



**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 J17321-1**

*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: 320-17321-1

TestAmerica SDG: CTO WE7G PFC Sampling

Client Project/Site: CTO WE7G PFC Sampling

For:

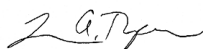
CH2M Hill, Inc.

5701 Cleveland Street

Suite 200

Virginia Beach, Virginia 23462

Attn: Laurie George



Authorized for release by:

3/1/2016 3:37:19 PM

Laura Turpen, Project Manager I

(916)374-4414

laura.turpen@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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www.testamericainc.com

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

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

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



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Case Narrative

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

TestAmerica Job ID: 320-17321-1
SDG: CTO WE7G PFC Sampling

Job ID: 320-17321-1

Laboratory: TestAmerica Sacramento

Narrative

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17321-1

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 shipped directly to Maxxam Analytics by the client, and not received by TestAmerica.

Subcontract Work

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

Certification Summary

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

TestAmerica Job ID: 320-17321-1
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: 320-17321-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17321-1	OF-FB02-0216	Water	02/12/16 09:10	02/17/16 08:39
320-17321-2	OF-RW02-0216	Water	02/12/16 09:18	02/17/16 08:39
320-17321-3	OF-FB15-0216	Water	02/12/16 16:45	02/17/16 08:39
320-17321-4	OF-RW15-0216	Water	02/12/16 16:53	02/17/16 08:39
320-17321-5	OF-FB18-0216	Water	02/16/16 12:20	02/17/16 08:39
320-17321-6	OF-RW18-0216	Water	02/16/16 12:24	02/17/16 08:39

Your Project #: 320-17321-1
Your C.O.C. #: 283619

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/03/01

Report #: R3914130

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B632546

Received: 2016/02/17, 15:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	6	2016/02/26	2016/02/29	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

=====

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		BWH243	BWH244	BWH245	BWH246	BWH247			
Sampling Date		2016/02/12 09:10	2016/02/12 09:18	2016/02/12 16:45	2016/02/12 16:53	2016/02/16 12:20			
COC Number		283619	283619	283619	283619	283619			
	UNITS	OF-FB02-0216	OF-RW02-0216	OF-FB15-0216	OF-RW15-0216	OF-FB18-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	9.4	0.27 U	0.27 U	0.27 U	0.27	4396598	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	11	0.39 U	0.39 U	0.39 U	0.39	4396598	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	8.4	0.40 U	0.40 U	0.40 U	0.40	4396598	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	42	0.39 U	0.39 U	0.39 U	0.39	4396598	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	5.5	0.33 U	0.33 U	0.33 U	0.33	4396598	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	86	0.30 U	0.30 U	0.30 U	0.30	4396598	2.0
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	87	102	101	66	91	N/A	4396598	N/A
13C4-Perfluorooctanesulfonate	%	84	111	104	56	86	N/A	4396598	N/A
13C4-Perfluorooctanoic acid	%	90	101	101	71	93	N/A	4396598	N/A
13C5-Perfluorononanoic acid	%	89	100	96	62	87	N/A	4396598	N/A
18O2-Perfluorohexanesulfonate	%	87	120	106	71	96	N/A	4396598	N/A
QC Batch = Quality Control Batch									
N/A = Not Applicable									

Maxxam ID		BWH248			
Sampling Date		2016/02/16 12:24			
COC Number		283619			
	UNITS	OF-RW18-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27	4396598	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39	4396598	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40	4396598	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39	4396598	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33	4396598	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.30	4396598	2.0
Surrogate Recovery (%)					
13C4-Perfluoroheptanoic acid	%	74	N/A	4396598	N/A
13C4-Perfluorooctanesulfonate	%	68	N/A	4396598	N/A
13C4-Perfluorooctanoic acid	%	75	N/A	4396598	N/A
13C5-Perfluorononanoic acid	%	63	N/A	4396598	N/A
18O2-Perfluorohexanesulfonate	%	82	N/A	4396598	N/A
QC Batch = Quality Control Batch					
N/A = Not Applicable					

Maxxam Job #: B632546
Report Date: 2016/03/01

TestAmerica
Client Project #: 320-17321-1

TEST SUMMARY

Maxxam ID: BWH243
Sample ID: OF-FB02-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH244
Sample ID: OF-RW02-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH245
Sample ID: OF-FB15-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH246
Sample ID: OF-RW15-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH247
Sample ID: OF-FB18-0216
Matrix: Water

Collected: 2016/02/16
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH248
Sample ID: OF-RW18-0216
Matrix: Water

Collected: 2016/02/16
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	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

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

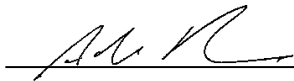
QA/QC				Date		%		
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4396598	CM5	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/29		76	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		75	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		82	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		77	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		88	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29		106	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		107	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		101	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		113	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		101	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
			4396598	CM5	Matrix Spike DUP	13C4-Perfluoroheptanoic acid	2016/02/29	
13C4-Perfluorooctanesulfonate	2016/02/29					82	%	50 - 130
13C4-Perfluorooctanoic acid	2016/02/29					85	%	50 - 130
13C5-Perfluorononanoic acid	2016/02/29					83	%	50 - 130
18O2-Perfluorohexanesulfonate	2016/02/29					98	%	50 - 130
Perfluorobutane Sulfonate (PFBS)	2016/02/29					107	%	70 - 130
Perfluoroheptanoic Acid (PFHpA)	2016/02/29					108	%	70 - 130
Perfluorohexane Sulfonate (PFHxS)	2016/02/29					110	%	70 - 130
Perfluorononanoic Acid (PFNA)	2016/02/29					121	%	70 - 130
Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29					110	%	70 - 130
Perfluorooctane Sulfonate (PFOS)	2016/02/29					116	%	70 - 130
4396598	CM5	MS/MSD RPD				Perfluorobutane Sulfonate (PFBS)	2016/02/29	1.7
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.75		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	8.7		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/29	6.8		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	9.1		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	2.4		%	30
			4396598	CM5	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/29	
13C4-Perfluorooctanesulfonate	2016/02/29					92	%	50 - 130
13C4-Perfluorooctanoic acid	2016/02/29					89	%	50 - 130
13C5-Perfluorononanoic acid	2016/02/29					93	%	50 - 130
18O2-Perfluorohexanesulfonate	2016/02/29					95	%	50 - 130
Perfluorobutane Sulfonate (PFBS)	2016/02/29					102	%	70 - 130
Perfluoroheptanoic Acid (PFHpA)	2016/02/29					117	%	70 - 130
Perfluorohexane Sulfonate (PFHxS)	2016/02/29					107	%	70 - 130
Perfluorononanoic Acid (PFNA)	2016/02/29					114	%	70 - 130
Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29					114	%	70 - 130
Perfluorooctane Sulfonate (PFOS)	2016/02/29					109	%	70 - 130
4396598	CM5	Method Blank				13C4-Perfluoroheptanoic acid	2016/02/29	
			13C4-Perfluorooctanesulfonate	2016/02/29		85	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		93	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		88	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		81	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/29	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	0.39 U, MDL=0.39		ng/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date		%		
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
			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.								

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

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.

RUSH

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☒ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CTD WE7G

TAL-4124 (1007)

Client CH2M Hill		Project Manager Bill Friedmann		Date 02/12/16	Chain of Custody Number 283619
Address 5701 Cleveland St Site 200		Telephone Number (Area Code)/Fax Number 757-671-6223		Lab Number	
City Virginia Beach	State VA	Zip Code 23462	Site Contact	Lab Contact	Page 1 of 1
Project Name and Location (State) CTD WE7G PFC Sampling			Carrier/Waybill Number FedEx		
Contract/Purchase Order/Quote No. PO# 10006 - 7-184000			Analysis (Attach list if more space is needed)		

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix										Containers & Preservatives	Special Instructions/ Conditions of Receipt
			Air	Aqueous	Soil	Soil	Ureases	H2SO4	HNO3	HCl	NH4OH	ZnAc		
OF-RW15-0216	02/12/16	16:53												
OF-FB15-0216	02/12/16	16:45												
OF-FB02-0216	02/12/16	09:10											2	
OF-RW02-0216	02/12/16	09:18											2	
OF-FB15-0216	02/12/16	16:45											2	
OF-RW15-0216	02/12/16	16:53											2	
OF-FB18-0216	02/16/16	12:26											2	
OF-RW18-0216	02/16/16	12:24											2	

17-Feb-16 15:50

Ivana Vukovic



B632546

RGN ENV.408

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
Turn Around Time Required		QC Requirements (Specify)			
☐ 24 Hours	☐ 48 Hours	☐ 7 Days	☐ 14 Days	☐ 21 Days	☐ Other _____
1. Relinquished By <i>[Signature]</i>		Date 02/16/16	Time 13:30	1. Received By ROHKLIN GRAHAM	
2. Relinquished By		Date	Time	2. Received By	
3. Relinquished By		Date	Time	3. Received By	

Comments
NOTE: FROM TEST AMERICA DUE 02/22/2016

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

ANALYTICAL REPORT

Job Number: 320-17321-1
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
3/14/2016 9:48 AM

Laura Turpen, Project Manager I
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4414
laura.turpen@testamericainc.com
03/14/2016

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: 320-17321-1
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: 320-17321-1

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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 shipped directly to Maxxam Analytics by the client, and not received by TestAmerica.

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 244 of the subcontract report; page 15 of 253 of the entire report).

Certification Summary

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

TestAmerica Job ID: 320-17321-1
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: 320-17321-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17321-1	OF-FB02-0216	Water	02/12/16 09:10	02/17/16 08:39
320-17321-2	OF-RW02-0216	Water	02/12/16 09:18	02/17/16 08:39
320-17321-3	OF-FB15-0216	Water	02/12/16 16:45	02/17/16 08:39
320-17321-4	OF-RW15-0216	Water	02/12/16 16:53	02/17/16 08:39
320-17321-5	OF-FB18-0216	Water	02/16/16 12:20	02/17/16 08:39
320-17321-6	OF-RW18-0216	Water	02/16/16 12:24	02/17/16 08:39

Subcontract Data



Prepared for: Test America

Project: 320-17321-1

Analytical Data Package (Level IV)

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

Maxxam Job #: B632546

Maxxam Analytics International
6740 Campobello Rd.
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L5N 2L8
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3.2 Sample Chromatograms

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5. Initial Calibration

6. Continuing Calibration

Last Page



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

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

Review Performed By:

Maxxam Analytics International
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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 4390179 (2016/02/23). Due to failure of QC acceptance criteria, all samples were reanalyzed on QC batch 4396598 (2016/02/29). The concentration of Perfluorooctanesulfonate (PFOS) marginally exceeded the upper calibration range for the following sample originally analyzed on QC batch 4390179 (2016/02/23):

BWH244 *OF-RW02-0216*

This sample was re-analyzed undiluted as well as diluted 10x on QC batch 4396598 (2016/02/29). The concentration of Perfluorooctanesulfonate (PFOS) in the undiluted sample was within the calibration range and was reported.

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 #: 320-17321-1



Client: TestAmerica
Client Project: 320-17321-1

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						
BWH243	OF-FB02-0216	2016/02/12	2016/02/17	2016/02/26	2016/02/29	2016/02/29
BWH244	OF-RW02-0216	2016/02/12	2016/02/17	2016/02/26	2016/02/29	2016/02/29
BWH245	OF-FB15-0216	2016/02/12	2016/02/17	2016/02/26	2016/02/29	2016/02/29
BWH246	OF-RW15-0216	2016/02/12	2016/02/17	2016/02/26	2016/02/29	2016/02/29
BWH247	OF-FB18-0216	2016/02/16	2016/02/17	2016/02/26	2016/02/29	2016/02/29
BWH248	OF-RW18-0216	2016/02/16	2016/02/17	2016/02/26	2016/02/29	2016/02/29

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: none encountered

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis

a) Hold Times: all within recommended hold times

b) Instrument Calibration: all within control limits

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

d) All analytes requiring manual 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

2016/03/14

Date



2. Sample Management Records

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2.1 Sample Custody

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RUSH**Chain of Custody Record**

TAL-4124 (1007)

Temperature on Receipt _____

Drinking Water? Yes ☒ No ☐**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

C70 WE7G

Client CH2M Hill Date 02/12/16 Chain of Custody Number 283619

Address 5781 Cleveland St Suite 200 Lab Number _____ Page _____ of _____

City Virginia Beach State VA Zip Code 23462

Project Name and Location (State) CH2M Hill - PCC Sampling

Contract/Purchase Order/Quote No. PO# 10006 - 7-18400

Current Manager Number FAE

Project Manager Bill Friedman Telephone Number (Area Code)/Fax Number 757-631-6223

Site Contact _____ Lab Contact _____

Analysis (Attach list if more space is needed)

Special Instructions/
Conditions of Receipt

Sample ID No. and Description (Containers for each sample may be combined on one line)	Date	Matrix				Containers & Preservatives							Time	Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
		Air	Aqueous	Soil	Slud	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH				
10-OF-RW15-0216	02/12/16															
10-OF-FB15-0216	02/12/16															
0F-FB02-0216	02/12/16															
0F-RW02-0216	02/12/16															
0F-FB15-0216	02/12/16															
0F-RW15-0216	02/12/16															
0F-FB18-0216	02/12/16															
0F-RW18-0216	02/12/16															

17-Feb-16 15:50
Ivana Vukovic
B632546
RCN ENV-408

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ 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 _____ Date 02/16/16 Time 1330

2. Relinquished By _____ Date 02/16/16 Time 15:50

3. Relinquished By _____ Date _____ Time _____

Comments NOTE: FROM TEST AMERICA DUE 02/22/2016

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 #: 320-17321-1
Your C.O.C. #: 283619

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/03/14
Report #: R3929714
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B632546

Received: 2016/02/17, 15:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	6	2016/02/26	2016/02/29	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

=====

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		BWH243	BWH244	BWH245	BWH246	BWH247			
Sampling Date		2016/02/12 09:10	2016/02/12 09:18	2016/02/12 16:45	2016/02/12 16:53	2016/02/16 12:20			
COC Number		283619	283619	283619	283619	283619			
	UNITS	OF-FB02-0216	OF-RW02-0216	OF-FB15-0216	OF-RW15-0216	OF-FB18-0216	RDL	MDL	QC Batch

Miscellaneous Parameters

Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	9.4	0.27 U	0.27 U	0.27 U	2.0	0.27	4396598
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	11	0.39 U	0.39 U	0.39 U	2.0	0.39	4396598
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	8.4	0.40 U	0.40 U	0.40 U	2.0	0.40	4396598
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	42	0.39 U	0.39 U	0.39 U	2.0	0.39	4396598
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	5.5	0.33 U	0.33 U	0.33 U	2.0	0.33	4396598
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	86	0.30 U	0.30 U	0.30 U	2.0	0.30	4396598

Surrogate Recovery (%)

13C4-Perfluoroheptanoic acid	%	87	102	101	66	91	N/A	N/A	4396598
13C4-Perfluorooctanesulfonate	%	84	111	104	56	86	N/A	N/A	4396598
13C4-Perfluorooctanoic acid	%	90	101	101	71	93	N/A	N/A	4396598
13C5-Perfluorononanoic acid	%	89	100	96	62	87	N/A	N/A	4396598
18O2-Perfluorohexanesulfonate	%	87	120	106	71	96	N/A	N/A	4396598

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

Maxxam ID		BWH248			
Sampling Date		2016/02/16 12:24			
COC Number		283619			
	UNITS	OF-RW18-0216	RDL	MDL	QC Batch

Miscellaneous Parameters

Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	2.0	0.27	4396598
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	2.0	0.39	4396598
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	2.0	0.40	4396598
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	2.0	0.39	4396598
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	2.0	0.33	4396598
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	2.0	0.30	4396598

Surrogate Recovery (%)

13C4-Perfluoroheptanoic acid	%	74	N/A	N/A	4396598
13C4-Perfluorooctanesulfonate	%	68	N/A	N/A	4396598
13C4-Perfluorooctanoic acid	%	75	N/A	N/A	4396598
13C5-Perfluorononanoic acid	%	63	N/A	N/A	4396598
18O2-Perfluorohexanesulfonate	%	82	N/A	N/A	4396598

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

TEST SUMMARY

Maxxam ID: BWH243
Sample ID: OF-FB02-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH244
Sample ID: OF-RW02-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH245
Sample ID: OF-FB15-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH246
Sample ID: OF-RW15-0216
Matrix: Water

Collected: 2016/02/12
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH247
Sample ID: OF-FB18-0216
Matrix: Water

Collected: 2016/02/16
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

Maxxam ID: BWH248
Sample ID: OF-RW18-0216
Matrix: Water

Collected: 2016/02/16
Shipped:
Received: 2016/02/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4396598	2016/02/26	2016/02/29	Colm McNamara

