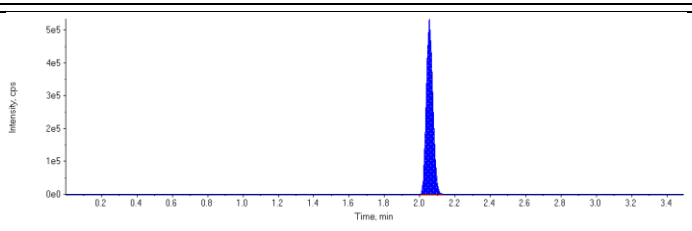
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 104. ng/L Area Ratio: 0.0382 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 98.6 ng/L Area Ratio: 0.122 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 95.7 ng/L Area Ratio: 0.103 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 2.00 (1.97) min Calculated Conc: 99.6 ng/L Area Ratio: 0.0431 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 104. ng/L Area Ratio: 0.0767 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

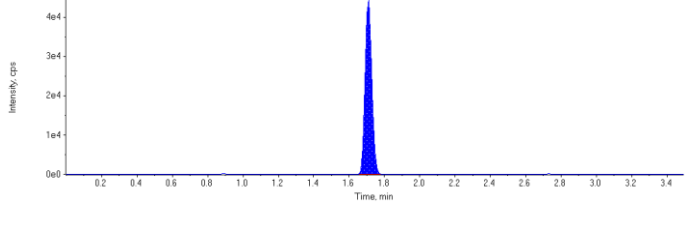
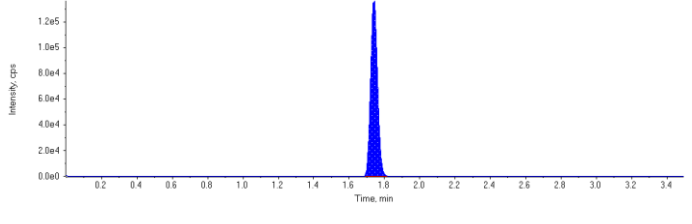
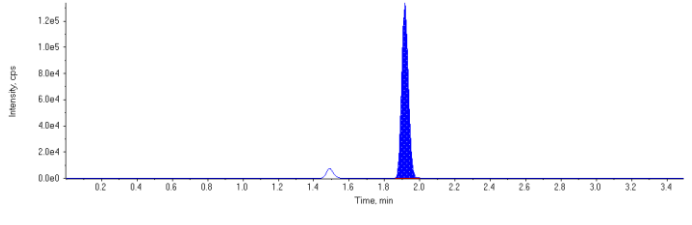
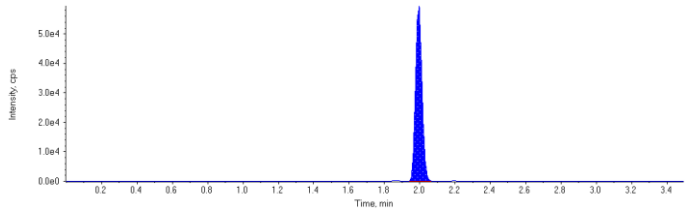
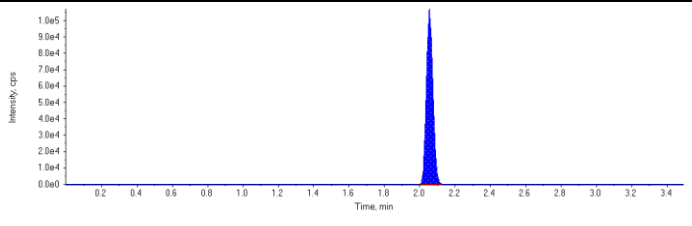
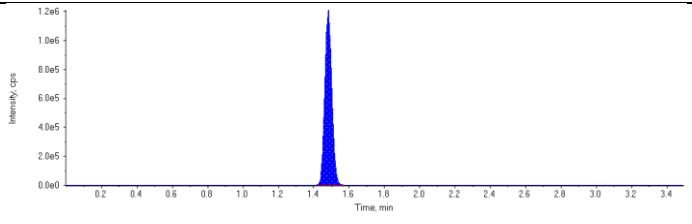
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 9:42:22 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	118000.	1.71	1.00	-
MPFHpA	376000.	1.74	1.00	-
MPFOA	350000.	1.92	1.00	-
MPFOS	153000.	1.99	1.00	-
MPFNA	275000.	2.06	1.00	-
13C6-PFHxA IS	3350000.	1.48	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	894000	1.16	30.0	24.9	82.8
PFHxS 1	1060000	1.71	30.0	27.7	92.4
PFHpA 1	1570000	1.74	30.0	31.1	104.0
PFOA 1	1780000	1.92	30.0	31.0	103.0
PFOS 1	804000	1.99	30.0	29.0	96.6
PFNA 1	1370000	2.05	30.0	30.1	100.0
18O2-PFHxS	118000	1.71	100.	95.3	95.3
13C4-PFHpA	376000	1.74	100.	90.7	90.7
13C4-PFOA	350000	1.92	100.	96.7	96.7
13C4-PFOS	153000	1.99	100.	106.	106.0
13C5-PFNA	275000	2.06	100.	111.	111.0
13C6-PFHxA	3350000	1.48	100.	84.0	84.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.92(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.06(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

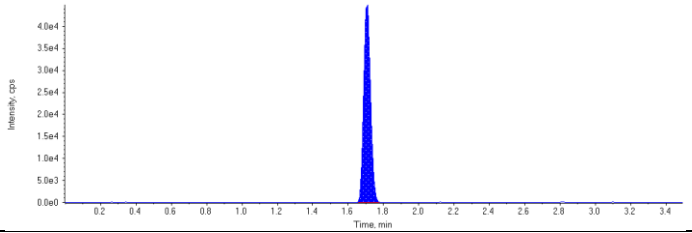
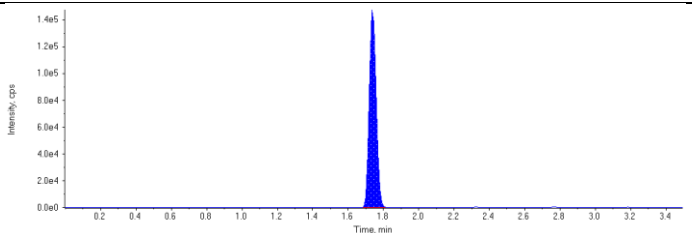
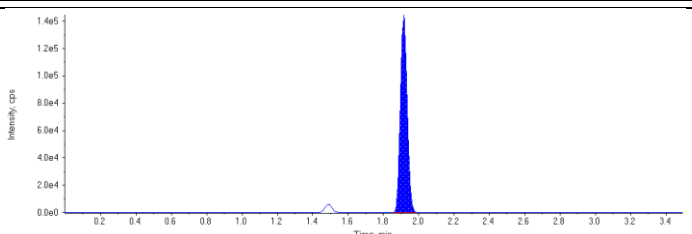
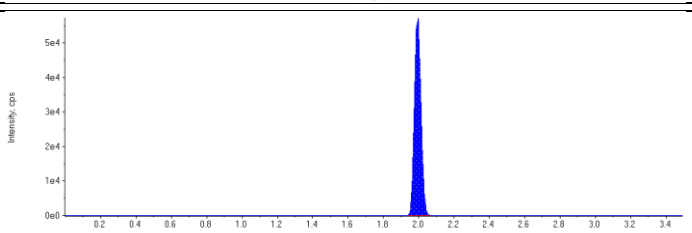
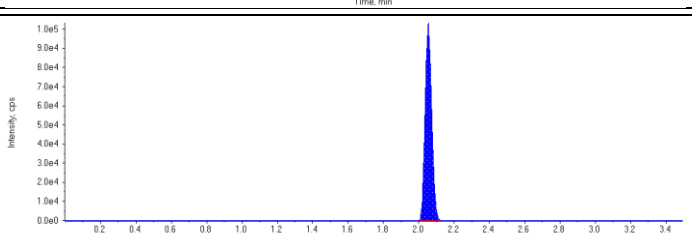
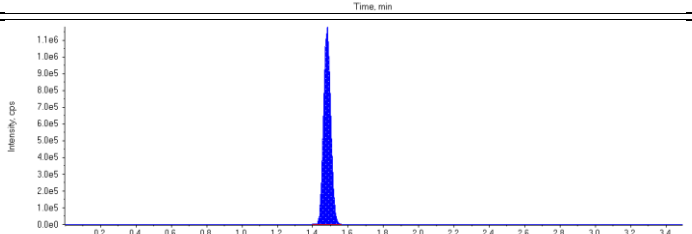
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.16 (1.15) min Calculated Conc: 24.9 ng/L Area Ratio: 7.60 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 27.7 ng/L Area Ratio: 9.02 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 31.1 ng/L Area Ratio: 4.18 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 31.0 ng/L Area Ratio: 5.08 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 29.0 ng/L Area Ratio: 5.25 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 30.1 ng/L Area Ratio: 4.98 Sample Type: (Quality Control)	

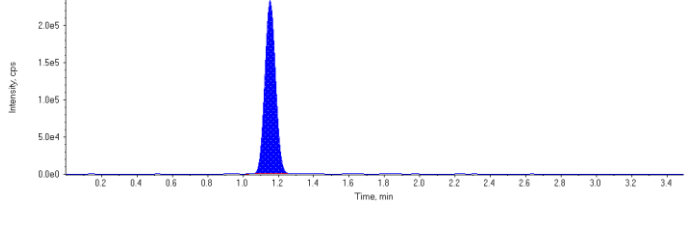
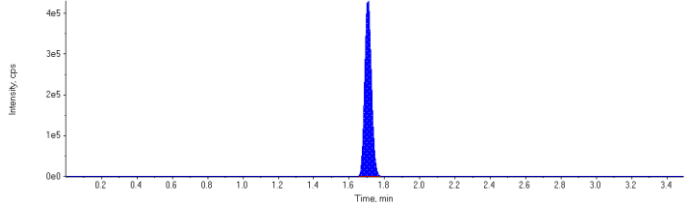
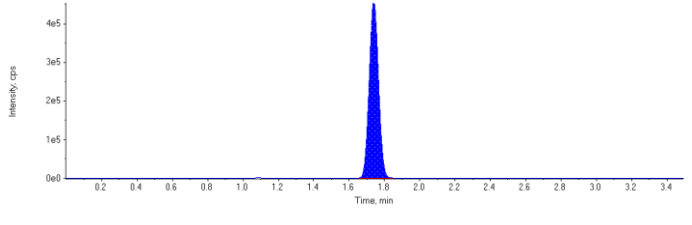
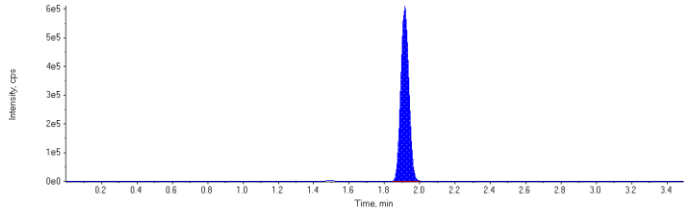
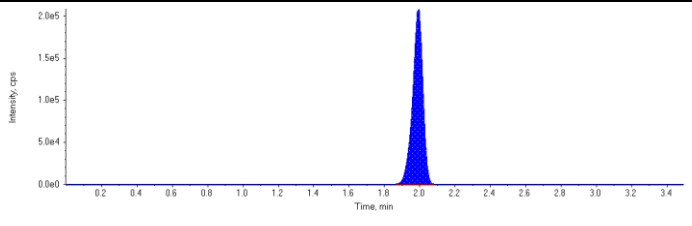
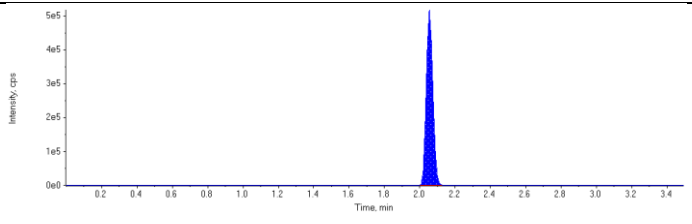
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 95.3 ng/L Area Ratio: 0.0351 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 90.7 ng/L Area Ratio: 0.112 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.92 (1.88) min Calculated Conc: 96.7 ng/L Area Ratio: 0.104 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 106. ng/L Area Ratio: 0.0457 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.06 (2.02) min Calculated Conc: 111. ng/L Area Ratio: 0.0820 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 84.0 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

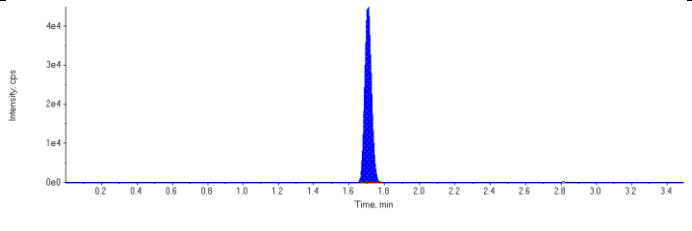
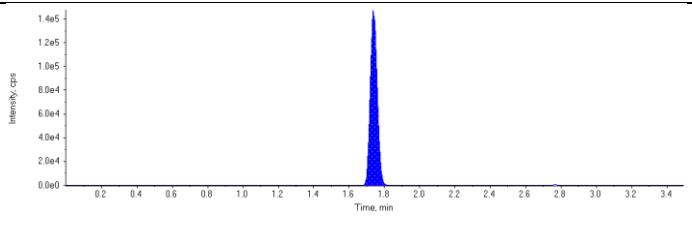
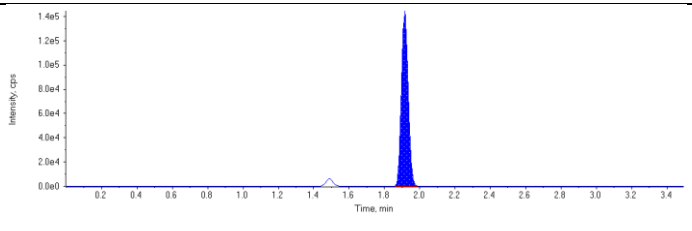
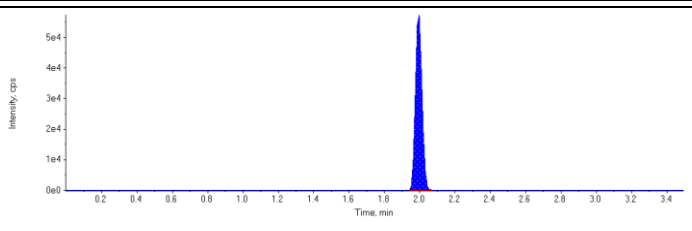
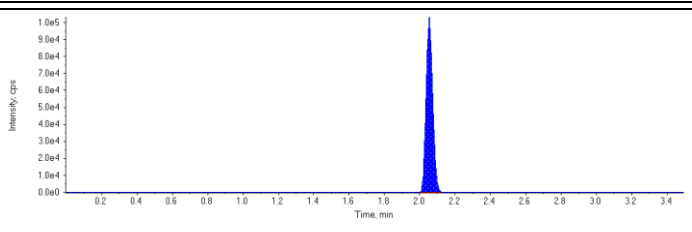
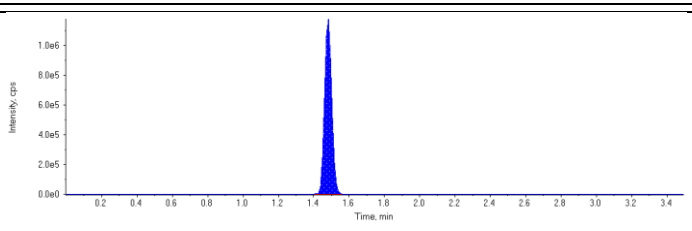
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 10:43:32 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	122000.	1.71	1.00	-
MPFHpA	400000.	1.74	1.00	-
MPFOA	381000.	1.91	1.00	-
MPFOS	150000.	1.99	1.00	-
MPFNA	266000.	2.05	1.00	-
13C6-PFHxA IS	3360000.	1.48	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	975000	1.15	30.0	26.0	86.7
PFHxS 1	1160000	1.71	30.0	29.2	97.3
PFHpA 1	1680000	1.74	30.0	31.2	104.0
PFOA 1	1910000	1.92	30.0	30.5	102.0
PFOS 1	851000	1.99	30.0	31.3	104.0
PFNA 1	1330000	2.05	30.0	30.3	101.0
18O2-PFHxS	122000	1.71	100.	99.0	99.0
13C4-PFHpA	400000	1.74	100.	96.4	96.4
13C4-PFOA	381000	1.91	100.	105.	105.0
13C4-PFOS	150000	1.99	100.	103.	103.0
13C5-PFNA	266000	2.05	100.	108.	108.0
13C6-PFHxA	3360000	1.48	100.	84.1	84.1

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.91(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

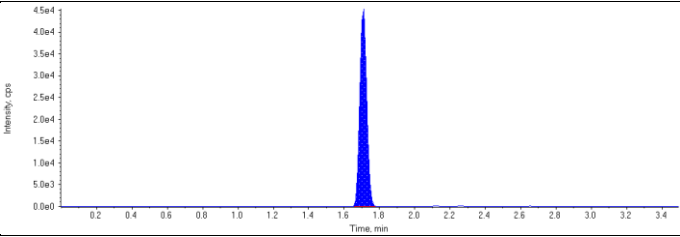
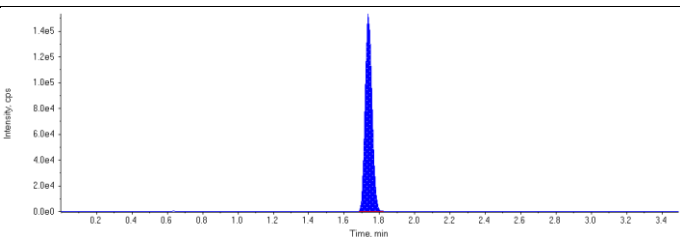
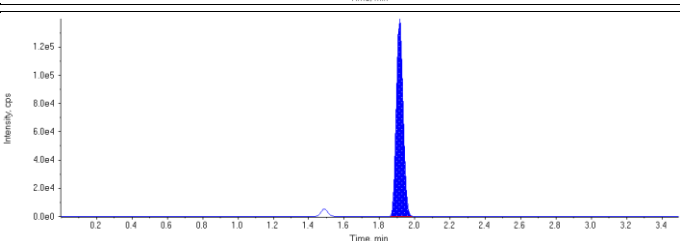
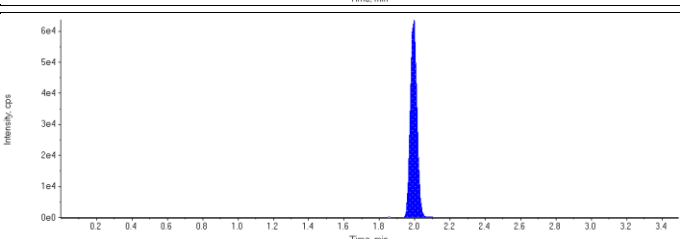
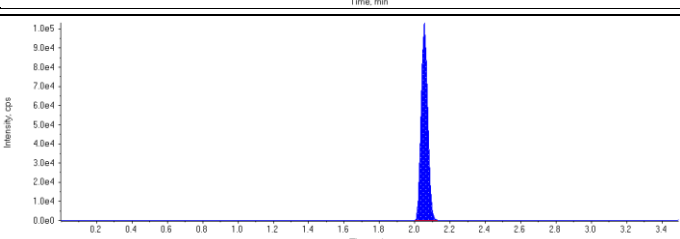
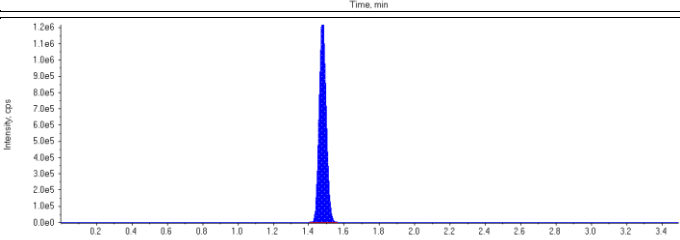
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.15 (1.15) min Calculated Conc: 26.0 ng/L Area Ratio: 7.96 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 29.2 ng/L Area Ratio: 9.51 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 31.2 ng/L Area Ratio: 4.20 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 30.5 ng/L Area Ratio: 5.00 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 31.3 ng/L Area Ratio: 5.67 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 30.3 ng/L Area Ratio: 5.01 Sample Type: (Quality Control)	