GENERAL COMMENTS

Report revised to remove qualifier legend

Perfluoroheptanoic acid (PFHpA) MDL = 0.39, LOD = 1.0, LOQ = 2.0

Perfluorooctanoic acid (PFOA) MDL = 0.39, LOD = 1.0, LOQ = 2.0

Perfluorononanoic acid (PFNA) MDL = 0.33, LOD = 1.0, LOQ = 2.0

Perfluorobutane sulfonate (PFBS) MDL = 0.27, LOD = 1.0, LOQ = 2.0

Perfluorohexane sulfonate (PFHxA) MDL = 0.40, LOD = 1.0, LOQ = 2.0

Perfluorooctane sulfonate (PFOS) MDL = 0.30, LOD = 1.0, LOQ = 2.0

All Units are in ng/L

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4396598	CM5	Matrix Spike		13C4-Perfluoroheptanoic acid	2016/02/29		76	%	50 - 130
				13C4-Perfluorooctanesulfonate	2016/02/29		75	%	50 - 130
				13C4-Perfluorooctanoic acid	2016/02/29		82	%	50 - 130
				13C5-Perfluorononanoic acid	2016/02/29		77	%	50 - 130
				18O2-Perfluorohexanesulfonate	2016/02/29		88	%	50 - 130
				Perfluorobutane Sulfonate (PFBS)	2016/02/29		106	%	70 - 130
				Perfluoroheptanoic Acid (PFHpA)	2016/02/29		107	%	70 - 130
				Perfluorohexane Sulfonate (PFHxS)	2016/02/29		101	%	70 - 130
				Perfluorononanoic Acid (PFNA)	2016/02/29		113	%	70 - 130
				Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		101	%	70 - 130
				Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
4396598	CM5	RPD		Perfluorobutane Sulfonate (PFBS)	2016/02/29	1.7		%	30
				Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.75		%	30
				Perfluorohexane Sulfonate (PFHxS)	2016/02/29	8.7		%	30
				Perfluorononanoic Acid (PFNA)	2016/02/29	6.8		%	30
				Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	9.1		%	30
				Perfluorooctane Sulfonate (PFOS)	2016/02/29	2.4		%	30
4396598	CM5	Spiked Blank		13C4-Perfluoroheptanoic acid	2016/02/29		82	%	50 - 130
				13C4-Perfluorooctanesulfonate	2016/02/29		92	%	50 - 130
				13C4-Perfluorooctanoic acid	2016/02/29		89	%	50 - 130
				13C5-Perfluorononanoic acid	2016/02/29		93	%	50 - 130
				18O2-Perfluorohexanesulfonate	2016/02/29		95	%	50 - 130
				Perfluorobutane Sulfonate (PFBS)	2016/02/29		102	%	70 - 130
				Perfluoroheptanoic Acid (PFHpA)	2016/02/29		117	%	70 - 130
				Perfluorohexane Sulfonate (PFHxS)	2016/02/29		107	%	70 - 130
				Perfluorononanoic Acid (PFNA)	2016/02/29		114	%	70 - 130
				Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		114	%	70 - 130
				Perfluorooctane Sulfonate (PFOS)	2016/02/29		109	%	70 - 130
4396598	CM5	Method Blank		13C4-Perfluoroheptanoic acid	2016/02/29		85	%	50 - 130
				13C4-Perfluorooctanesulfonate	2016/02/29		85	%	50 - 130
				13C4-Perfluorooctanoic acid	2016/02/29		93	%	50 - 130
				13C5-Perfluorononanoic acid	2016/02/29		88	%	50 - 130
				18O2-Perfluorohexanesulfonate	2016/02/29		81	%	50 - 130
				Perfluorobutane Sulfonate (PFBS)	2016/02/29	0.27 U, MDL=0.27		ng/L	
				Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
				Perfluorohexane Sulfonate (PFHxS)	2016/02/29	0.40 U, MDL=0.40		ng/L	
				Perfluorononanoic Acid (PFNA)	2016/02/29	0.33 U, MDL=0.33		ng/L	
				Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
				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.

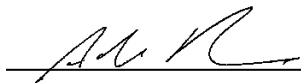
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

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.

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

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



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

Maxxam Analytics International
6740 Campobello Rd
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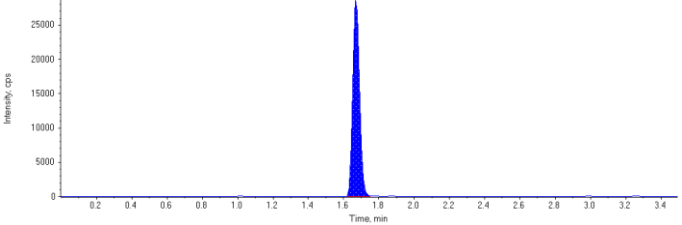
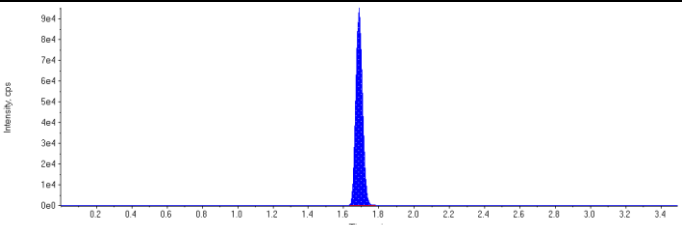
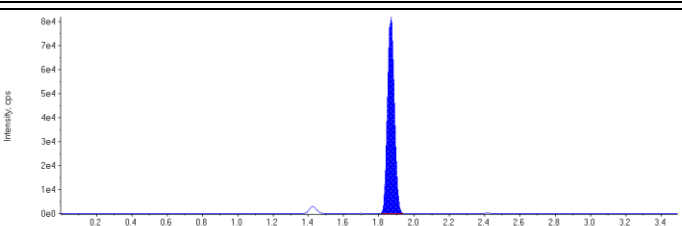
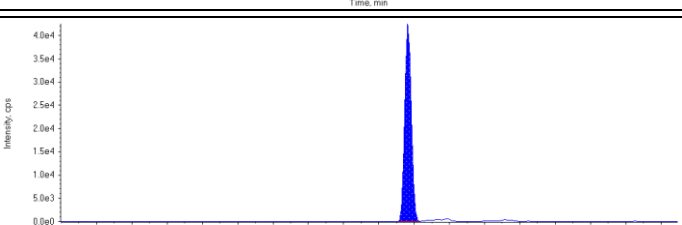
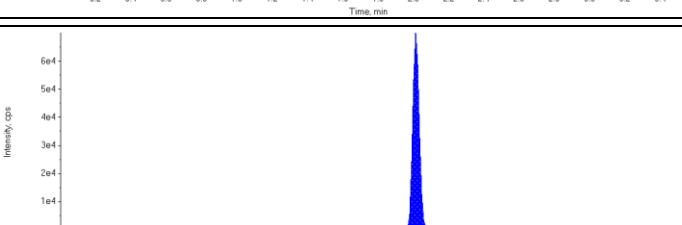
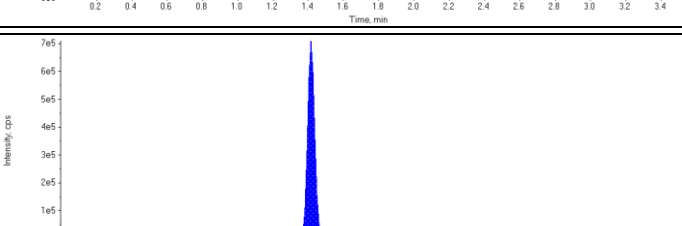
3.2 Sample Chromatograms

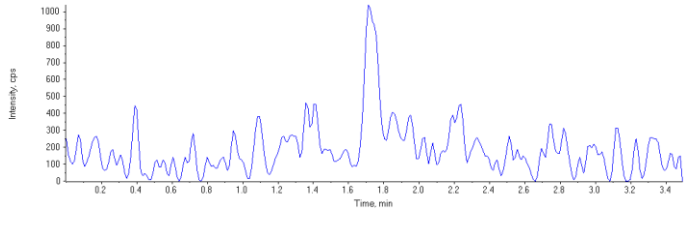
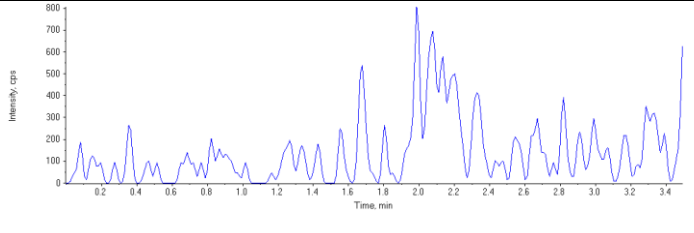
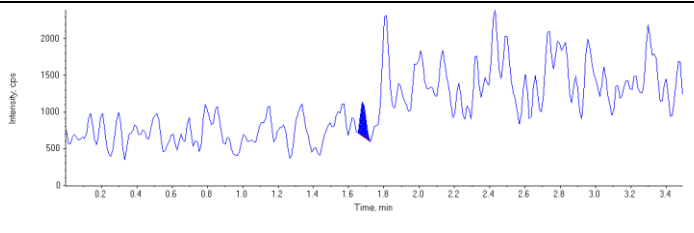
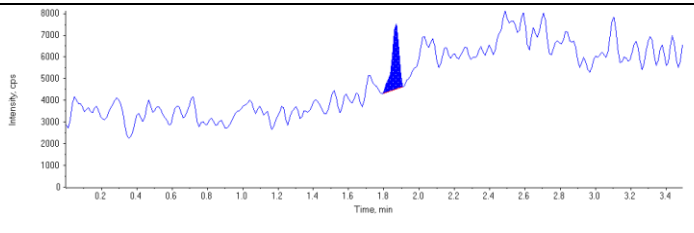
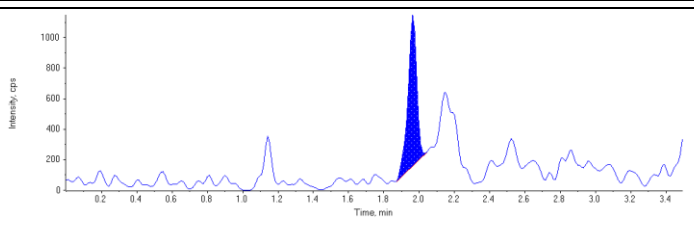
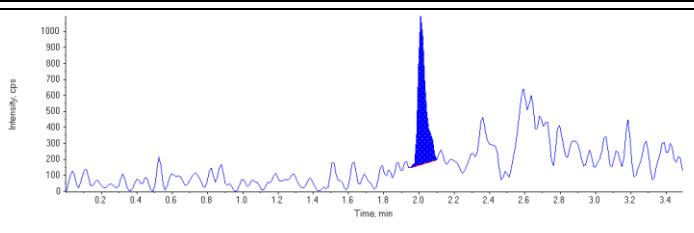
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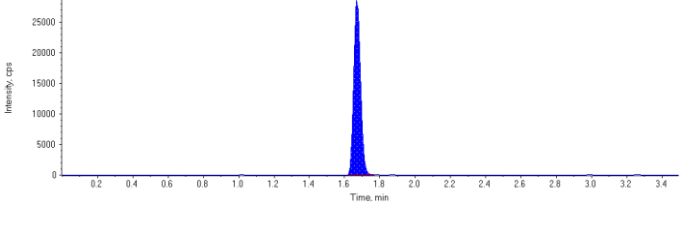
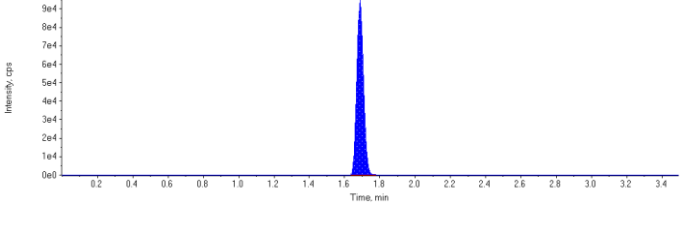
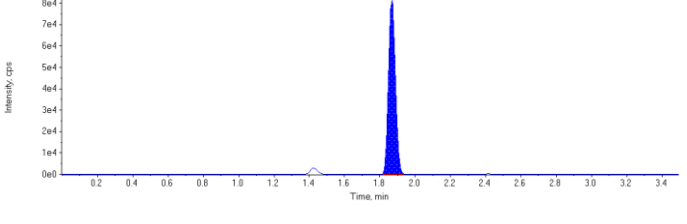
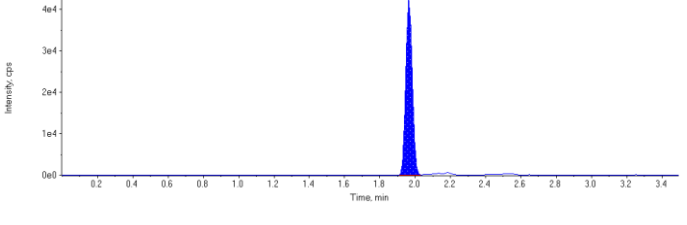
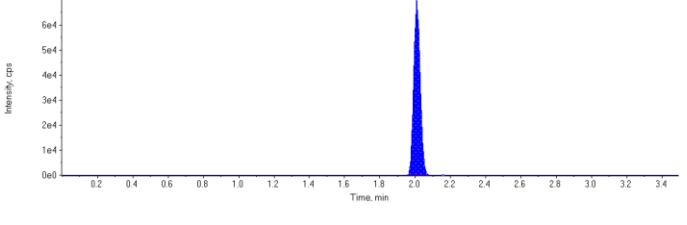
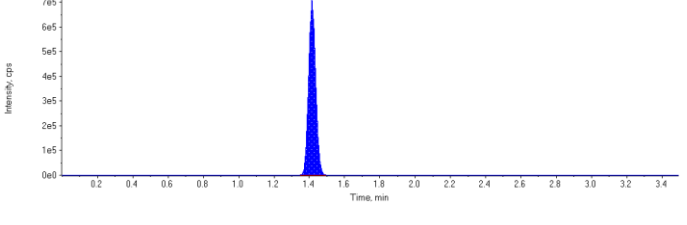
Sample Name	4390179~BWH243-01	Injection Vial	25
Sample ID	4390179~BWH243-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:03:33 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	76900.	1.67	1.00	-
MPFHpA	248000.	1.69	1.00	-
MPFOA	221000.	1.87	1.00	-
MPFOS	109000.	1.96	1.00	-
MPFNA	178000.	2.01	1.00	-
13C6-PFHxA IS	1990000.	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	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	976	1.68	N/A	0.111	N/A
PFOA 1	8290	1.87	N/A	0.0874	N/A
PFOS 1	3410	1.96	N/A	0.520	N/A
PFNA 1	2720	2.01	N/A	N/A	N/A
18O2-PFHxS	76900	1.67	N/A	48.3	N/A
13C4-PFHpA	248000	1.69	N/A	54.1	N/A
13C4-PFOA	221000	1.87	N/A	53.5	N/A
13C4-PFOS	109000	1.96	N/A	53.2	N/A
13C5-PFNA	178000	2.01	N/A	51.0	N/A
13C6-PFHxA	1990000	1.42	N/A	101.	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): 1.42(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

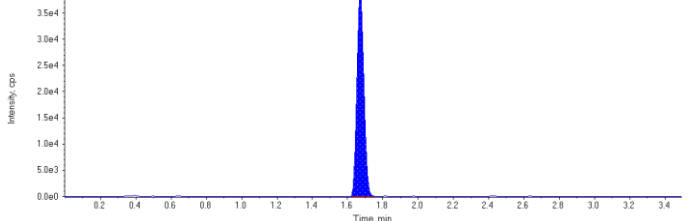
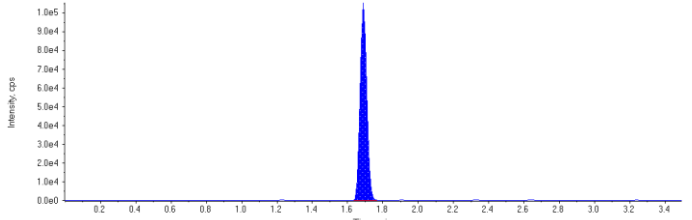
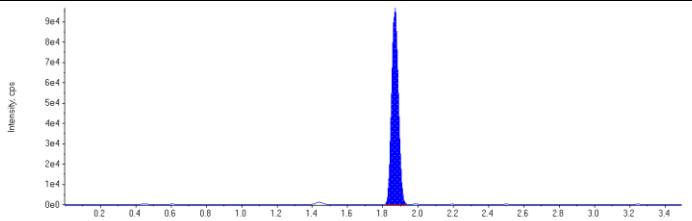
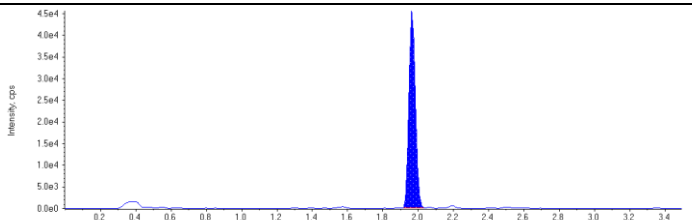
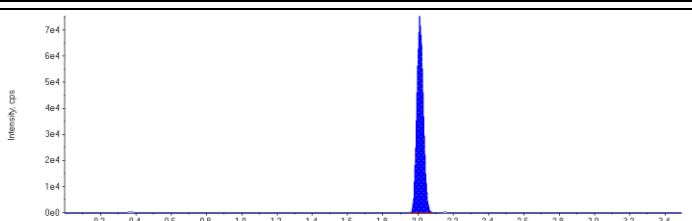
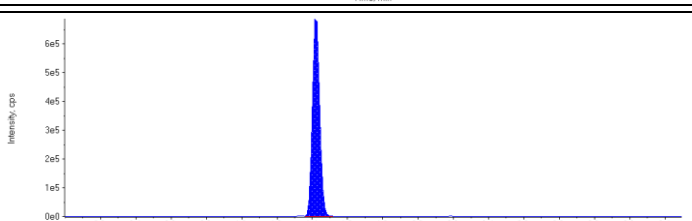
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.70) min Calculated Conc: 0.111 ng/L Area Ratio: 0.00393 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 0.0874 ng/L Area Ratio: 0.0376 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 0.520 ng/L Area Ratio: 0.0313 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.0153 Sample Type: (Unknown)	

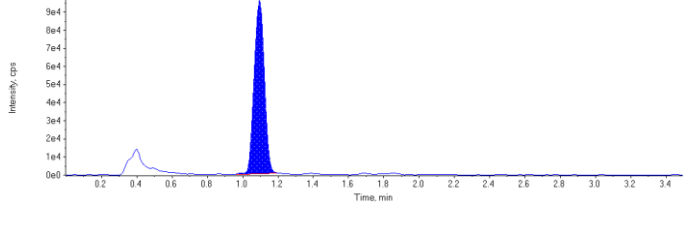
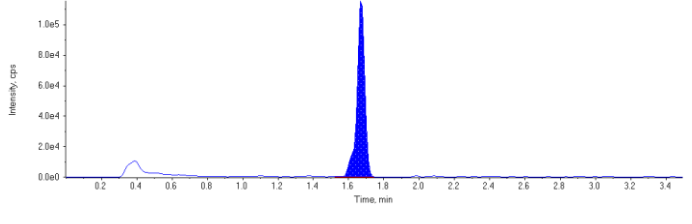
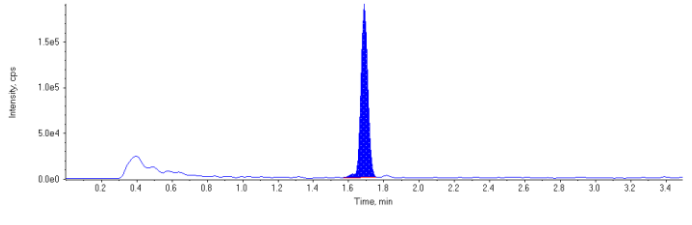
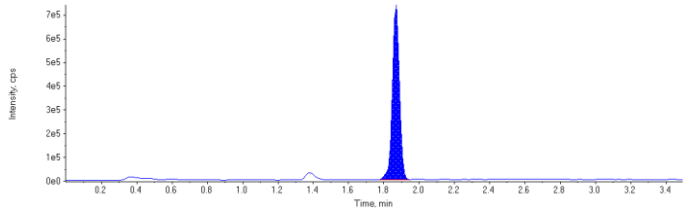
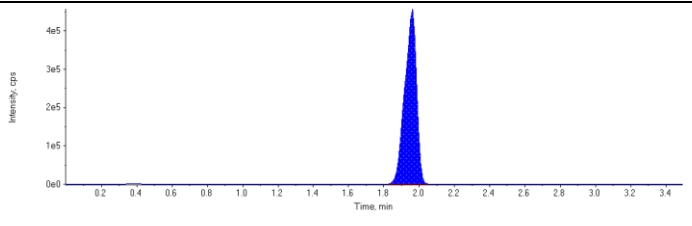
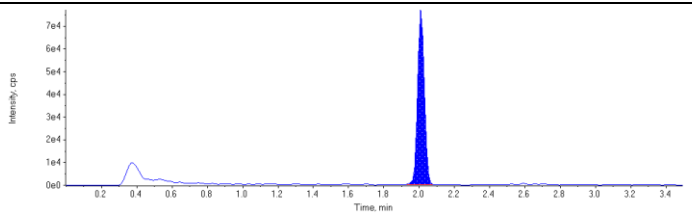
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 48.3 ng/L Area Ratio: 0.0387 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 54.1 ng/L Area Ratio: 0.125 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 53.5 ng/L Area Ratio: 0.111 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 53.2 ng/L Area Ratio: 0.0548 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 51.0 ng/L Area Ratio: 0.0895 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

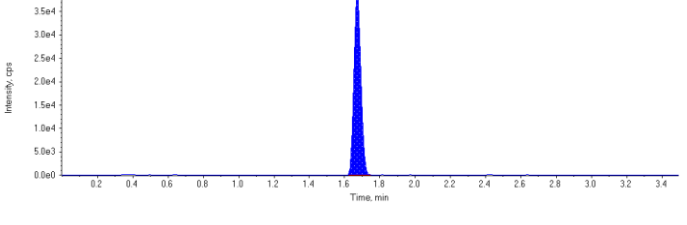
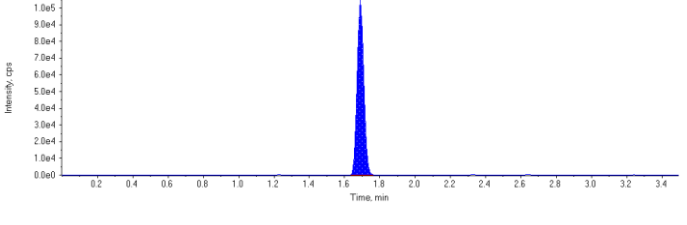
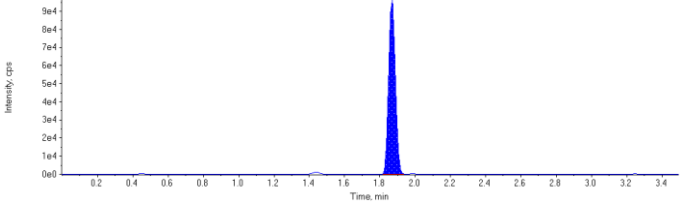
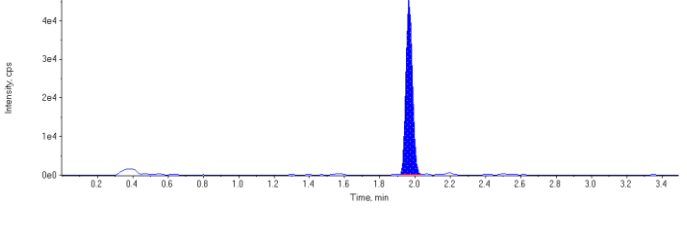
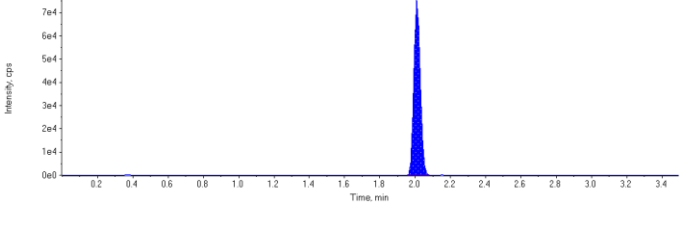
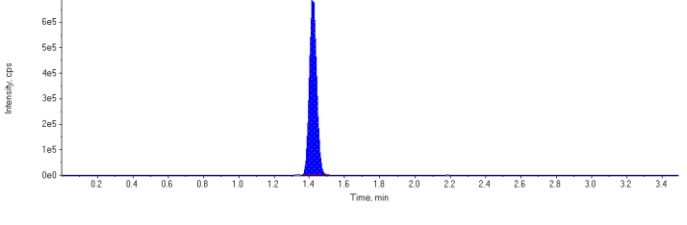
Sample Name	4390179~BWH244-01	Injection Vial	26
Sample ID	4390179~BWH244-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:08:39 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	107000.	1.67	1.00	-
MPFHpA	272000.	1.69	1.00	-
MPFOA	255000.	1.87	1.00	-
MPFOS	116000.	1.97	1.00	-
MPFNA	193000.	2.01	1.00	-
13C6-PFHxA IS	1990000.	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	385000	1.09	N/A	12.4	N/A
PFHxS 1	358000	1.67	N/A	11.6	N/A
PFHpA 1	506000	1.69	N/A	15.0	N/A
PFOA 1	2030000	1.87	N/A	55.0	N/A
PFOS 1	2110000	1.96	N/A	108.	N/A
PFNA 1	203000	2.01	N/A	7.69	N/A
18O2-PFHxS	107000	1.67	N/A	66.8	N/A
13C4-PFHpA	272000	1.69	N/A	59.3	N/A
13C4-PFOA	255000	1.87	N/A	61.8	N/A
13C4-PFOS	116000	1.97	N/A	56.5	N/A
13C5-PFNA	193000	2.01	N/A	55.4	N/A
13C6-PFHxA	1990000	1.42	N/A	101.	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): 1.97(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): 1.42(1.42) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
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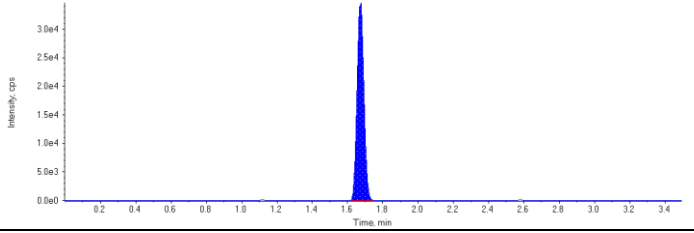
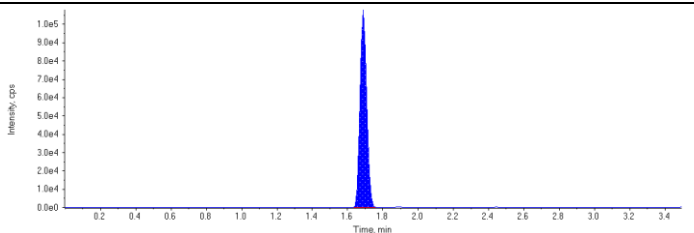
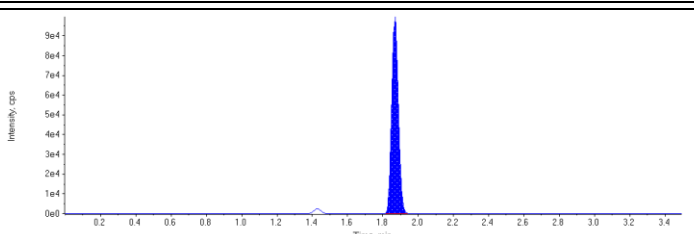
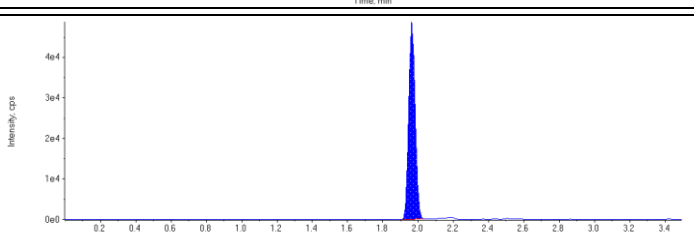
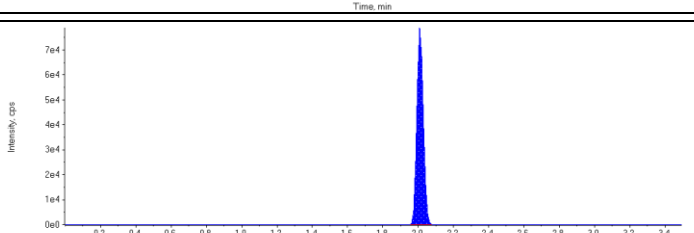
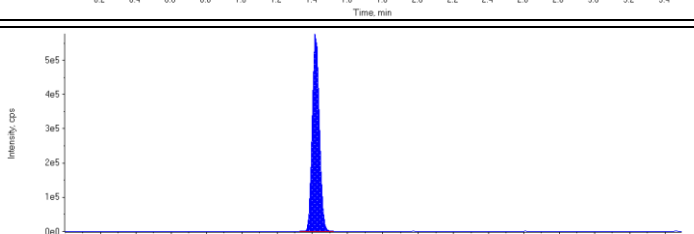
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 12.4 ng/L Area Ratio: 3.61 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 11.6 ng/L Area Ratio: 3.36 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 15.0 ng/L Area Ratio: 1.86 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 55.0 ng/L Area Ratio: 7.97 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 108. ng/L Area Ratio: 18.3 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 7.69 ng/L Area Ratio: 1.05 Sample Type: (Unknown)	

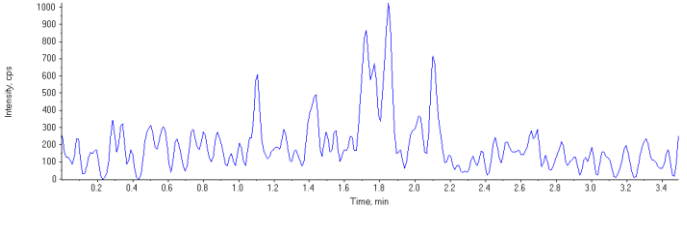
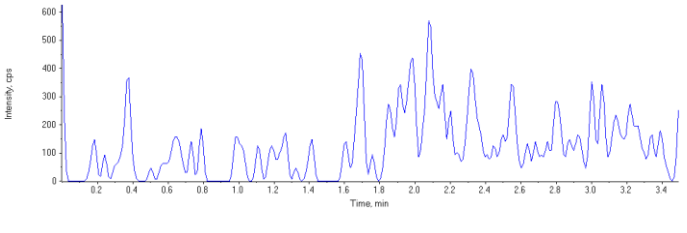
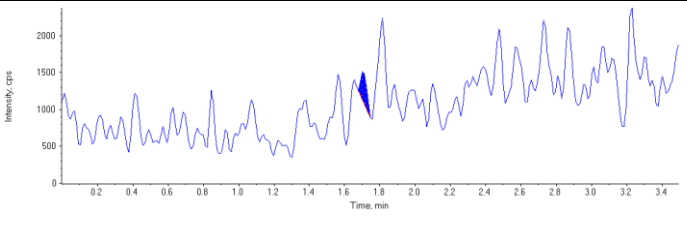
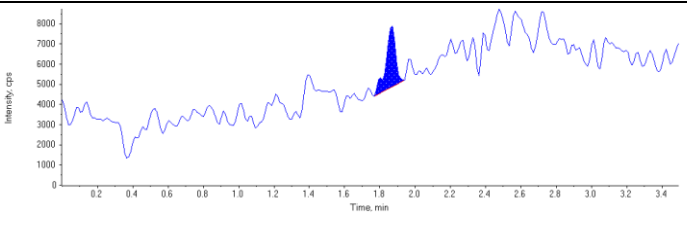
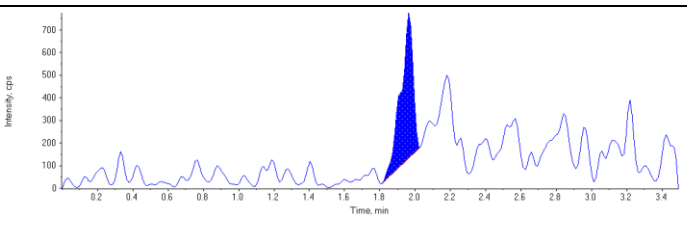
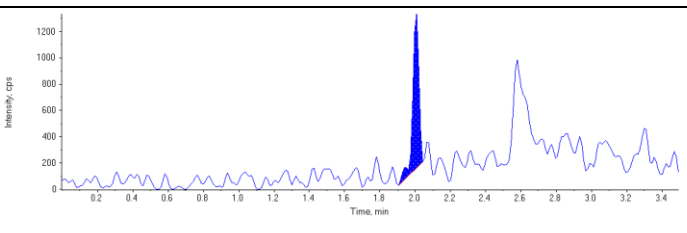
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 66.8 ng/L Area Ratio: 0.0536 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 59.3 ng/L Area Ratio: 0.137 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 61.8 ng/L Area Ratio: 0.128 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 56.5 ng/L Area Ratio: 0.0582 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 55.4 ng/L Area Ratio: 0.0972 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