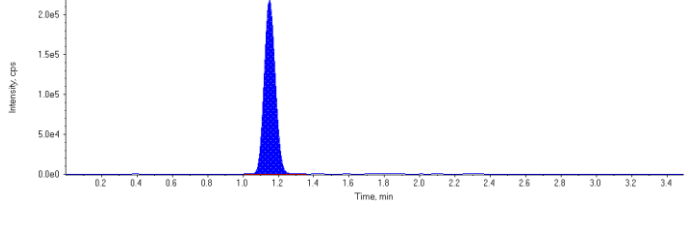
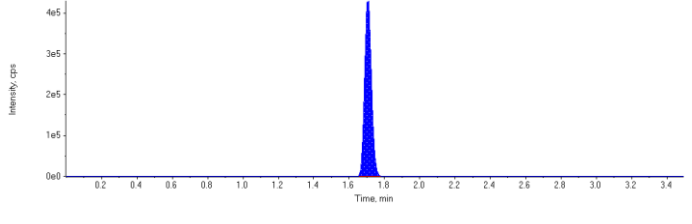
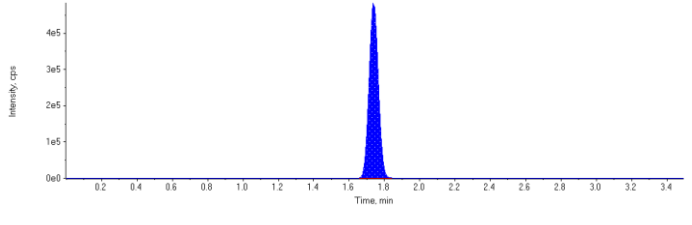
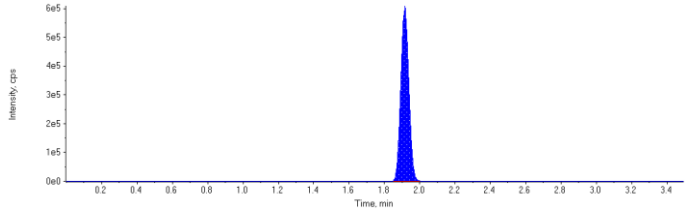
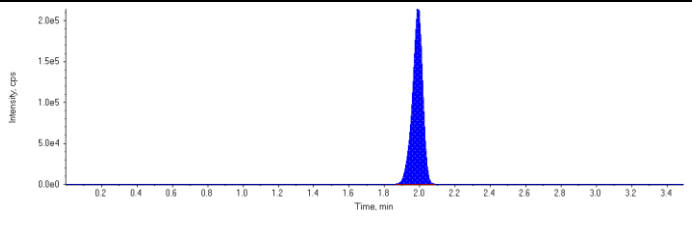
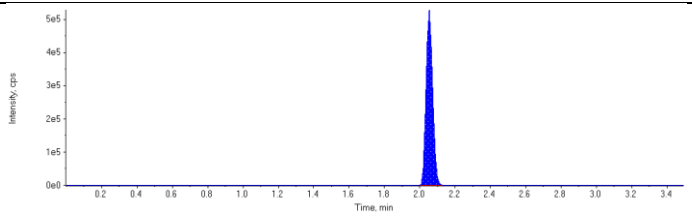
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 99.0 ng/L Area Ratio: 0.0365 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 96.4 ng/L Area Ratio: 0.119 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.91 (1.88) min Calculated Conc: 105. ng/L Area Ratio: 0.114 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 103. ng/L Area Ratio: 0.0447 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 108. ng/L Area Ratio: 0.0793 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 84.1 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

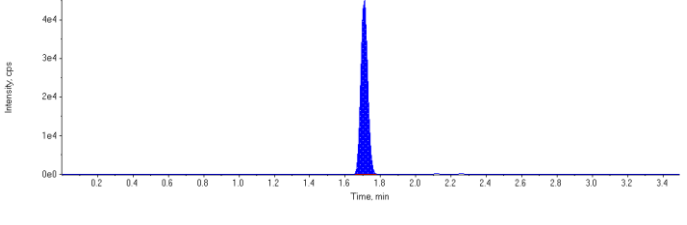
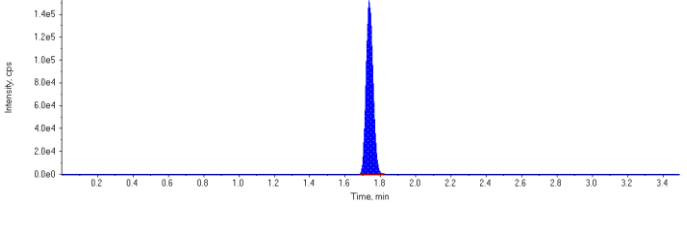
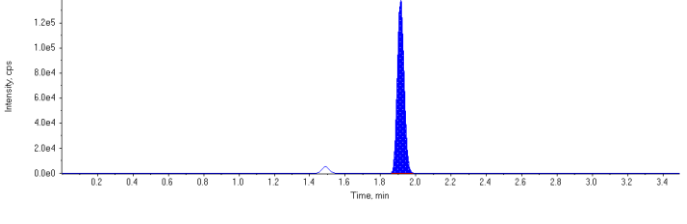
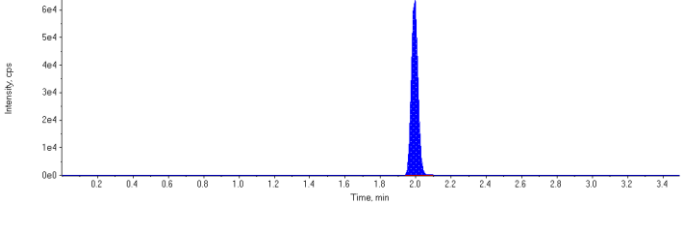
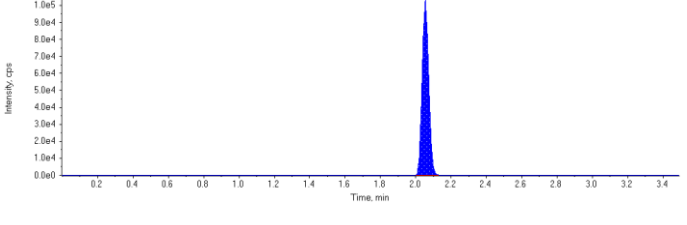
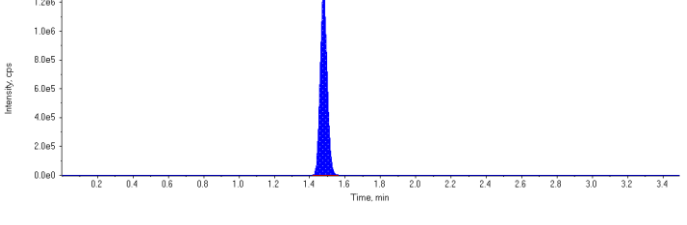
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/19 11:03:54 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160219\WS#4386408.wiff		
Result Table	PFC_Water_160219_4386408_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	123000.	1.71	1.00	-
MPFHpA	413000.	1.74	1.00	-
MPFOA	372000.	1.91	1.00	-
MPFOS	165000.	1.99	1.00	-
MPFNA	267000.	2.05	1.00	-
13C6-PFHxA IS	3510000.	1.48	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	950000	1.15	30.0	25.3	84.2
PFHxS 1	1180000	1.71	30.0	29.5	98.2
PFHpA 1	1770000	1.74	30.0	31.8	106.0
PFOA 1	1910000	1.92	30.0	31.4	105.0
PFOS 1	881000	1.99	30.0	29.4	98.1
PFNA 1	1370000	2.05	30.0	30.9	103.0
18O2-PFHxS	123000	1.71	100.	95.1	95.1
13C4-PFHpA	413000	1.74	100.	95.1	95.1
13C4-PFOA	372000	1.91	100.	98.3	98.3
13C4-PFOS	165000	1.99	100.	109.	109.0
13C5-PFNA	267000	2.05	100.	103.	103.0
13C6-PFHxA	3510000	1.48	100.	87.9	87.9

MPFHxS (Internal Standard) RT (Exp. RT): 1.71(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.74(1.75) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.91(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.99(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.05(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.48(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