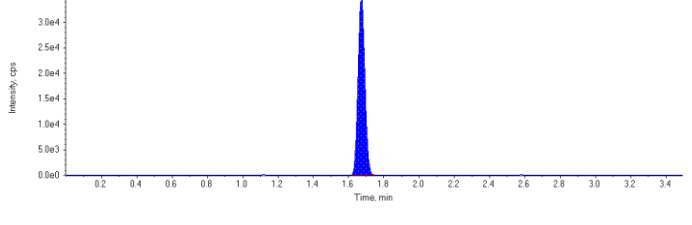
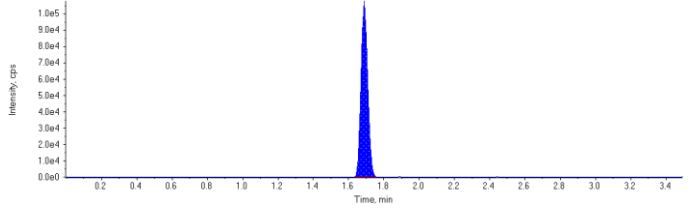
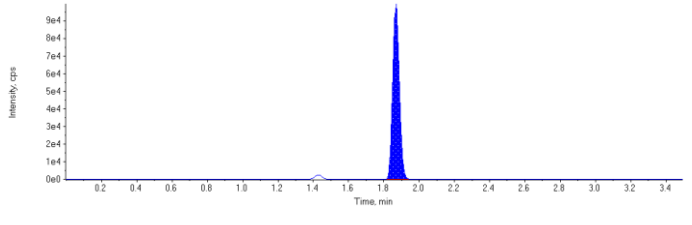
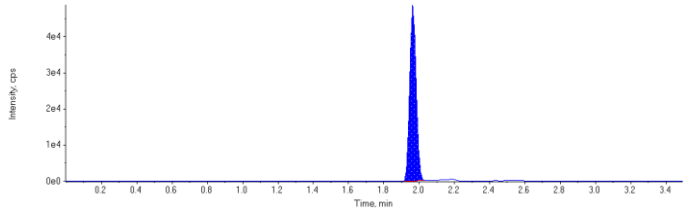
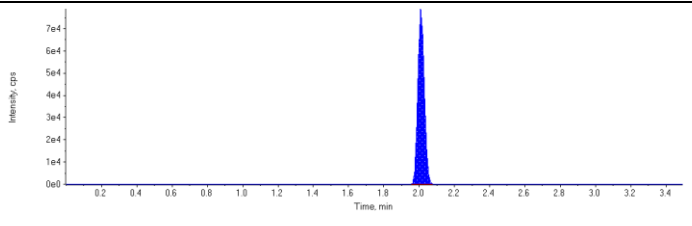
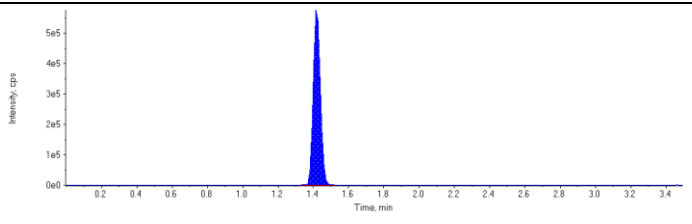
Sample Name	4390179~BWH245-01	Injection Vial	27
Sample ID	4390179~BWH245-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:13:45 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	94100.	1.67	1.00	-
MPFHpA	280000.	1.69	1.00	-
MPFOA	261000.	1.87	1.00	-
MPFOS	122000.	1.96	1.00	-
MPFNA	201000.	2.01	1.00	-
13C6-PFHxA IS	1640000.	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	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	971	1.70	N/A	0.108	N/A
PFOA 1	11700	1.87	N/A	0.138	N/A
PFOS 1	3080	1.96	N/A	0.483	N/A
PFNA 1	2880	2.01	N/A	N/A	N/A
18O2-PFHxS	94100	1.67	N/A	71.7	N/A
13C4-PFHpA	280000	1.69	N/A	74.1	N/A
13C4-PFOA	261000	1.87	N/A	76.7	N/A
13C4-PFOS	122000	1.96	N/A	72.6	N/A
13C5-PFNA	201000	2.01	N/A	70.1	N/A
13C6-PFHxA	1640000	1.42	N/A	83.2	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): 1.42(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

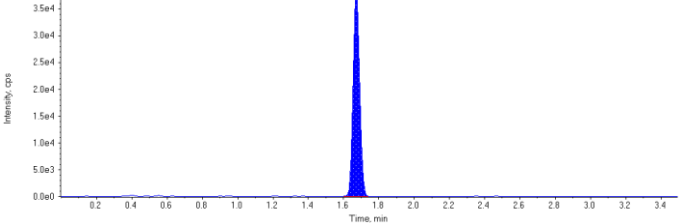
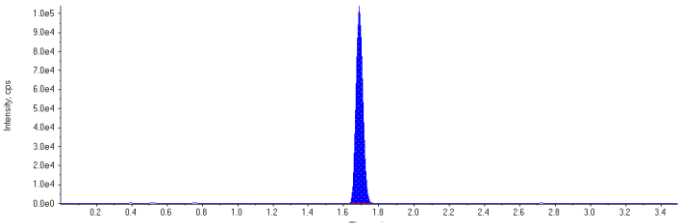
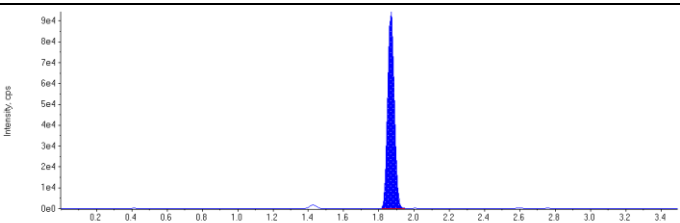
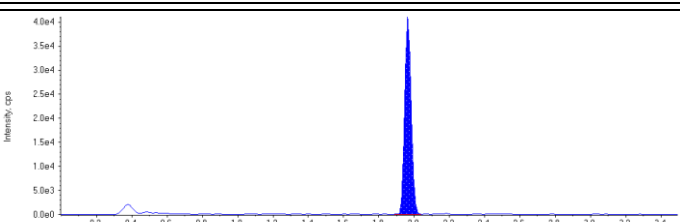
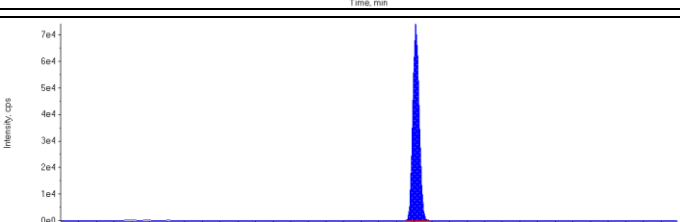
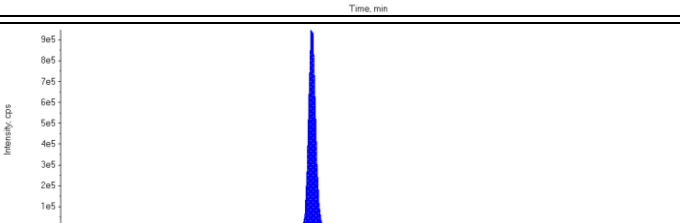
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.70 (1.70) min Calculated Conc: 0.108 ng/L Area Ratio: 0.00346 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 0.138 ng/L Area Ratio: 0.0448 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 0.483 ng/L Area Ratio: 0.0252 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.0143 Sample Type: (Unknown)	

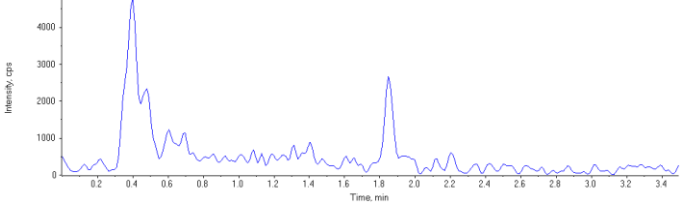
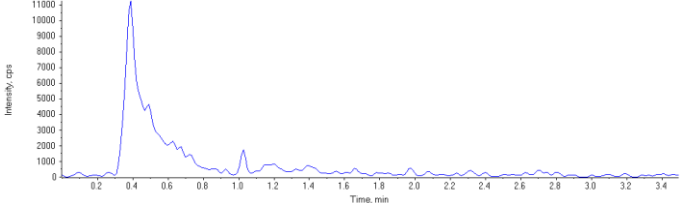
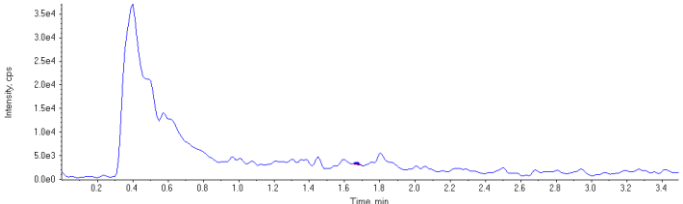
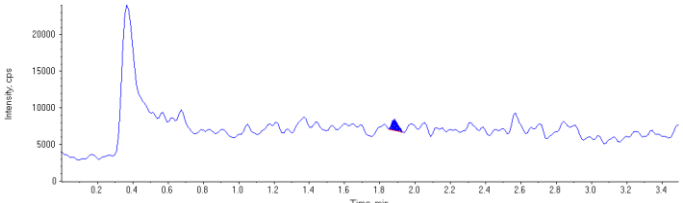
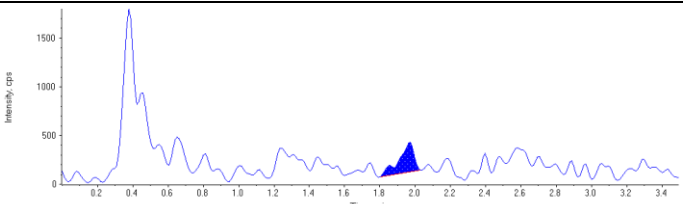
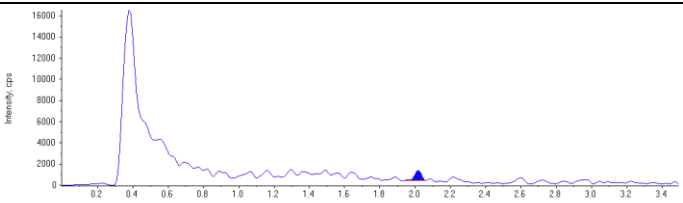
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 71.7 ng/L Area Ratio: 0.0574 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 74.1 ng/L Area Ratio: 0.171 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 76.7 ng/L Area Ratio: 0.159 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 72.6 ng/L Area Ratio: 0.0748 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 70.1 ng/L Area Ratio: 0.123 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 83.2 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

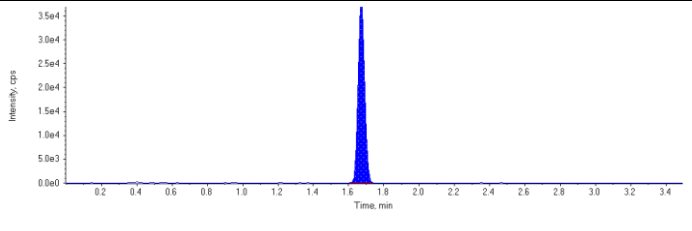
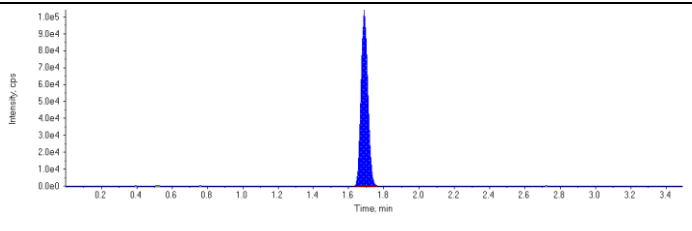
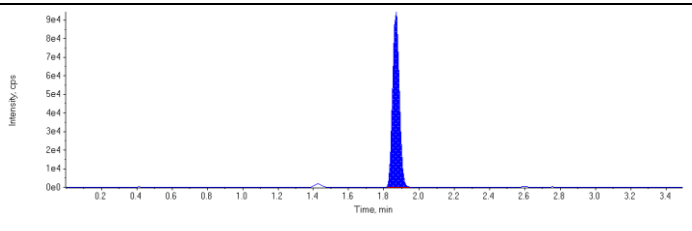
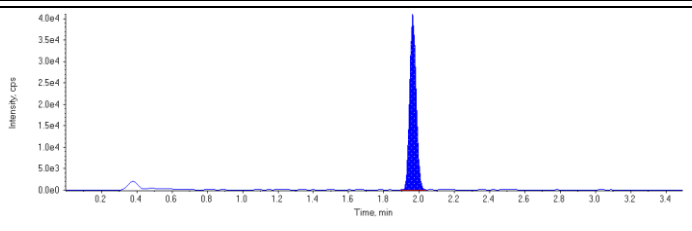
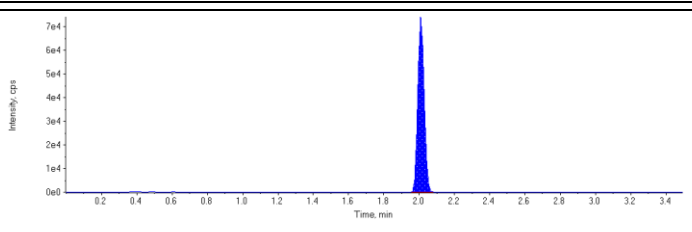
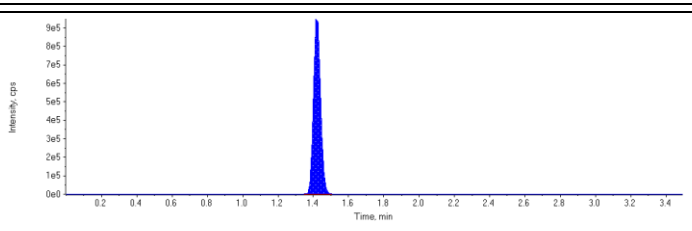
Sample Name	4390179~BWH246-01	Injection Vial	28
Sample ID	4390179~BWH246-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:18:50 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	98400.	1.67	1.00	-
MPFHpA	273000.	1.69	1.00	-
MPFOA	246000.	1.87	1.00	-
MPFOS	104000.	1.96	1.00	-
MPFNA	187000.	2.01	1.00	-
13C6-PFHxA IS	2700000.	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	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	1050	1.67	N/A	0.111	N/A
PFOA 1	3890	1.88	N/A	N/A	N/A
PFOS 1	1800	1.97	N/A	0.437	N/A
PFNA 1	2470	2.02	N/A	N/A	N/A
18O2-PFHxS	98400	1.67	N/A	45.5	N/A
13C4-PFHpA	273000	1.69	N/A	43.8	N/A
13C4-PFOA	246000	1.87	N/A	44.0	N/A
13C4-PFOS	104000	1.96	N/A	37.4	N/A
13C5-PFNA	187000	2.01	N/A	39.5	N/A
13C6-PFHxA	2700000	1.42	N/A	137.	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): 1.42(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

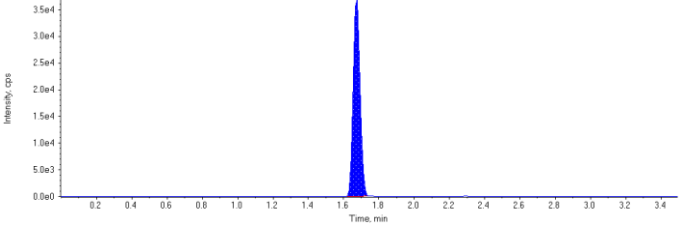
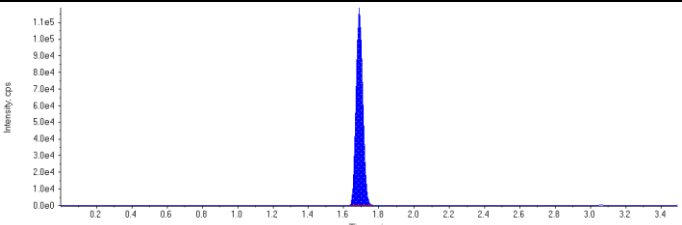
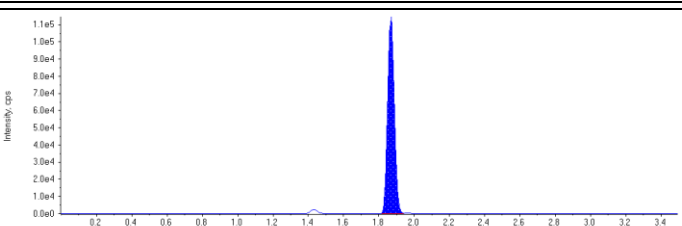
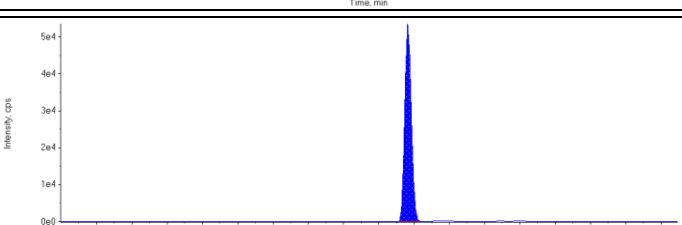
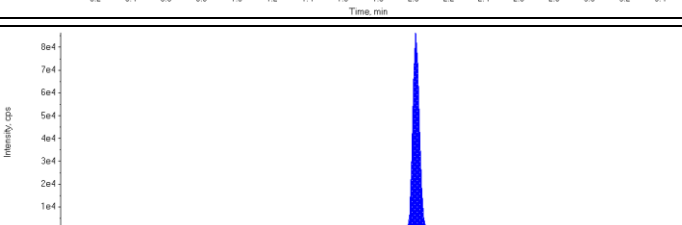
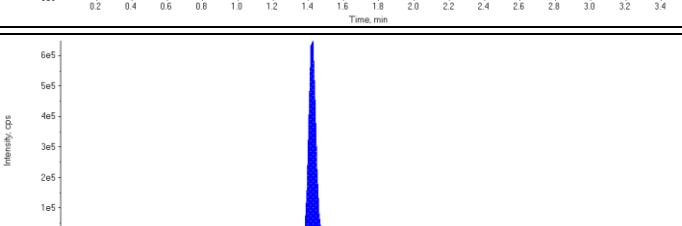
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.67 (1.70) min Calculated Conc: 0.111 ng/L Area Ratio: 0.00387 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.88 (1.88) min Calculated Conc: N/A ng/L Area Ratio: 0.0158 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 0.437 ng/L Area Ratio: 0.0173 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.02 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.0132 Sample Type: (Unknown)	

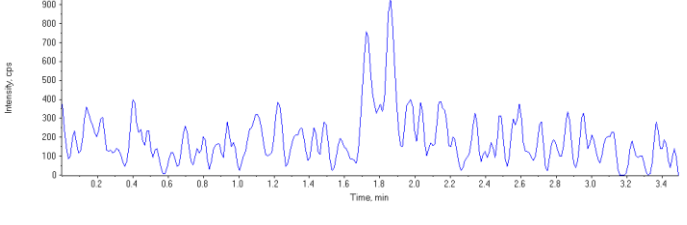
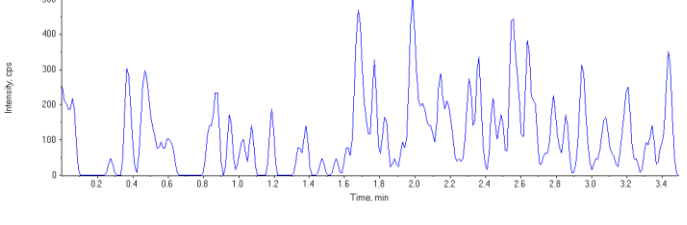
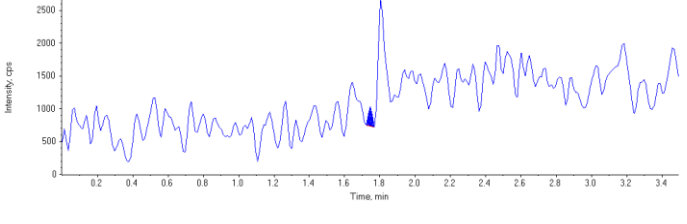
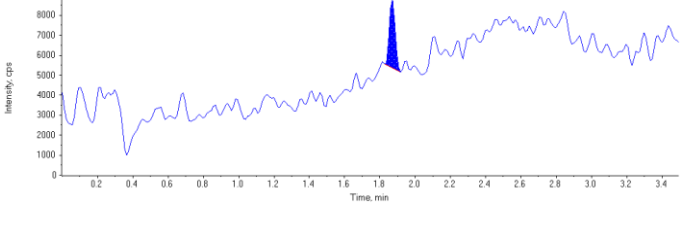
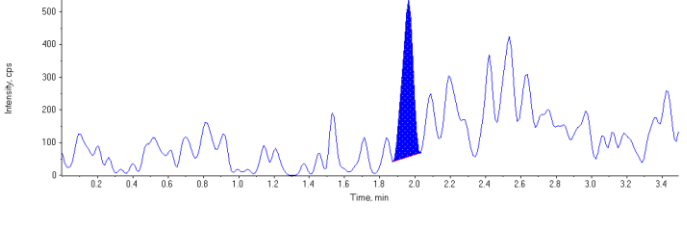
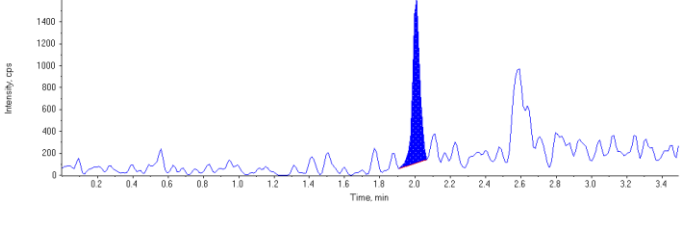
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 45.5 ng/L Area Ratio: 0.0365 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 43.8 ng/L Area Ratio: 0.101 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 44.0 ng/L Area Ratio: 0.0913 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 37.4 ng/L Area Ratio: 0.0385 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 39.5 ng/L Area Ratio: 0.0693 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 137. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

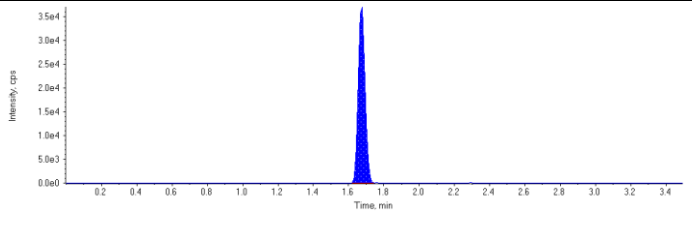
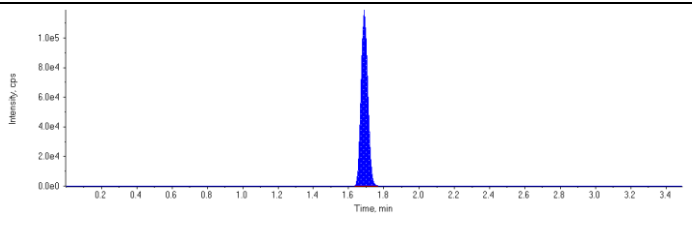
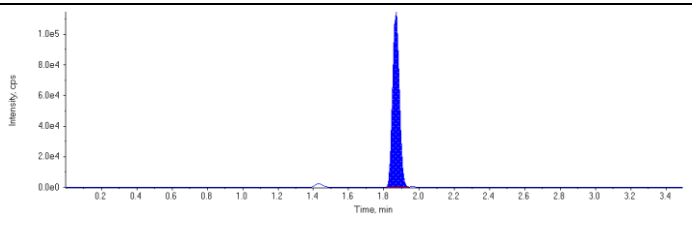
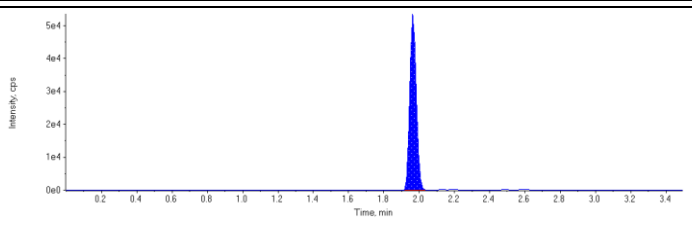
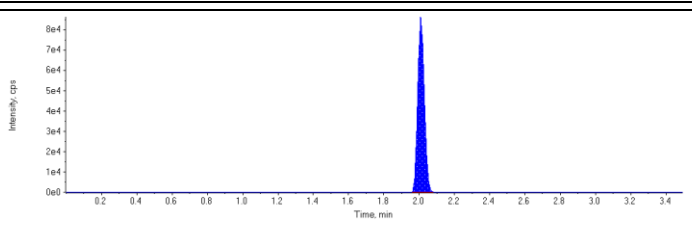
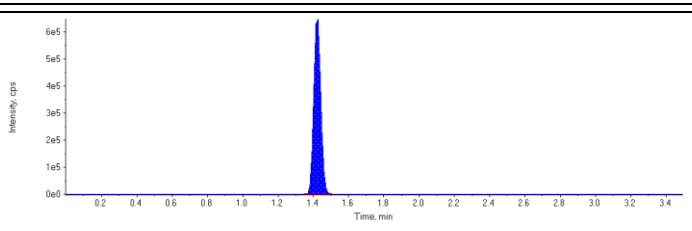
Sample Name	4390179~BWH247-01	Injection Vial	29
Sample ID	4390179~BWH247-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:23:56 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	101000.	1.67	1.00	-
MPFHpA	309000.	1.69	1.00	-
MPFOA	301000.	1.87	1.00	-
MPFOS	137000.	1.96	1.00	-
MPFNA	225000.	2.01	1.00	-
13C6-PFHxA IS	1830000.	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	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	439	1.75	N/A	0.0912	N/A
PFOA 1	7780	1.87	N/A	0.00640	N/A
PFOS 1	1990	1.96	N/A	0.420	N/A
PFNA 1	4230	2.01	N/A	N/A	N/A
18O2-PFHxS	101000	1.67	N/A	68.7	N/A
13C4-PFHpA	309000	1.69	N/A	73.2	N/A
13C4-PFOA	301000	1.87	N/A	79.3	N/A
13C4-PFOS	137000	1.96	N/A	72.7	N/A
13C5-PFNA	225000	2.01	N/A	70.1	N/A
13C6-PFHxA	1830000	1.42	N/A	92.8	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): 1.42(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

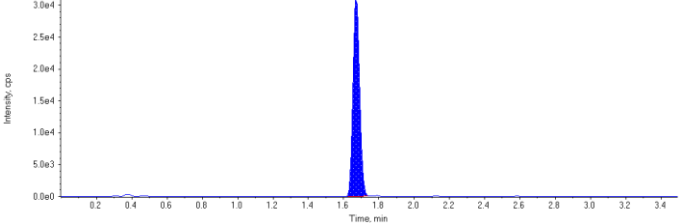
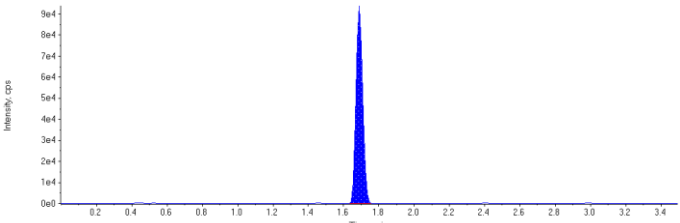
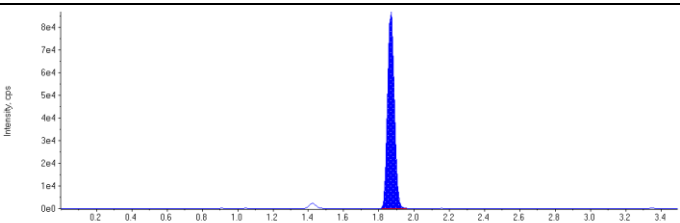
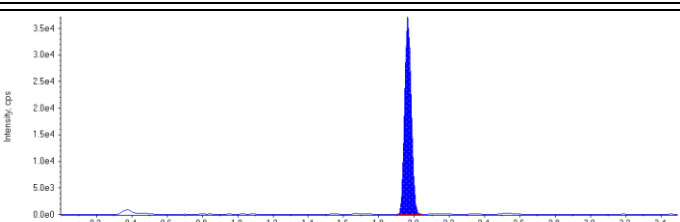
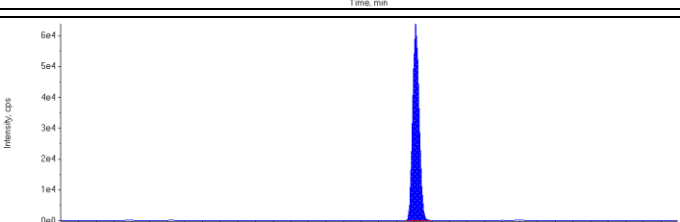
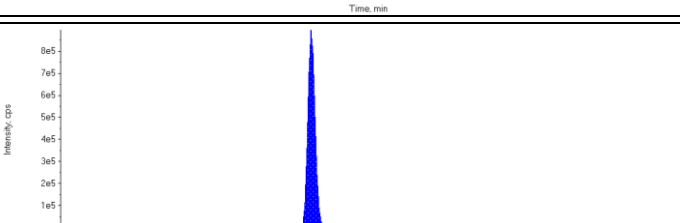
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.75 (1.70) min Calculated Conc: 0.0912 ng/L Area Ratio: 0.00142 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 0.00640 ng/L Area Ratio: 0.0259 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 0.420 ng/L Area Ratio: 0.0145 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.0188 Sample Type: (Unknown)	

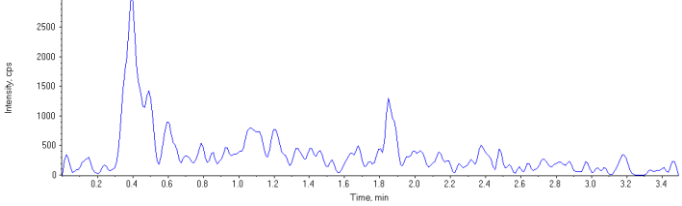
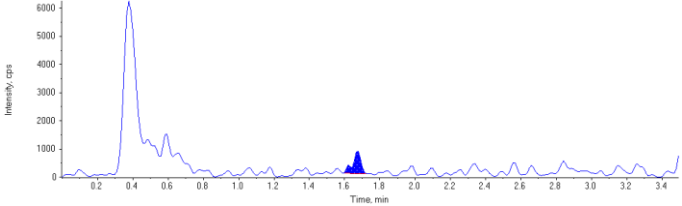
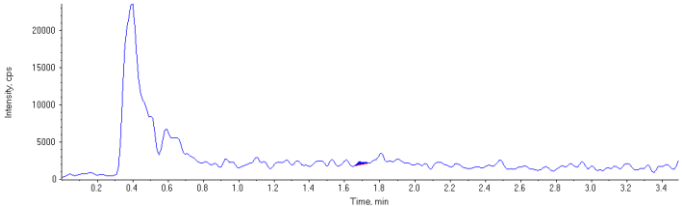
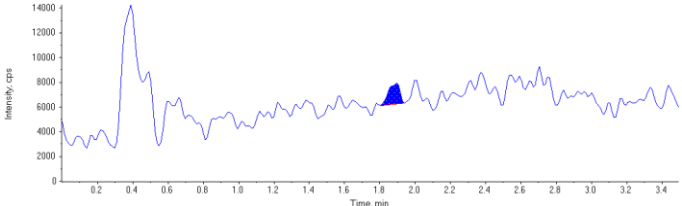
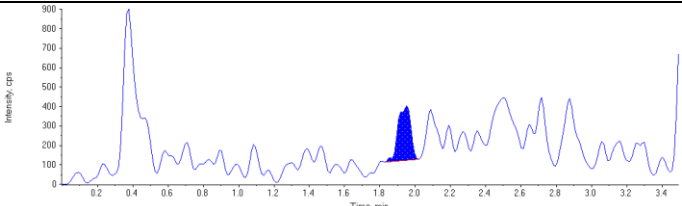
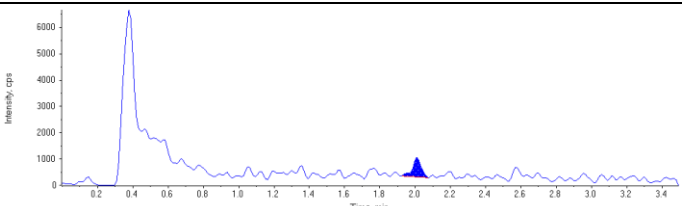
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 68.7 ng/L Area Ratio: 0.0550 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 73.2 ng/L Area Ratio: 0.169 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 79.3 ng/L Area Ratio: 0.165 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 72.7 ng/L Area Ratio: 0.0749 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 70.1 ng/L Area Ratio: 0.123 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 92.8 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

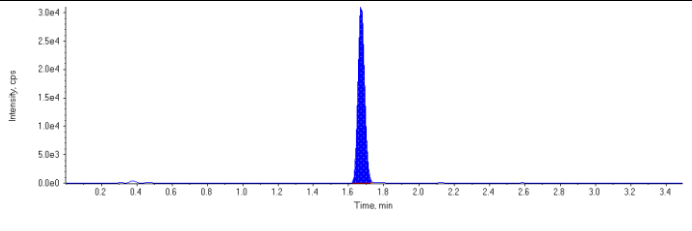
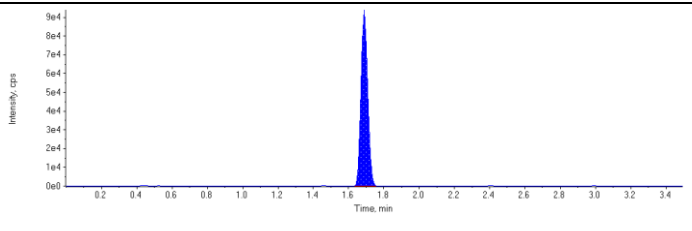
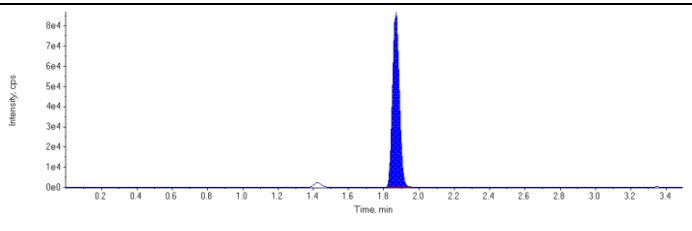
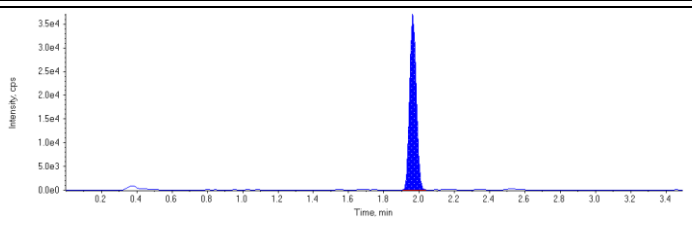
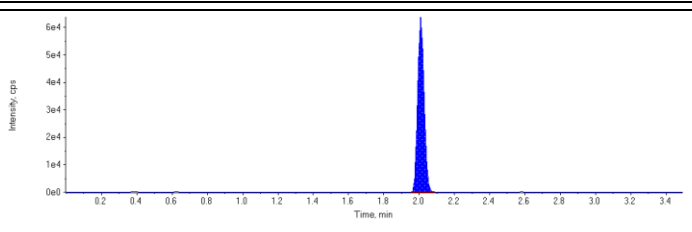
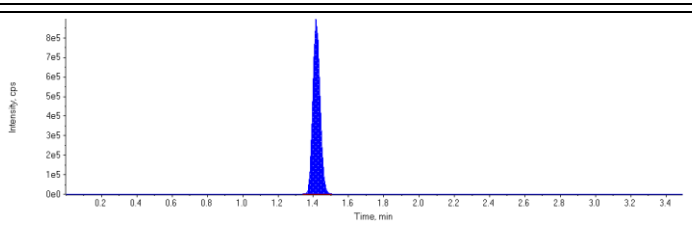
Sample Name	4390179~BWH248-01	Injection Vial	30
Sample ID	4390179~BWH248-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:29:01 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	82000.	1.67	1.00	-
MPFHpA	245000.	1.69	1.00	-
MPFOA	232000.	1.87	1.00	-
MPFOS	96600.	1.96	1.00	-
MPFNA	161000.	2.01	1.00	-
13C6-PFHxA IS	2570000.	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	N/A	N/A	N/A
PFHxS 1	2580	1.67	N/A	0.376	N/A
PFHpA 1	1120	1.69	N/A	0.117	N/A
PFOA 1	7580	1.89	N/A	0.0539	N/A
PFOS 1	1400	1.95	N/A	0.420	N/A
PFNA 1	2520	2.01	N/A	N/A	N/A
18O2-PFHxS	82000	1.67	N/A	39.9	N/A
13C4-PFHpA	245000	1.69	N/A	41.4	N/A
13C4-PFOA	232000	1.87	N/A	43.5	N/A
13C4-PFOS	96600	1.96	N/A	36.6	N/A
13C5-PFNA	161000	2.01	N/A	35.9	N/A
13C6-PFHxA	2570000	1.42	N/A	130.	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): 1.42(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