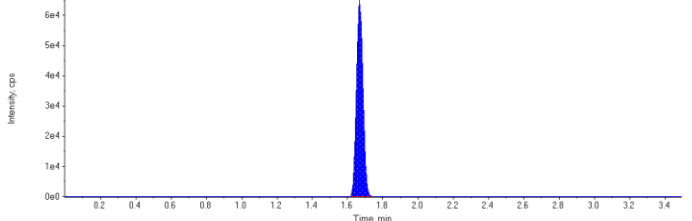
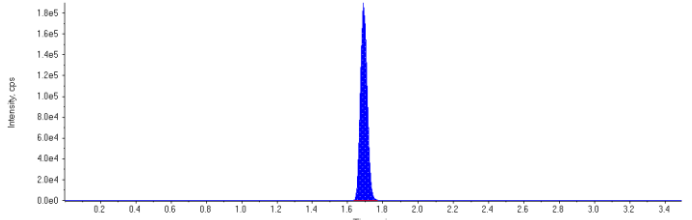
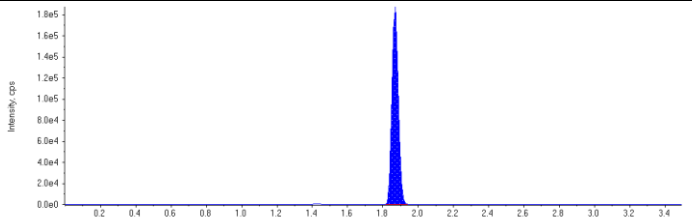
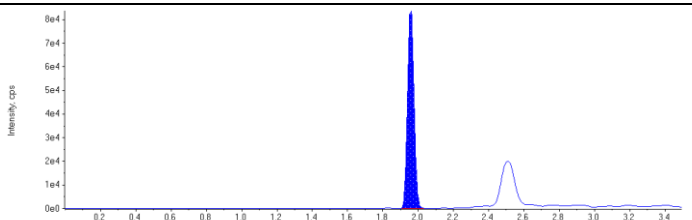
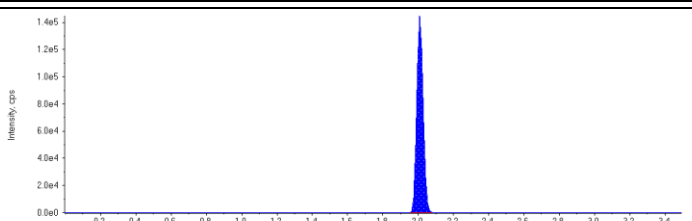
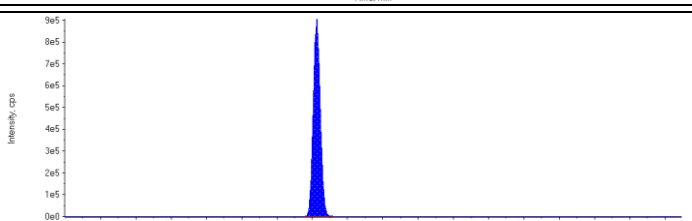
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.15 (1.15) min Calculated Conc: 25.3 ng/L Area Ratio: 7.73 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 29.5 ng/L Area Ratio: 9.60 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 31.8 ng/L Area Ratio: 4.28 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.92 (1.92) min Calculated Conc: 31.4 ng/L Area Ratio: 5.14 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 29.4 ng/L Area Ratio: 5.33 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 30.9 ng/L Area Ratio: 5.12 Sample Type: (Quality Control)	

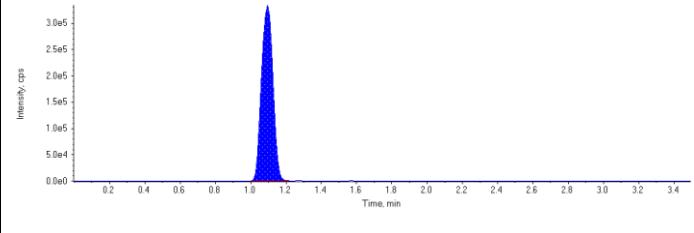
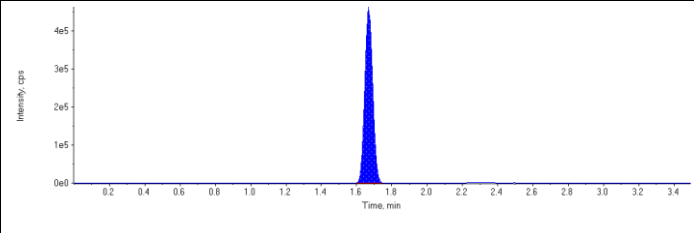
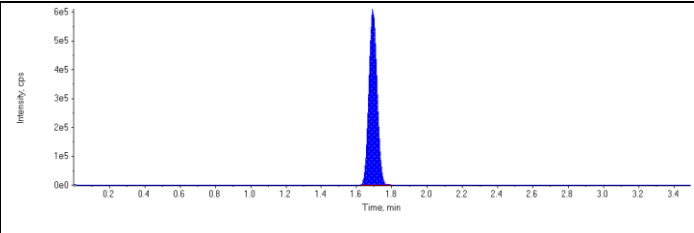
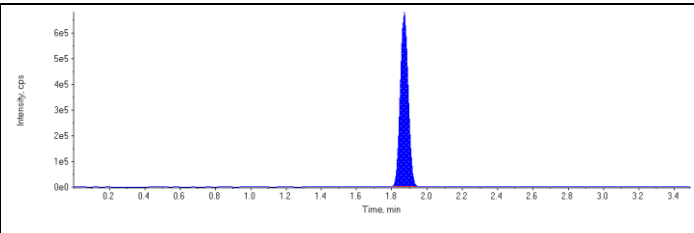
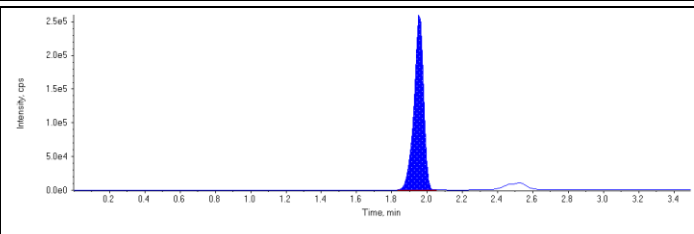
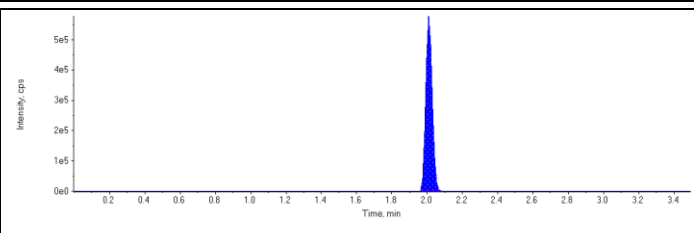
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.71 (1.68) min Calculated Conc: 95.1 ng/L Area Ratio: 0.0350 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.74 (1.75) min Calculated Conc: 95.1 ng/L Area Ratio: 0.118 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.91 (1.88) min Calculated Conc: 98.3 ng/L Area Ratio: 0.106 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.99 (1.97) min Calculated Conc: 109. ng/L Area Ratio: 0.0471 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.05 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.0762 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.48 (1.42) min Calculated Conc: 87.9 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

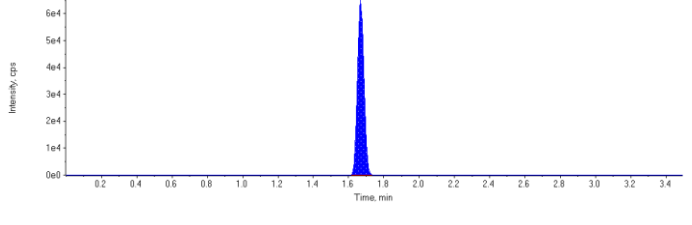
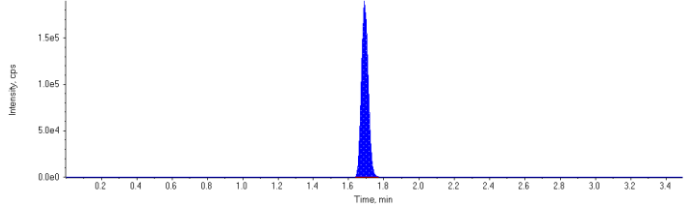
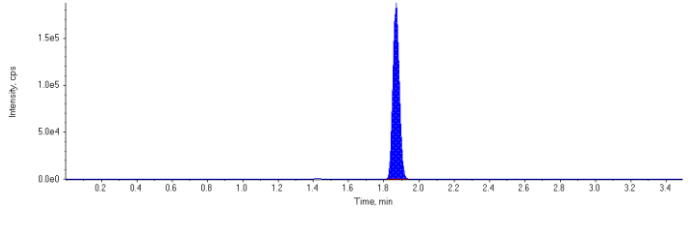
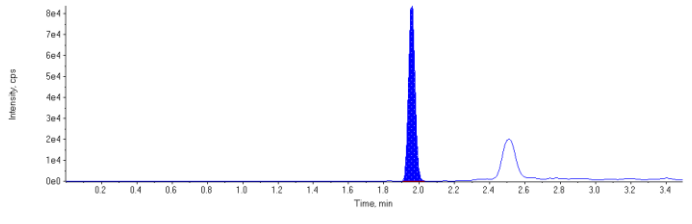
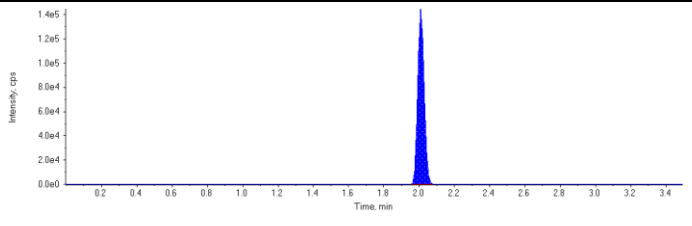
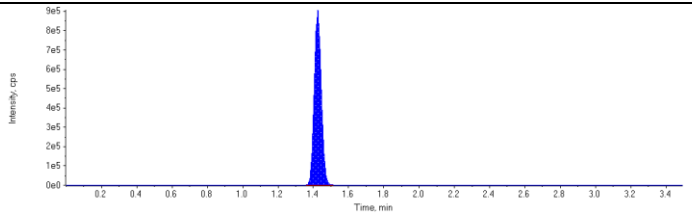
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 9:46:45 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	166000.	1.67	1.00	-
MPFHpA	500000.	1.69	1.00	-
MPFOA	470000.	1.87	1.00	-
MPFOS	215000.	1.96	1.00	-
MPFNA	366000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	1.42	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	1510000	1.10	30.0	32.6	109.0
PFHxS 1	1430000	1.67	30.0	29.6	98.8
PFHpA 1	1950000	1.69	30.0	32.6	109.0
PFOA 1	2090000	1.87	30.0	30.4	101.0
PFOS 1	978000	1.96	30.0	29.4	98.0
PFNA 1	1470000	2.01	30.0	30.4	101.0
18O2-PFHxS	166000	1.67	100.	102.	102.0
13C4-PFHpA	500000	1.69	100.	103.	103.0
13C4-PFOA	470000	1.87	100.	111.	111.0
13C4-PFOS	215000	1.96	100.	108.	108.0
13C5-PFNA	366000	2.01	100.	108.	108.0
13C6-PFHxA	2530000	1.42	100.	102.	102.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