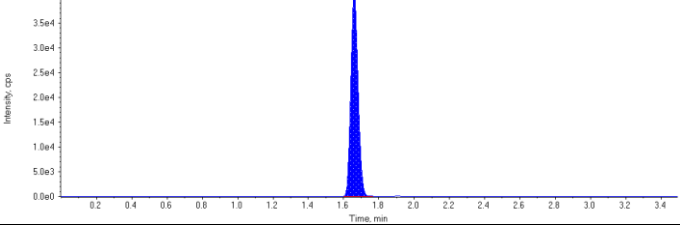
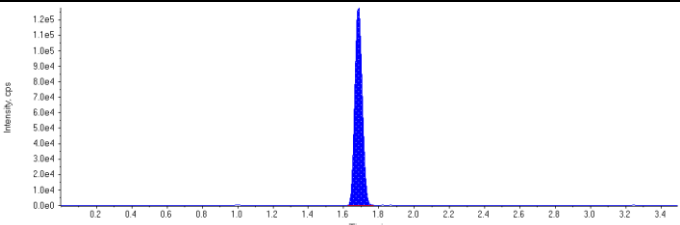
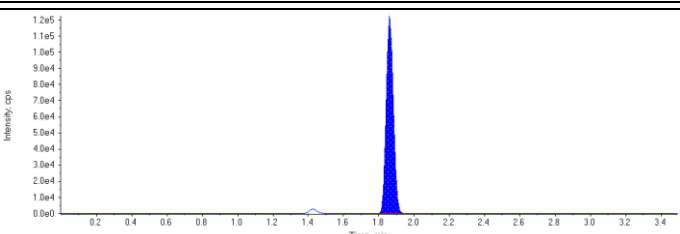
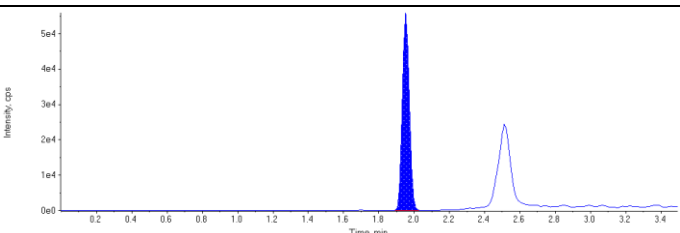
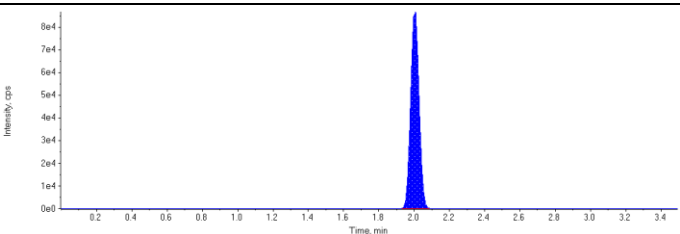
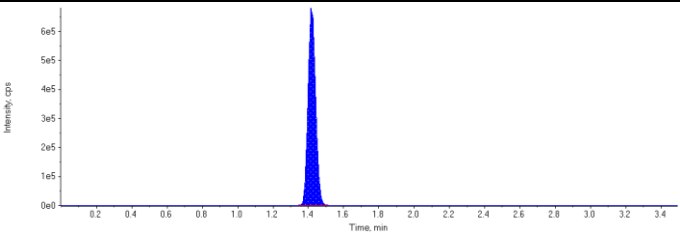
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 0.376 ng/L Area Ratio: 0.0314 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 0.117 ng/L Area Ratio: 0.00456 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.89 (1.88) min Calculated Conc: 0.0539 ng/L Area Ratio: 0.0327 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 0.420 ng/L Area Ratio: 0.0145 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.0156 Sample Type: (Unknown)	

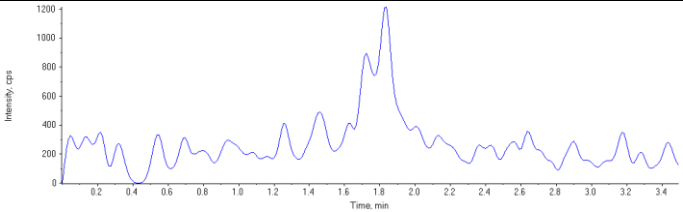
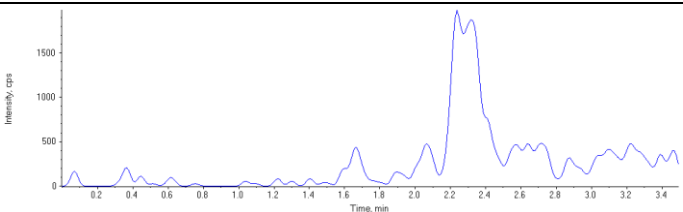
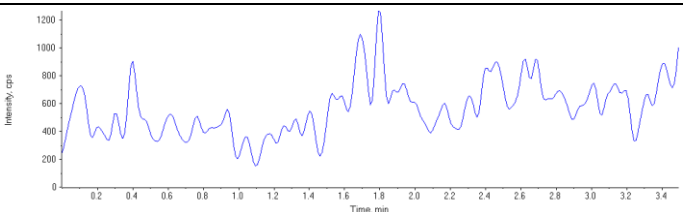
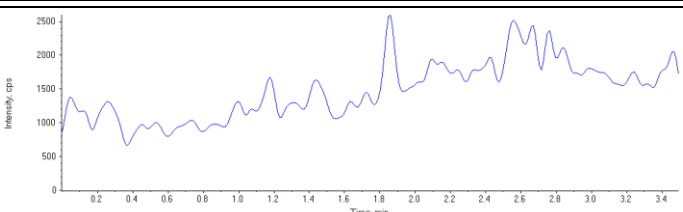
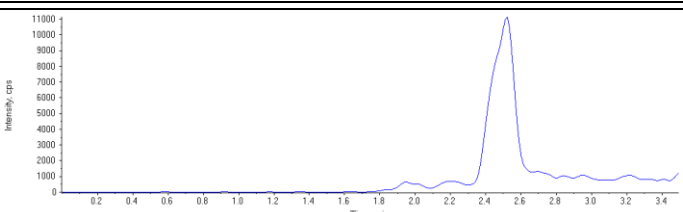
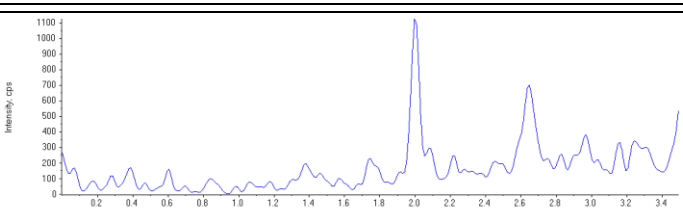
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 39.9 ng/L Area Ratio: 0.0320 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 41.4 ng/L Area Ratio: 0.0955 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 43.5 ng/L Area Ratio: 0.0903 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 36.6 ng/L Area Ratio: 0.0376 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 35.9 ng/L Area Ratio: 0.0629 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 130. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

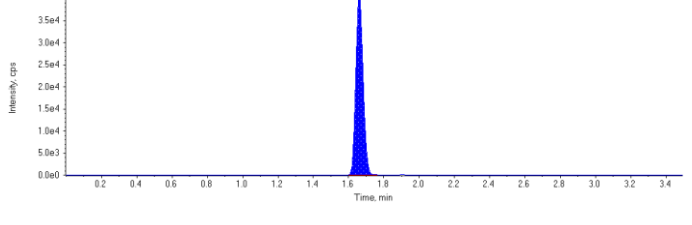
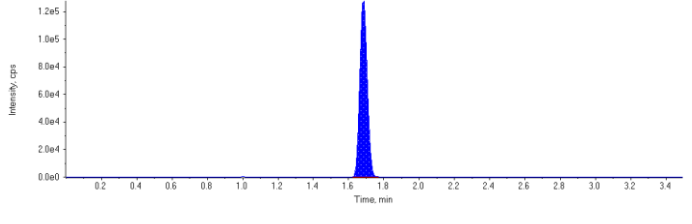
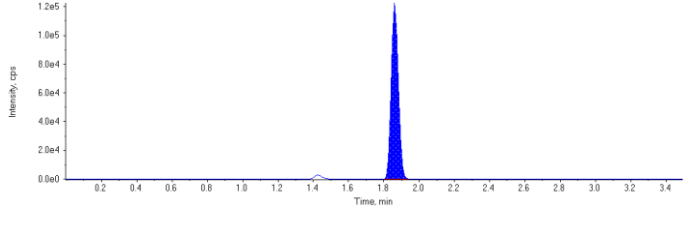
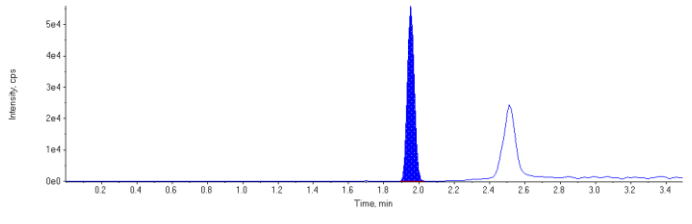
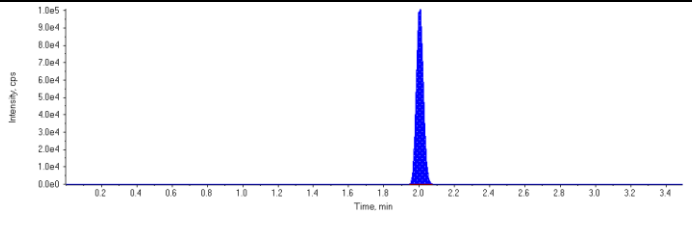
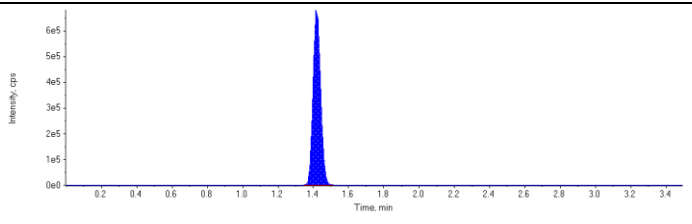
Sample Name	4396598~BWH243-01	Injection Vial	13
Sample ID	4396598~BWH243-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:19:04 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	117000.	1.66	1.00	-
MPFHpA	379000.	1.68	1.00	-
MPFOA	339000.	1.86	1.00	-
MPFOS	153000.	1.95	1.00	-
MPFNA	288000.	2.00	1.00	-
13C6-PFHxA IS	2040000.	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	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	117000	1.66	N/A	87.3	N/A
13C4-PFHpA	379000	1.68	N/A	87.0	N/A
13C4-PFOA	339000	1.86	N/A	89.8	N/A
13C4-PFOS	153000	1.95	N/A	84.2	N/A
13C5-PFNA	288000	2.00	N/A	88.7	N/A
13C6-PFHxA	2040000	1.42	N/A	103.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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

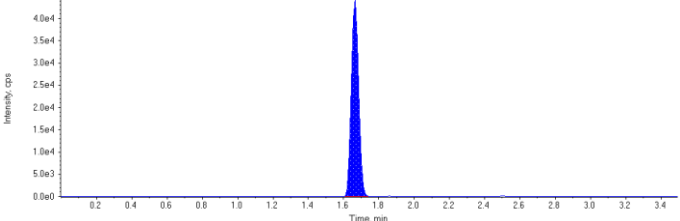
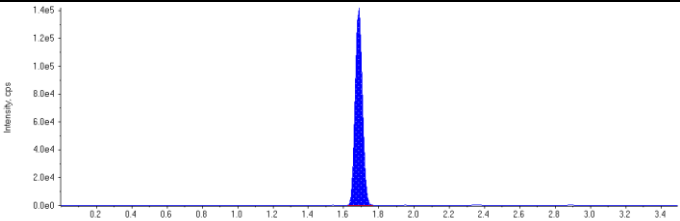
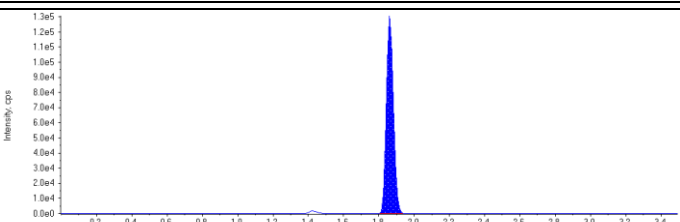
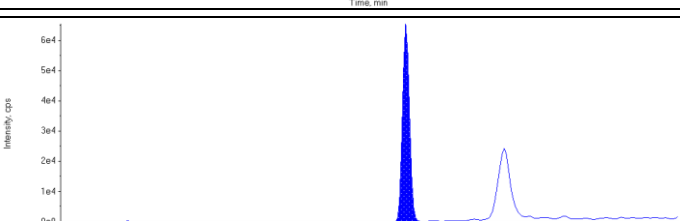
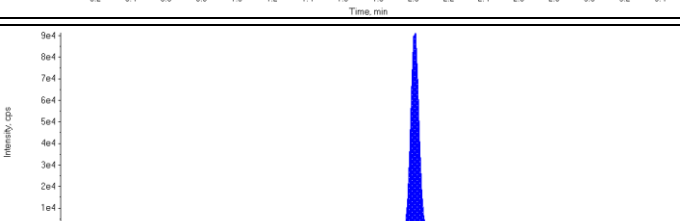
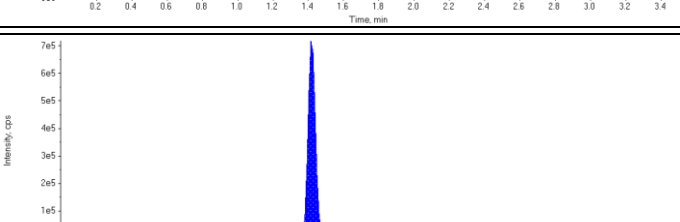
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) 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)	