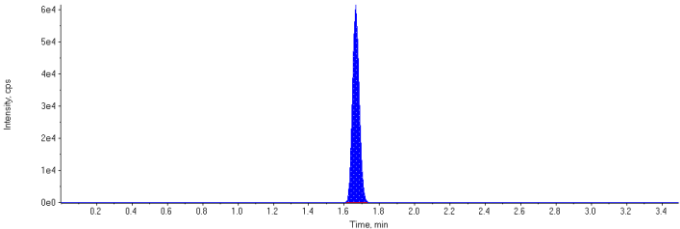
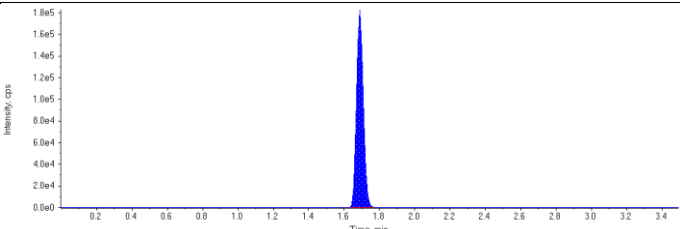
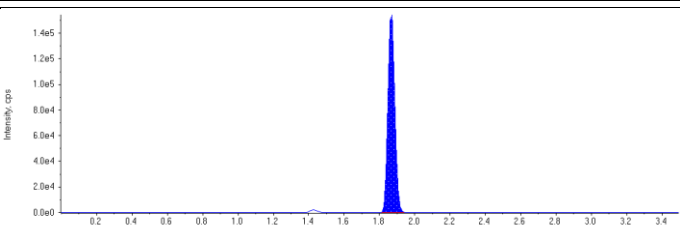
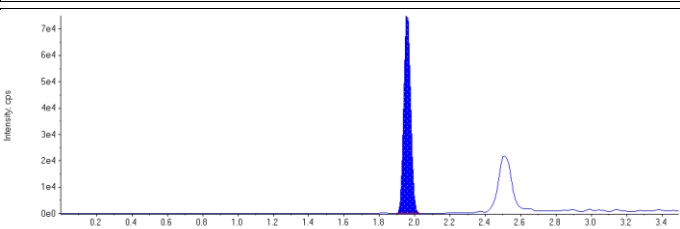
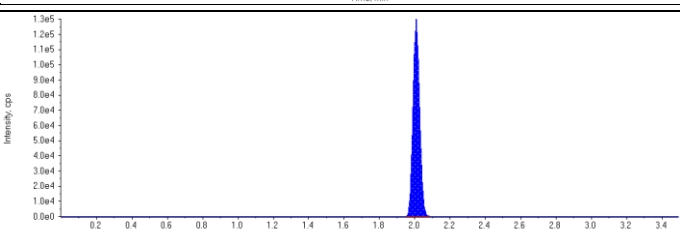
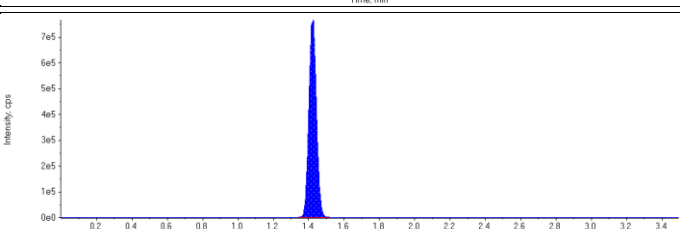
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 32.6 ng/L Area Ratio: 9.08 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 29.6 ng/L Area Ratio: 8.57 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 32.6 ng/L Area Ratio: 3.90 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 30.4 ng/L Area Ratio: 4.44 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 29.4 ng/L Area Ratio: 4.54 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 30.4 ng/L Area Ratio: 4.02 Sample Type: (Quality Control)	

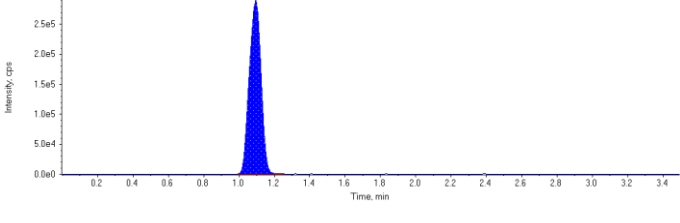
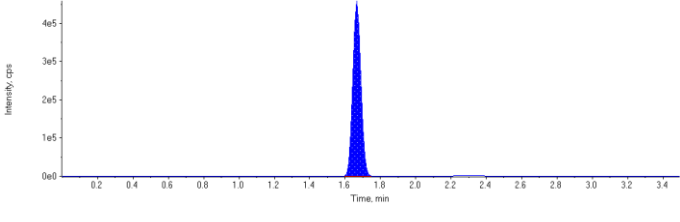
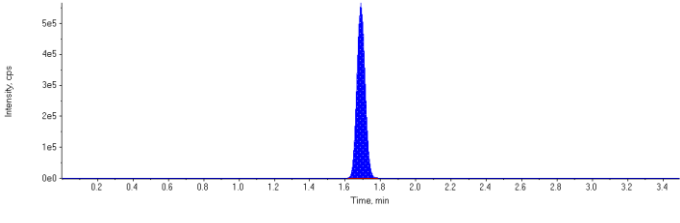
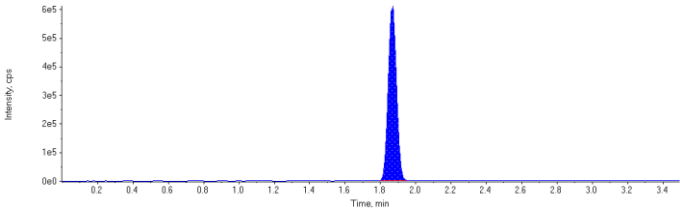
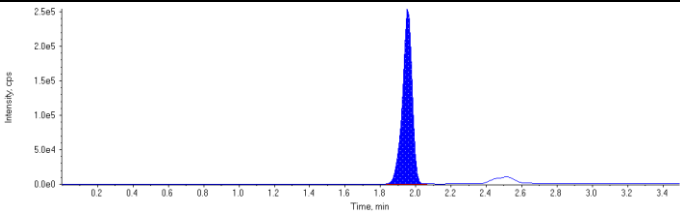
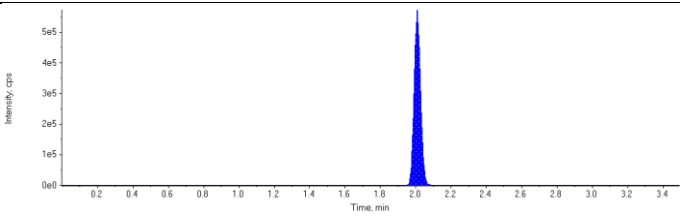
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 102. ng/L Area Ratio: 0.0659 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 103. ng/L Area Ratio: 0.198 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 111. ng/L Area Ratio: 0.186 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 108. ng/L Area Ratio: 0.0853 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 108. ng/L Area Ratio: 0.145 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

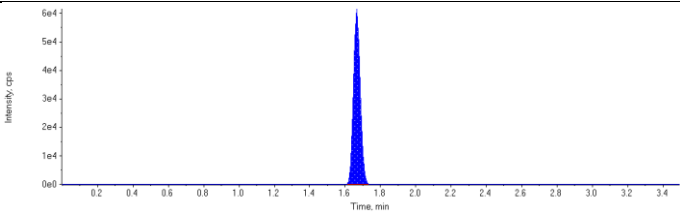
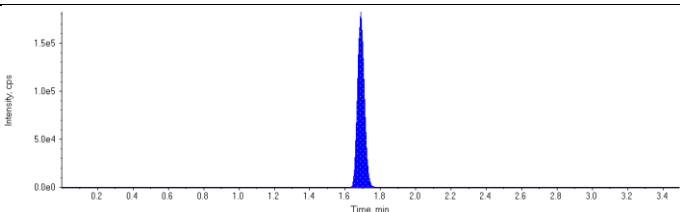
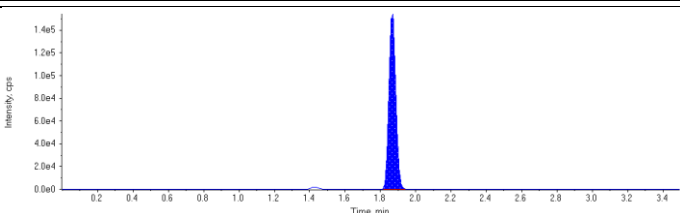
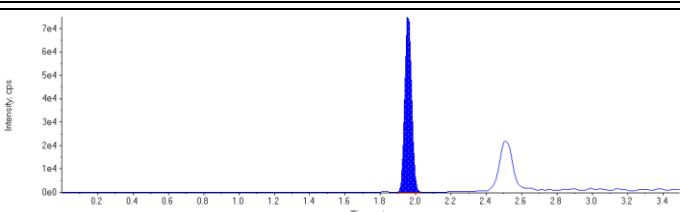
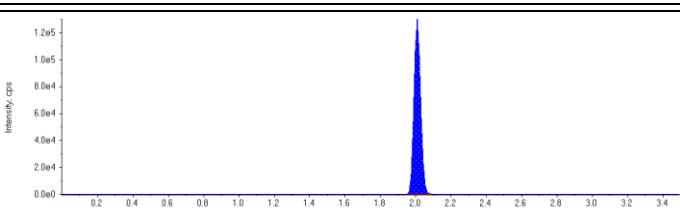
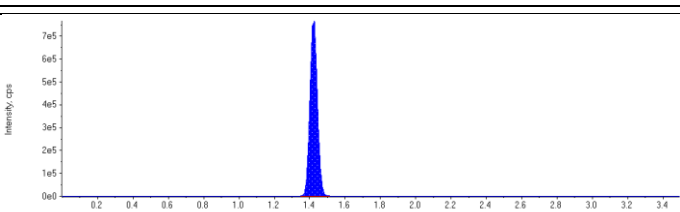
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 11:21:13 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	162000.	1.67	1.00	-
MPFHpA	482000.	1.69	1.00	-
MPFOA	419000.	1.87	1.00	-
MPFOS	204000.	1.96	1.00	-
MPFNA	340000.	2.01	1.00	-
13C6-PFHxA IS	2290000.	1.42	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	1340000	1.09	30.0	29.7	99.1
PFHxS 1	1450000	1.67	30.0	30.9	103.0
PFHpA 1	1800000	1.69	30.0	31.3	104.0
PFOA 1	1980000	1.87	30.0	32.3	108.0
PFOS 1	963000	1.96	30.0	30.5	102.0
PFNA 1	1450000	2.01	30.0	32.1	107.0
18O2-PFHxS	162000	1.67	100.	110.	110.0
13C4-PFHpA	482000	1.69	100.	110.	110.0
13C4-PFOA	419000	1.87	100.	110.	110.0
13C4-PFOS	204000	1.96	100.	113.	113.0
13C5-PFNA	340000	2.01	100.	111.	111.0
13C6-PFHxA	2290000	1.42	100.	92.3	92.3

MPFHxS (Internal Standard) RT (Exp. RT): 1.67(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

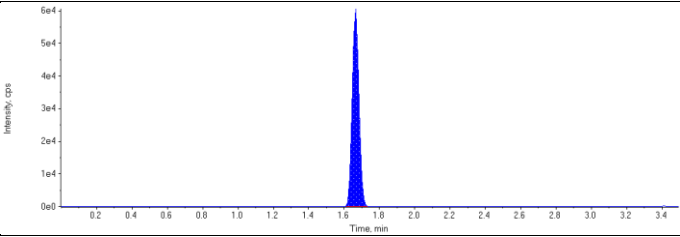
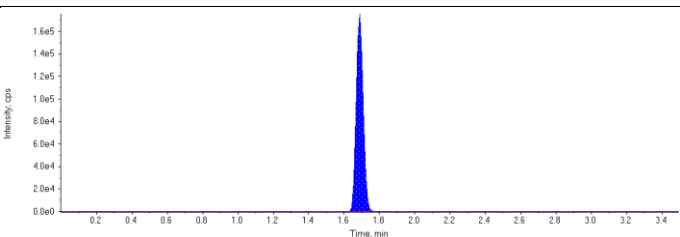
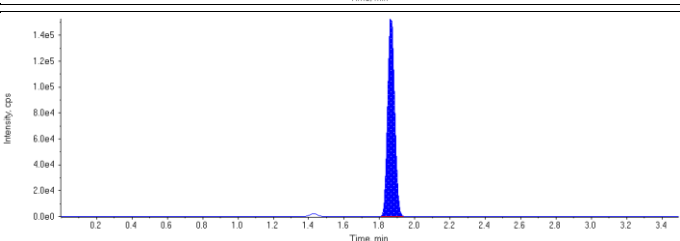
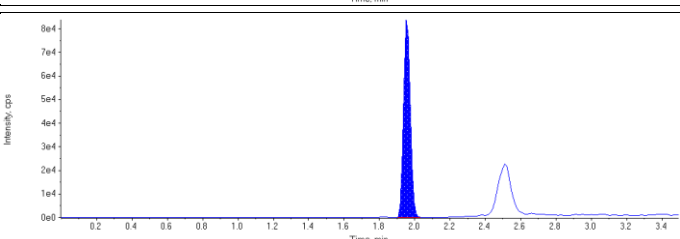
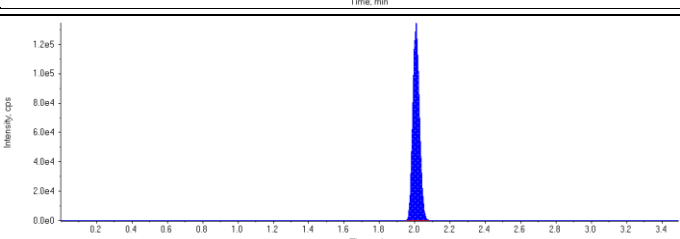
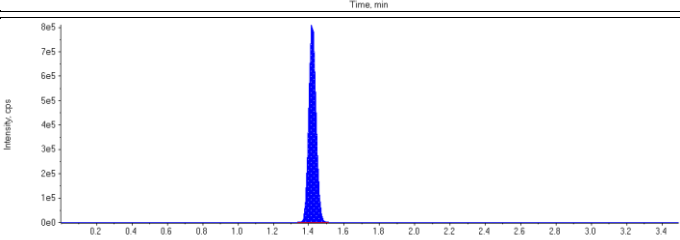
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 29.7 ng/L Area Ratio: 8.28 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 30.9 ng/L Area Ratio: 8.94 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 31.3 ng/L Area Ratio: 3.74 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 32.3 ng/L Area Ratio: 4.71 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 30.5 ng/L Area Ratio: 4.71 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 32.1 ng/L Area Ratio: 4.25 Sample Type: (Quality Control)	

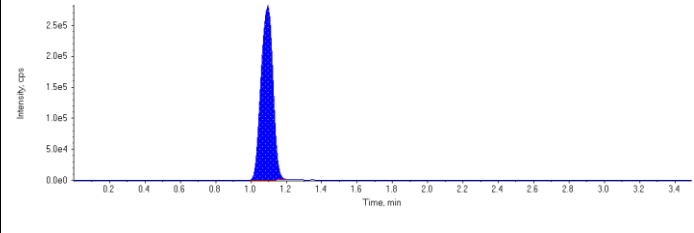
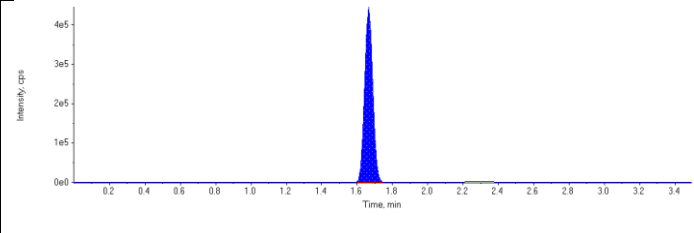
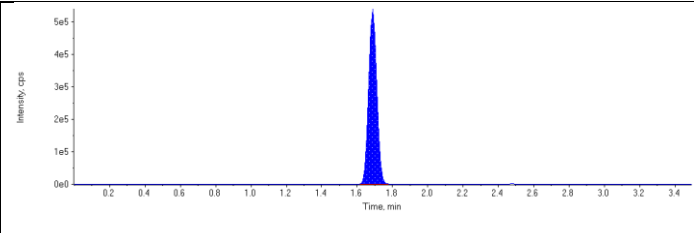
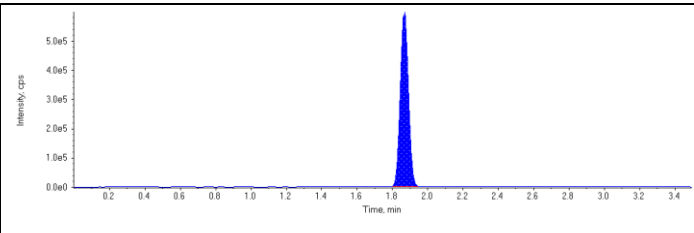
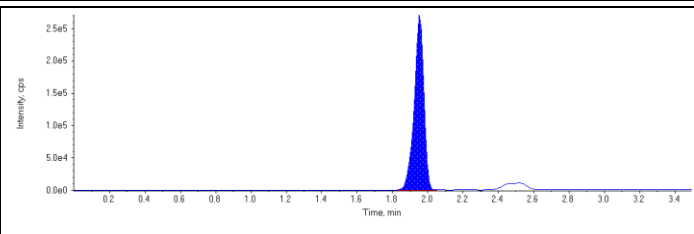
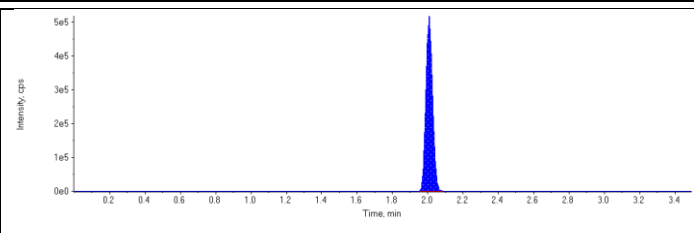
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 110. ng/L Area Ratio: 0.0708 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 110. ng/L Area Ratio: 0.211 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 110. ng/L Area Ratio: 0.183 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 113. ng/L Area Ratio: 0.0893 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 111. ng/L Area Ratio: 0.149 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 92.3 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