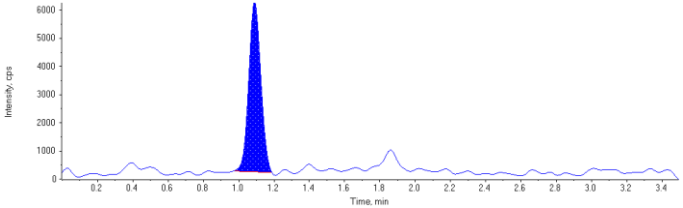
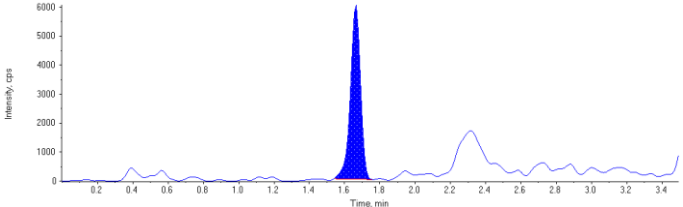
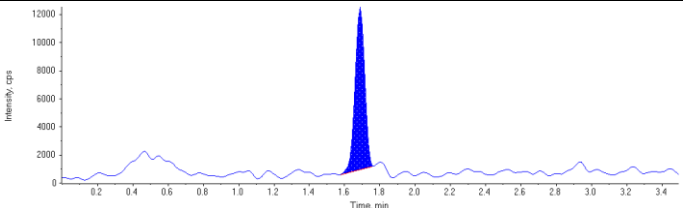
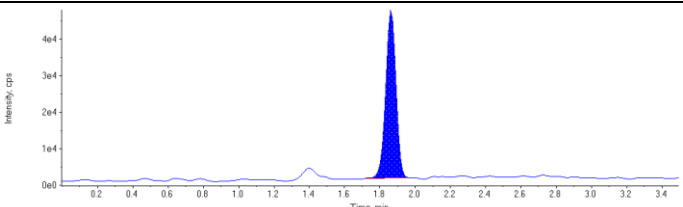
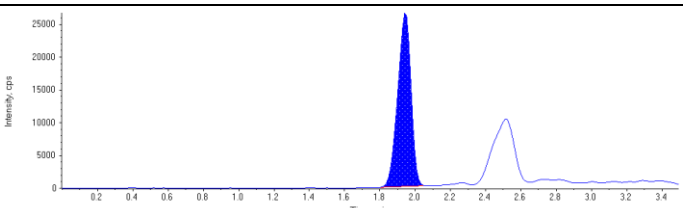
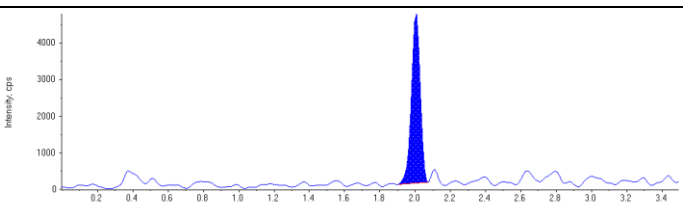
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 87.3 ng/L Area Ratio: 0.0574 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 87.0 ng/L Area Ratio: 0.186 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 89.8 ng/L Area Ratio: 0.166 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 84.2 ng/L Area Ratio: 0.0751 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 88.7 ng/L Area Ratio: 0.142 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

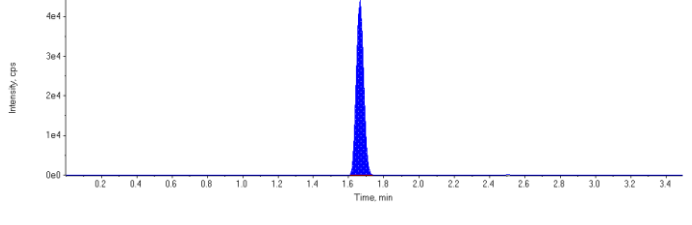
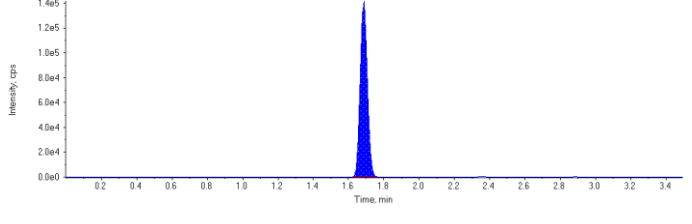
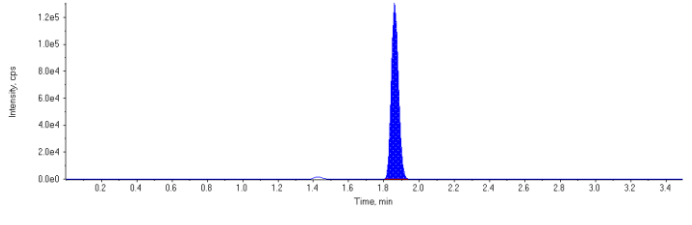
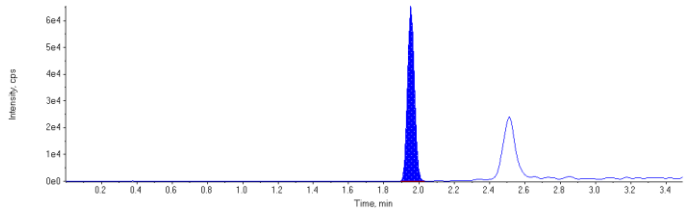
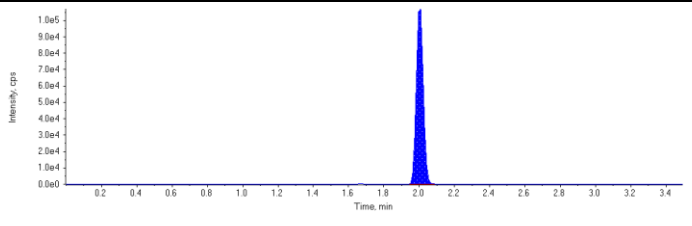
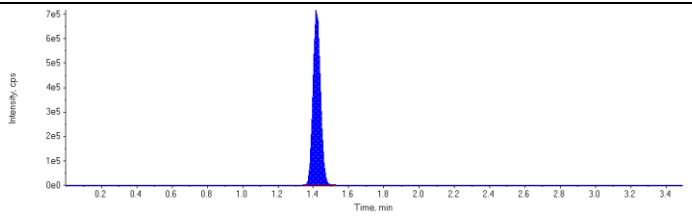
Sample Name	4396598~BWH244-01(10X)	Injection Vial	14
Sample ID	4396598~BWH244-01(10X)	Injection Volume (μL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:24:10 PM	Dilution Factor	10.0
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed, results not reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	127000.	1.66	1.00	-
MPFHpA	399000.	1.69	1.00	-
MPFOA	361000.	1.86	1.00	-
MPFOS	179000.	1.95	1.00	-
MPFNA	300000.	2.00	1.00	-
13C6-PFHxA IS	2140000.	1.42	0.100	-
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	28600	1.09	N/A	13.3	N/A
PFHxS 1	23800	1.66	N/A	8.90	N/A
PFHpA 1	43700	1.69	N/A	11.1	N/A
PFOA 1	185000	1.86	N/A	38.4	N/A
PFOS 1	138000	1.94	N/A	57.1	N/A
PFNA 1	16000	2.00	N/A	2.71	N/A
18O2-PFHxS	127000	1.66	N/A	90.8	N/A
13C4-PFHpA	399000	1.69	N/A	87.5	N/A
13C4-PFOA	361000	1.86	N/A	91.2	N/A
13C4-PFOS	179000	1.95	N/A	93.8	N/A
13C5-PFNA	300000	2.00	N/A	88.1	N/A
13C6-PFHxA	2140000	1.42	N/A	1080.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.69(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(1.42) min Concentration: 0.100 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

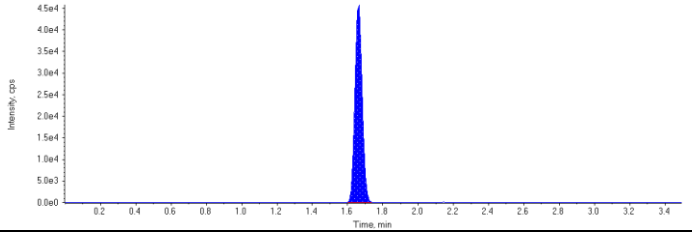
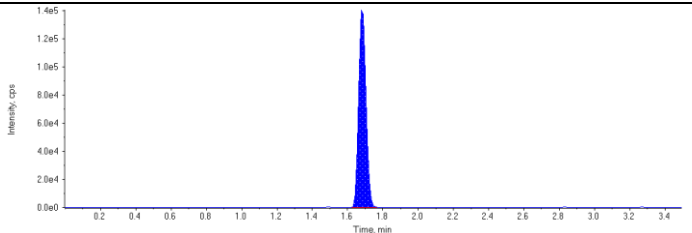
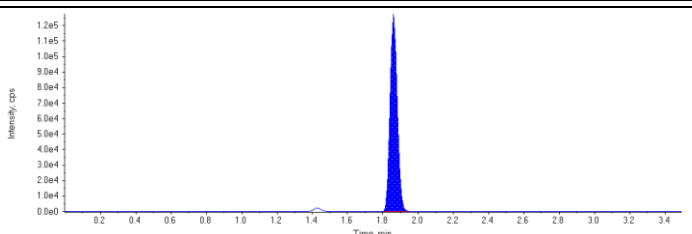
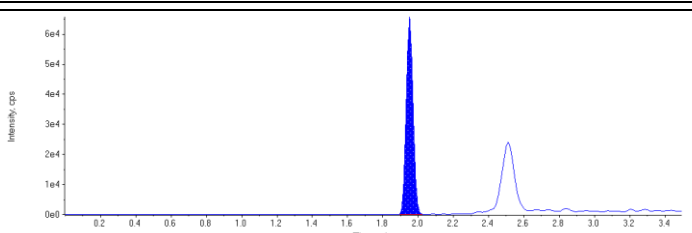
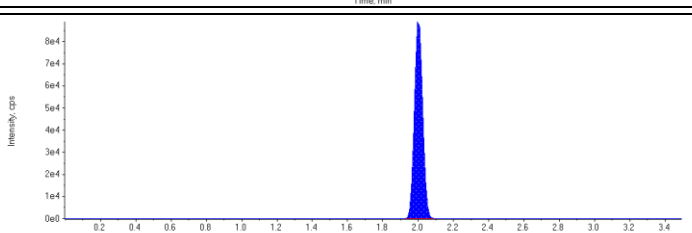
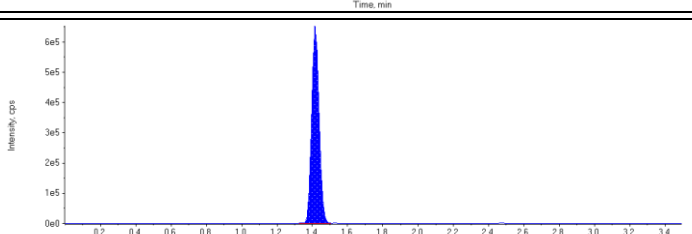
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.15) min Calculated Conc: 13.3 ng/L Area Ratio: 0.224 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 8.90 ng/L Area Ratio: 0.187 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 11.1 ng/L Area Ratio: 0.110 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 38.4 ng/L Area Ratio: 0.513 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.94 (1.97) min Calculated Conc: 57.1 ng/L Area Ratio: 0.772 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 2.71 ng/L Area Ratio: 0.0534 Sample Type: (Unknown)	

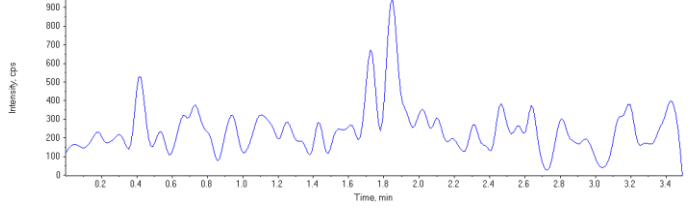
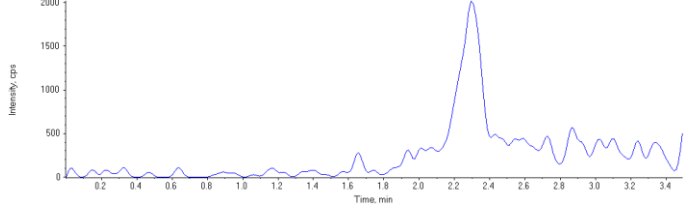
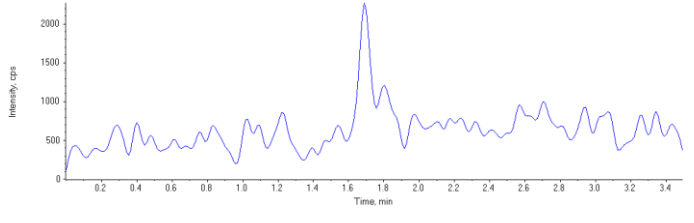
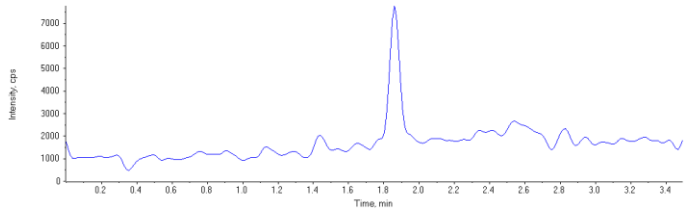
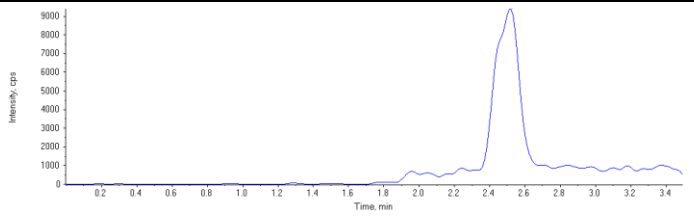
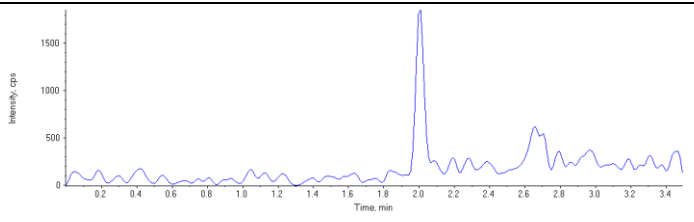
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 90.8 ng/L Area Ratio: 0.0596 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.73) min Calculated Conc: 87.5 ng/L Area Ratio: 0.187 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 91.2 ng/L Area Ratio: 0.169 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 93.8 ng/L Area Ratio: 0.0837 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 88.1 ng/L Area Ratio: 0.141 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 1080. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

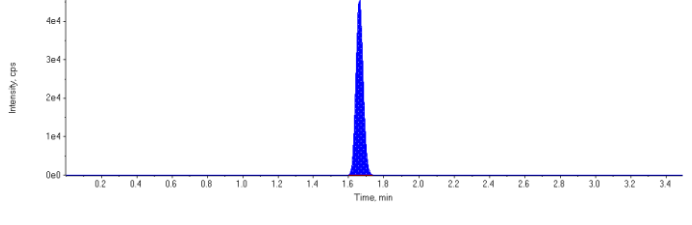
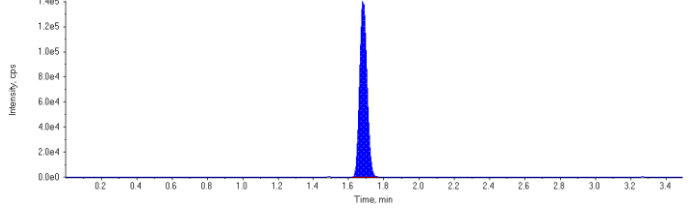
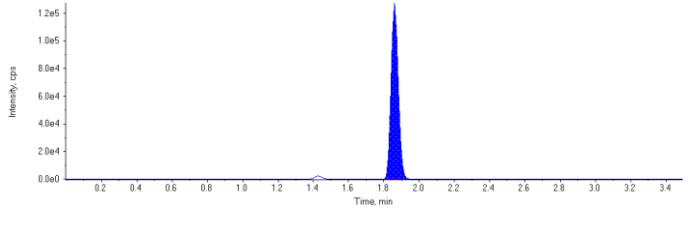
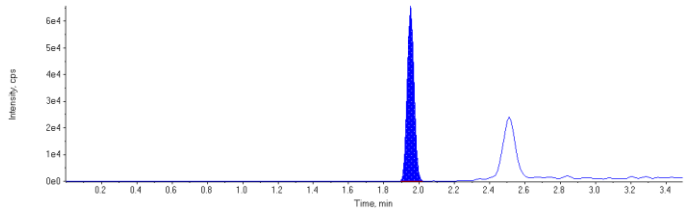
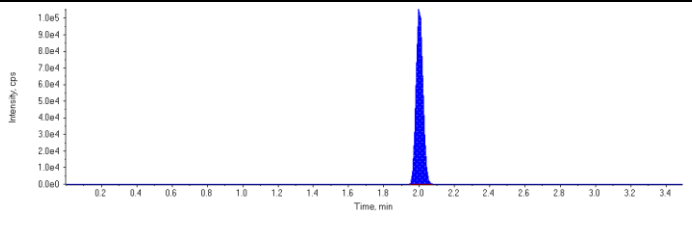
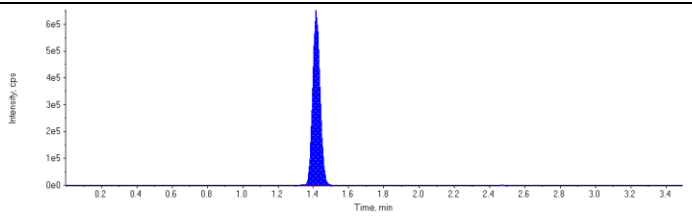
Sample Name	4396598~BWH245-01	Injection Vial	15
Sample ID	4396598~BWH245-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:29:15 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	132000.	1.66	1.00	-
MPFHpA	409000.	1.68	1.00	-
MPFOA	355000.	1.86	1.00	-
MPFOS	176000.	1.95	1.00	-
MPFNA	291000.	2.00	1.00	-
13C6-PFHxA IS	1900000.	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	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	132000	1.66	N/A	106.	N/A
13C4-PFHpA	409000	1.68	N/A	101.	N/A
13C4-PFOA	355000	1.86	N/A	101.	N/A
13C4-PFOS	176000	1.95	N/A	104.	N/A
13C5-PFNA	291000	2.00	N/A	96.2	N/A
13C6-PFHxA	1900000	1.42	N/A	96.1	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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