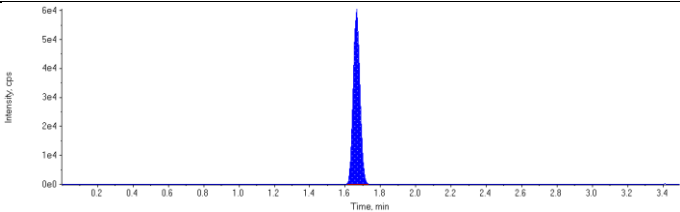
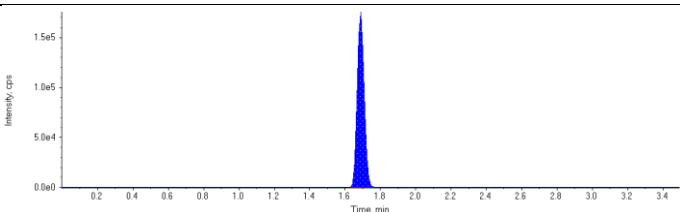
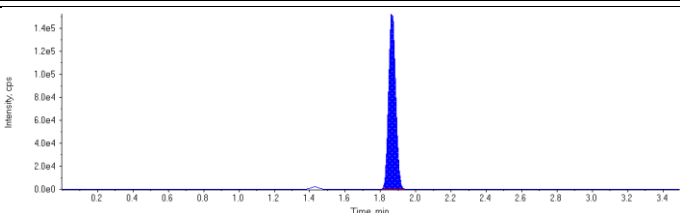
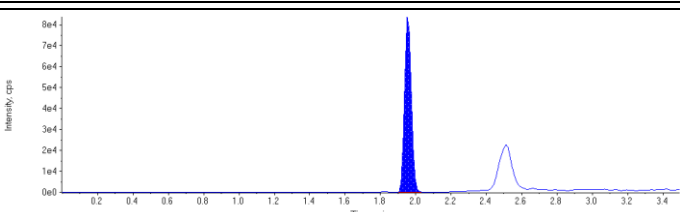
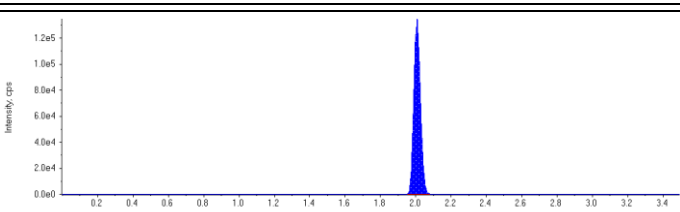
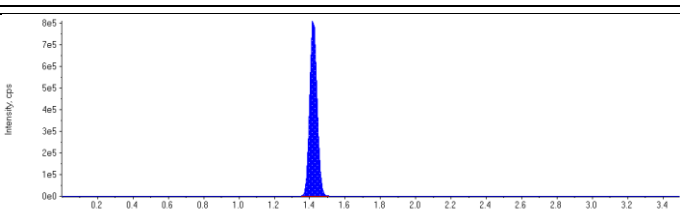
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 11:36:34 AM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	159000.	1.66	1.00	-
MPFHpA	477000.	1.69	1.00	-
MPFOA	425000.	1.87	1.00	-
MPFOS	223000.	1.96	1.00	-
MPFNA	354000.	2.01	1.00	-
13C6-PFHxA IS	2390000.	1.42	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	1320000	1.09	30.0	29.7	99.1
PFHxS 1	1410000	1.67	30.0	30.6	102.0
PFHpA 1	1720000	1.69	30.0	30.2	101.0
PFOA 1	1910000	1.87	30.0	30.8	103.0
PFOS 1	1020000	1.95	30.0	29.6	98.6
PFNA 1	1370000	2.01	30.0	29.2	97.4
18O2-PFHxS	159000	1.66	100.	103.	103.0
13C4-PFHpA	477000	1.69	100.	104.	104.0
13C4-PFOA	425000	1.87	100.	106.	106.0
13C4-PFOS	223000	1.96	100.	119.	119.0
13C5-PFNA	354000	2.01	100.	111.	111.0
13C6-PFHxA	2390000	1.42	100.	96.3	96.3

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.69) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.87(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.96(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.01(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
N/A (Internal Standard) RT (Exp. RT): N/A(N/A) min Concentration: N/A N/A Sample Type: (Quality Control)	This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 29.7 ng/L Area Ratio: 8.28 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 30.6 ng/L Area Ratio: 8.86 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 30.2 ng/L Area Ratio: 3.61 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 30.8 ng/L Area Ratio: 4.49 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 29.6 ng/L Area Ratio: 4.57 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 29.2 ng/L Area Ratio: 3.86 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 0.0666 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 104. ng/L Area Ratio: 0.200 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 106. ng/L Area Ratio: 0.178 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 119. ng/L Area Ratio: 0.0935 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 111. ng/L Area Ratio: 0.148 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.3 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	



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Shipping and Receiving Documents

Chain of Custody Record

Temperature on Receipt 34

Drinking Water? Yes ☒ No ☐

TAL-4124 (1007)

Client Charm Hill Project Manager Bill Friedmann Chain of Custody Number 283597
 Address 5701 Cleveland St, Suite 200 Telephone Number (Area Code)/Fax Number 757-671-6223 Date 02/04/16
 City Virginia Beach State VA Zip Code 23462 Lab Number 1 of 2

Project Name and Location (State) CTD WE76 APC Sampling Carrier/Waybill Number FedEx Special Instructions/Conditions of Receipt
 Contract/Purchase Order/Quote No. PO# 100060-7-104000

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)
OF-FB08-0216	02/04/16	0930	Air	LiPres. H2SO4 HNO3 HCl NaOH ZnAc NaOH	Selected PFG
OF-RW08-0216		0935	Soil		2
OF-RW08P-0216		0937	Sed		2
OF-FB41-0216		1005	Aqueous		2
OF-RW41-0216		1010			2
OF-RW41P-0216		1012			2
OF-FB56-0216		1035			2
OF-RW56-0216		1040			2
OF-RW56-0216-MS		1040			2
OF-RW56-0216-SD		1100			2
OF-FB51-0216		1110			2
OF-RW51-0216					

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)

QC Requirements (Specify)
 Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____
 1. Relinquished By Anthony Datta Date 02/04/16 Time 19:30
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

TestAmerica

Temperature on Receipt

Drinking Water? Yes ☒ No ☐

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	CH2M Hill	Project Manager	Bill Friedmann	Date	02/04/10	Chain of Custody Number	283598
Address	5701 Cleveland St, Suite 200	Telephone Number (Area Code)/Fax Number	757-1671-6223	Lab Number		Page	2 of 2

City	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if
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VA 73462	more space is needed)
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Project Name and Location (State)	Carrier/Waybill Number
NICHOLS, PAUL	2110
Project Name and Location (State)	Carrier/Waybill Number

[illegible][illegible]

Matrix	Preservatives & Containers	Matrix	Preservatives & Containers
00 # 10000-3	10000-3	10000-3	10000-3

[illegible]

Date	Time	Time	if	Percent	Red.	Roll	Impure	250C	INOC	ICI	laOH	laOH	maOH	laOH
(Containers for each sample may be combined on one line)														
Sample I.L. No. and Description														

[illegible]

RF-655 P-026
0204 112
0204 112

[illegible]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)	(112)	(113)	(114)	(115)	(116)	(117)	(118)	(119)	(120)	(121)	(122)	(123)	(124)	(125)	(126)	(127)	(128)	(129)	(130)	(131)	(132)	(133)	(134)	(135)	(136)	(137)	(138)	(139)	(140)	(141)	(142)	(143)	(144)	(145)	(146)	(147)	(148)	(149)	(150)	(151)	(152)	(153)	(154)	(155)	(156)	(157)	(158)	(159)	(160)	(161)	(162)	(163)	(164)	(165)	(166)	(167)	(168)	(169)	(170)	(171)	(172)	(173)	(174)	(175)	(176)	(177)	(178)	(179)	(180)	(181)	(182)	(183)	(184)	(185)	(186)	(187)	(188)	(189)	(190)	(191)	(192)	(193)	(194)	(195)	(196)	(197)	(198)	(199)	(200)	(201)	(202)	(203)	(204)	(205)	(206)	(207)	(208)	(209)	(210)	(211)	(212)	(213)	(214)	(215)	(216)	(217)	(218)	(219)	(220)	(221)	(222)	(223)	(224)	(225)	(226)	(227)	(228)	(229)	(230)	(231)	(232)	(233)	(234)	(235)	(236)	(237)	(238)	(239)	(240)	(241)	(242)	(243)	(244)	(245)	(246)	(247)	(248)	(249)	(250)	(251)	(252)	(253)	(254)	(255)	(256)	(257)	(258)	(259)	(260)	(261)	(262)	(263)	(264)	(265)	(266)	(267)	(268)	(269)	(270)	(271)	(272)	(273)	(274)	(275)	(276)	(277)	(278)	(279)	(280)	(281)	(282)	(283)	(284)	(285)	(286)	(287)	(288)	(289)	(290)	(291)	(292)	(293)	(294)	(295)	(296)	(297)	(298)	(299)	(300)	(301)	(302)	(303)	(304)	(305)	(306)	(307)	(308)	(309)	(310)	(311)	(312)	(313)	(314)	(315)	(316)	(317)	(318)	(319)	(320)	(321)	(322)	(323)	(324)	(325)	(326)	(327)	(328)	(329)	(330)	(331)	(332)	(333)	(334)	(335)	(336)	(337)	(338)	(339)	(340)	(341)	(342)	(343)	(344)	(345)	(346)	(347)	(348)	(349)	(350)	(351)	(352)	(353)	(354)	(355)	(356)	(357)	(358)	(359)	(360)	(361)	(362)	(363)	(364)	(365)	(366)	(367)	(368)	(369)	(370)	(371)	(372)	(373)	(374)	(375)	(376)	(377)	(378)	(379)	(380)	(381)	(382)	(383)	(384)	(385)	(386)	(387)	(388)	(389)	(390)	(391)	(392)	(393)	(394)	(395)	(396)	(397)	(398)	(399)	(400)	(401)	(402)	(403)	(404)	(405)	(406)	(407)	(408)	(409)	(410)	(411)	(412)	(413)	(414)	(415)	(416)	(417)	(418)	(419)	(420)	(421)	(422)	(423)	(424)	(425)	(426)	(427)	(428)	(429)	(430)	(431)	(432)	(433)	(434)	(435)	(436)	(437)	(438)	(439)	(440)	(441)	(442)	(443)	(444)	(445)	(446)	(447)	(448)	(449)	(450)	(451)	(452)	(453)	(454)	(455)	(456)	(457)	(458)	(459)	(460)	(461)	(462)	(463)	(464)	(465)	(466)	(467)	(468)	(469)	(470)	(471)	(472)	(473)	(474)	(475)	(476)	(477)	(478)	(479)	(480)	(481)	(482)	(483)	(484)	(485)	(486)	(487)	(488)	(489)	(490)	(491)	(492)	(493)	(494)	(495)	(496)	(497)	(498)	(499)	(500)	(501)	(502)	(503)	(504)	(505)	(506)	(507)	(508)	(509)	(510)	(511)	(512)	(513)	(514)	(515)	(516)	(517)	(518)	(519)	(520)	(521)	(522)	(523)	(52
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777

of

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[illegible][illegible]

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(Handwritten signature)

[illegible][illegible][illegible]

Possible Hazard Identification	Sample Disposal	(A fee may be assessed if samples are retained)

☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☐ Unknown	☐ Return to Client	☐ Disposal By Lab	☐ Archive For _____ Months	☐ longer than 1 month)
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Turn Around Time Required	QC Requirements (Specify)

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

1. Relinquished By	Date	Time	1. Received By	Date	Time
	11-11	11:00		11-11	11:00

1930
02/04/16

2. Relinquished By	Date	Time	2. Received By	Date	Time

33/

3. Relinquished By	Date	Time	3. Received By	Date	Time

2020

6 Comments

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

Chain of Custody Record

Due 2/22

13-Feb-16 13:40

Hongmei Zhao (Grace)



B630791

AKP ENV-997

Temperature on Receipt 3.4

Drinking Water? Yes ☒ No ☐



320-17185 Chain of Custody

IG

CTD WE 76

Project Manager [Redacted]		Date 02/04/16	Chain of Custody Number 283597
Telephone Number (Area Code)/Fax Number [Redacted]		Lab Number	
Site Contact [Redacted]	Lab Contact	Page 1 of 2	
Carrier/Waybill Number FedEx		Analysis (Attach list if more space is needed)	

AKP	ENV-997				Matrix				Containers & Preservatives						Select PFG	Special Instructions/ Conditions of Receipt									
Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date	Time	Air	Aqueous	Solid	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH												
OF-FB08-0216		02/04/16	0930	✓				✓						2											
OF-RW08-0216			0935											2											
OF-RW08P-0216			0937											2											
OF-FB41-0216			1005											2											
OF-RW41-0216			1010											2											
OF-RW41P-0216			1012											2											
OF-FB56-0216			1035											2											
OF-RW56-0216			1040											2											
OF-RW56-0216-MS			1040											2											
OF-RW56-0216-SD			1040											2											
OF-FB51-0216			1100											2											
OF-RW51-0216			1110											2											

Possible Hazard Identification			Sample Disposal			(A fee may be assessed if samples are retained longer than 1 month)		
☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☐ Unknown	☐ Return To Client	☐ Disposal By Lab	☐ Archive For	Months
Turn Around Time Required			QC Requirements (Specify)					
☐ 24 Hours	☐ 48 Hours	☐ 7 Days	☐ 14 Days	☐ 21 Days	☐ Other			
1. Relinquished By [Signature]			Date 02/04/16			Time 10:30		
2. Relinquished By			Date			Time		
3. Relinquished By			Date			Time		
Comments			1. Received By [Signature]			Date 2/5/16		
			2. Received By			Time 10:00		
			3. Received By [Signature]			Date 2/8/16		
						Time 13:40		

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

Chain of Custody Record

Due 2/22

Temperature on Receipt 3.4

Drinking Water? Yes ☒ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CTD WE 7G

Project Manager [Redacted]		Date 02/04/16	Chain of Custody Number 283598
Telephone Number (Area Code) Ext. Number [Redacted]		Lab Number	
Site Contact	Lab Contact	Page 2 of 2	
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)

OF-RW51P-0216

Date
02/04/16

Time
11:12

Matrix

Air

Aqueous

Soil

Sludge

Other

Containers & Preservatives

Unpres.

H2SO4

HNO3

HCl

NaOH

NaCl

Na2CO3

Na2S2O8

Na2S2O3

Na2S2O4

Na2S2O5

Na2S2O6

Na2S2O7

Na2S2O8

Na2S2O9

Na2S2O10

Na2S2O11

Na2S2O12

Na2S2O13

Na2S2O14

Na2S2O15

Na2S2O16

Na2S2O17

Na2S2O18

Na2S2O19

Na2S2O20

Na2S2O21

Na2S2O22

Na2S2O23

Na2S2O24

Na2S2O25

Na2S2O26

Na2S2O27

Na2S2O28

Na2S2O29

Na2S2O30

Na2S2O31

Na2S2O32

Na2S2O33

Na2S2O34

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

02/04/16

Time

19:30

2. Received By

[Signature]

Date

2/5/16

Time

10:00

2. Relinquished By

Date

Time

3. Received By

[Signature]

Date

2/10/16

Time

13:40

3. Relinquished By

Date

Time

Comments

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: 320-17185-1
SDG Number: CTO WE7G PFC Sampling

Login Number: 17185

List Number: 1

Creator: Alltucker, David R

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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 $<6\text{mm}$ (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**.

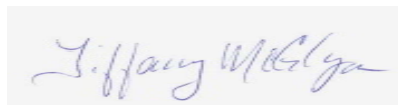
Sample Name	SDG
OF-RW37-0216	320-17154
OF-FB56-0216	320-17185

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

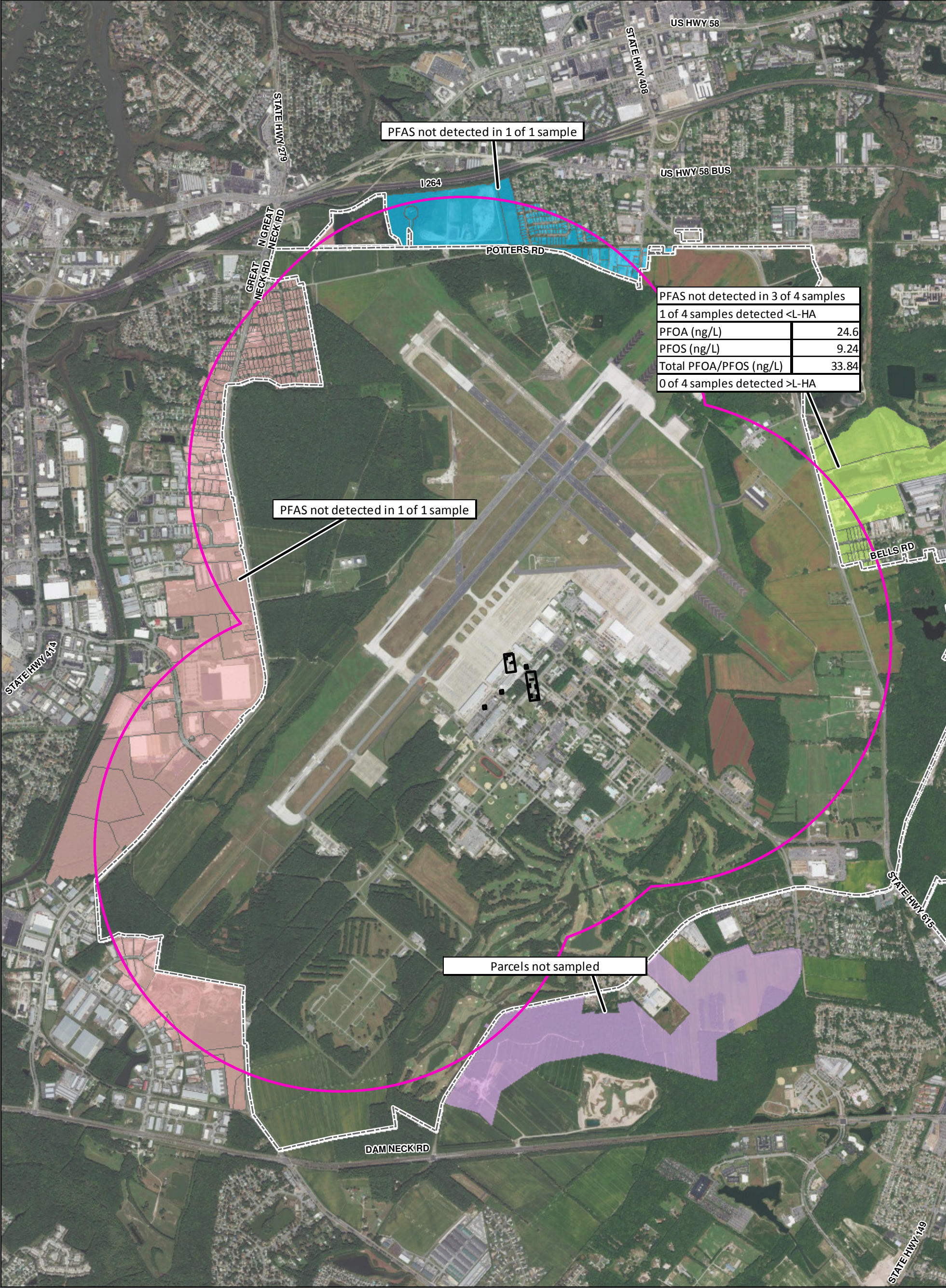
Qualification Flags

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

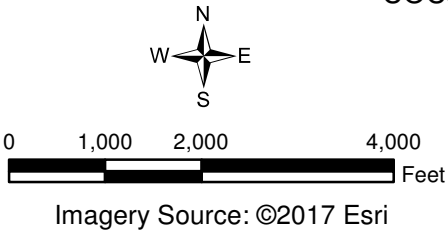


Figure 4-3
COCs Detections in Potable Wells Sampled from Parcels Located Off-Base
Basewide Per- and Polyfluoroalkyl Substances Site Inspection Report
NAS Oceana, Virginia Beach, Virginia