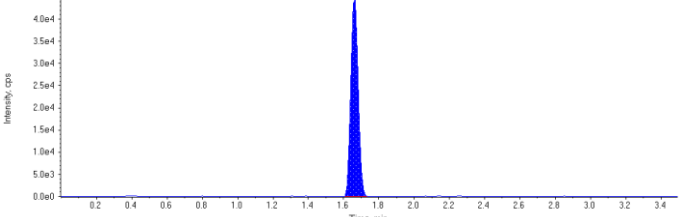
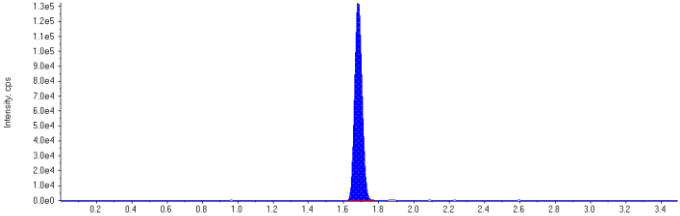
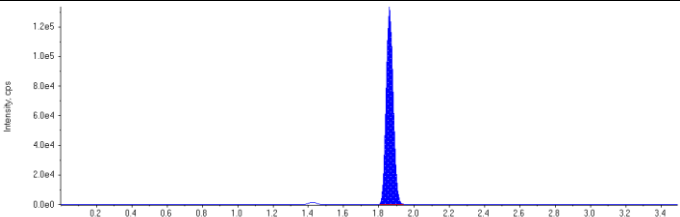
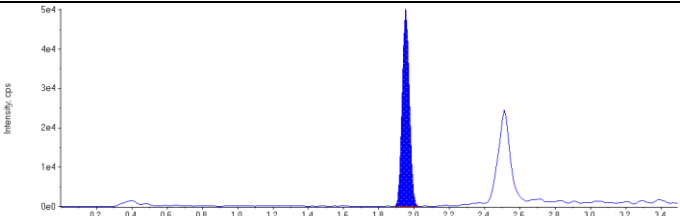
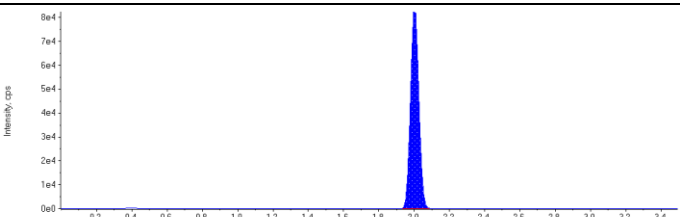
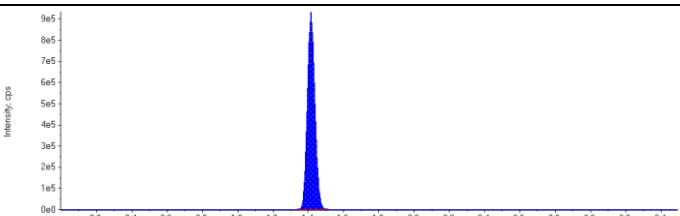
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) 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)	

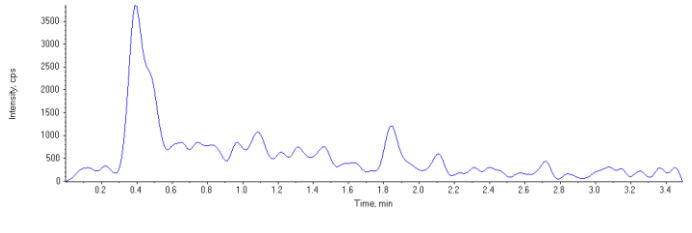
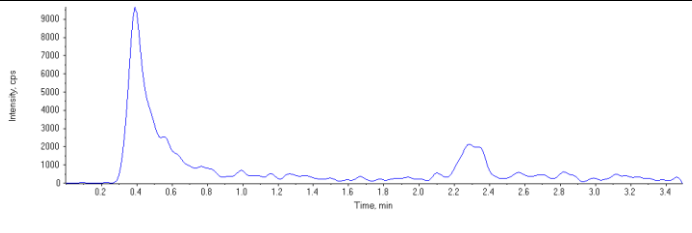
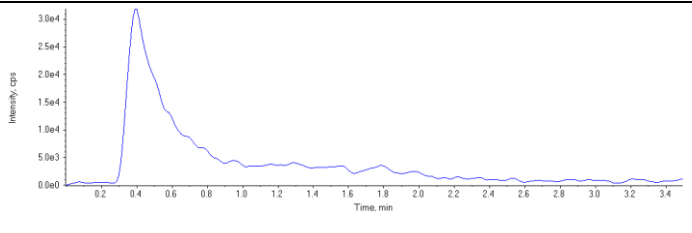
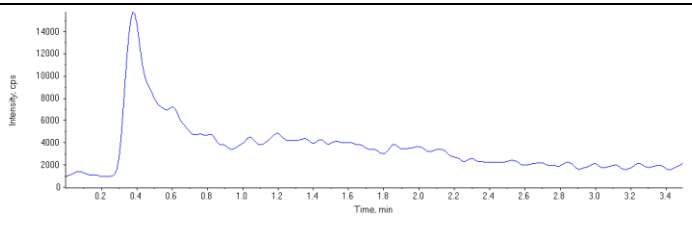
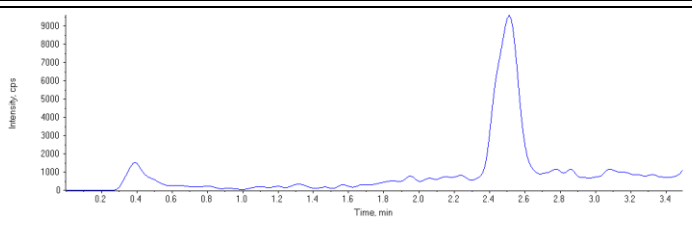
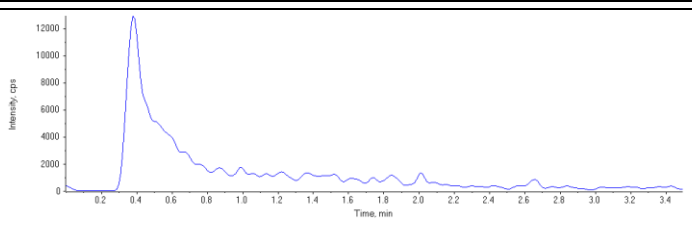
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 106. ng/L Area Ratio: 0.0694 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 101. ng/L Area Ratio: 0.216 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.187 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 104. ng/L Area Ratio: 0.0929 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 96.2 ng/L Area Ratio: 0.154 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.1 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

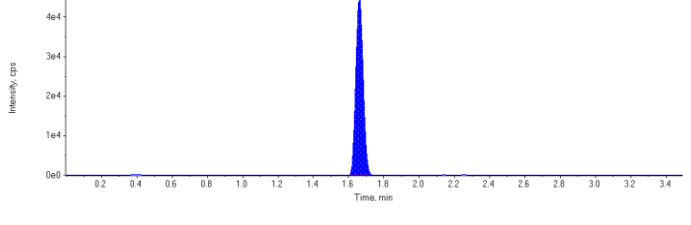
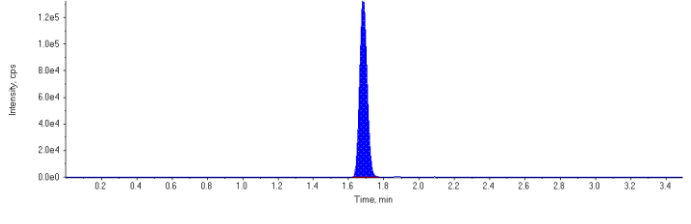
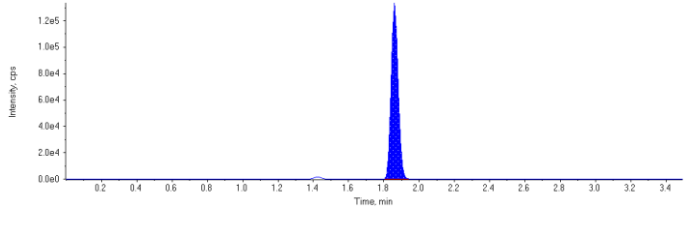
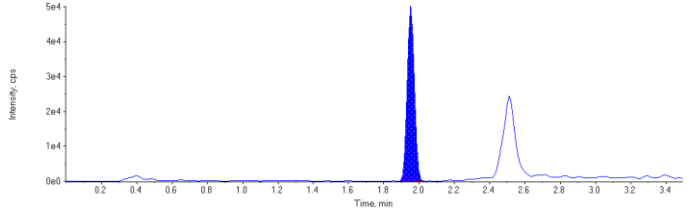
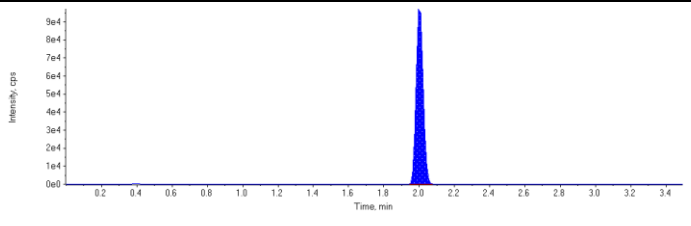
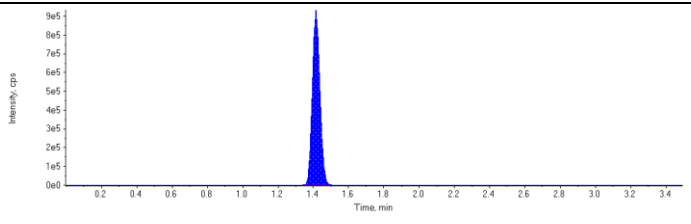
Sample Name	4396598~BWH246-01	Injection Vial	16
Sample ID	4396598~BWH246-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:34:22 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	130000.	1.66	1.00	-
MPFHpA	392000.	1.68	1.00	-
MPFOA	365000.	1.86	1.00	-
MPFOS	140000.	1.95	1.00	-
MPFNA	274000.	2.00	1.00	-
13C6-PFHxA IS	2790000.	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	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	130000	1.66	N/A	70.9	N/A
13C4-PFHpA	392000	1.68	N/A	65.7	N/A
13C4-PFOA	365000	1.86	N/A	70.6	N/A
13C4-PFOS	140000	1.95	N/A	56.2	N/A
13C5-PFNA	275000	2.00	N/A	61.7	N/A
13C6-PFHxA	2790000	1.42	N/A	141.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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

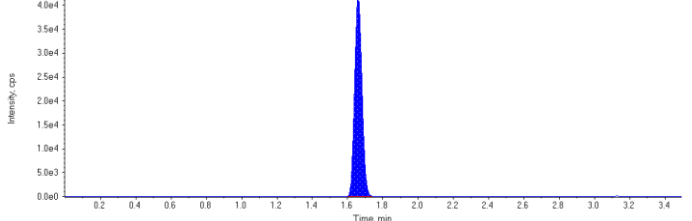
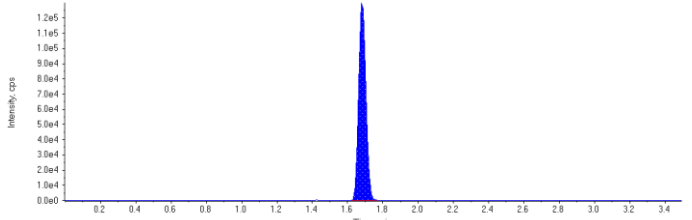
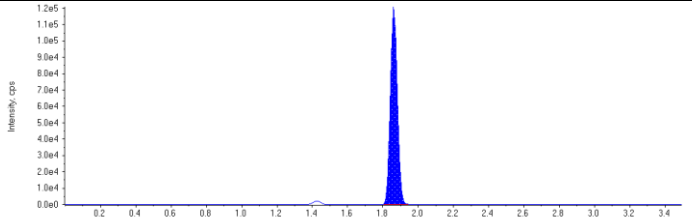
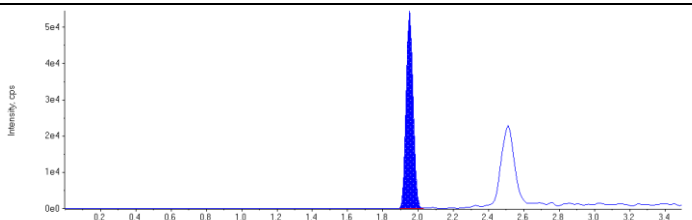
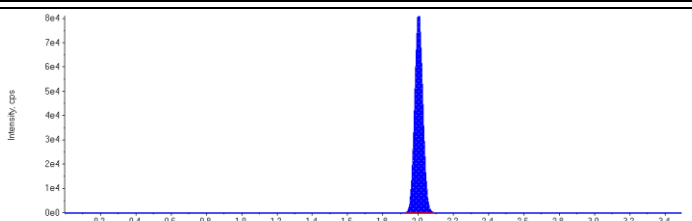
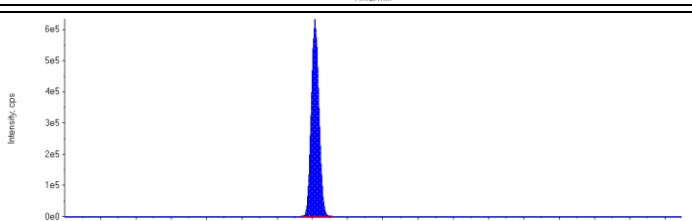
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) 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)	

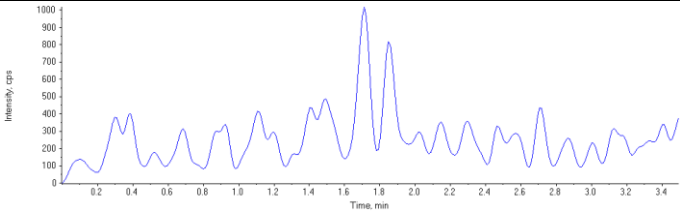
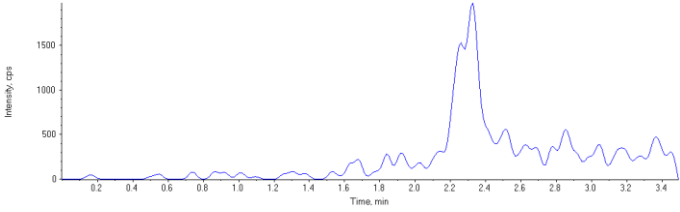
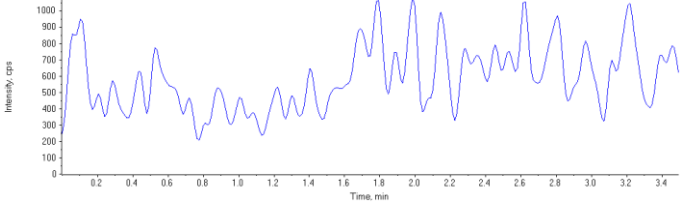
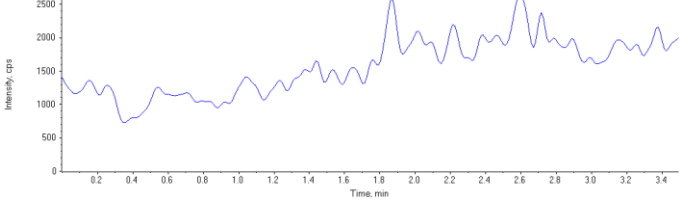
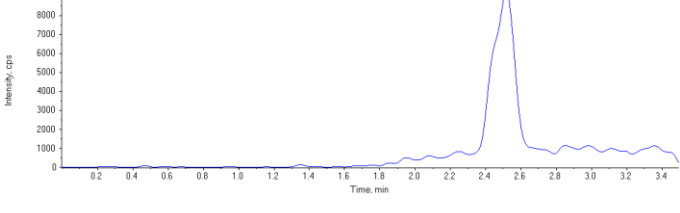
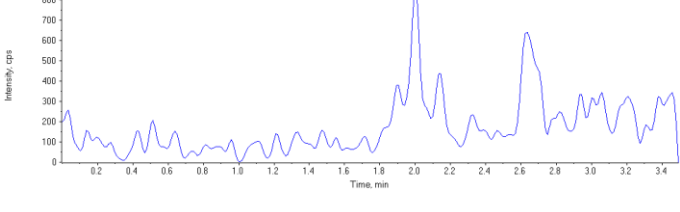
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 70.9 ng/L Area Ratio: 0.0466 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 65.7 ng/L Area Ratio: 0.140 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 70.6 ng/L Area Ratio: 0.131 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 56.2 ng/L Area Ratio: 0.0501 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 61.7 ng/L Area Ratio: 0.0985 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 141. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

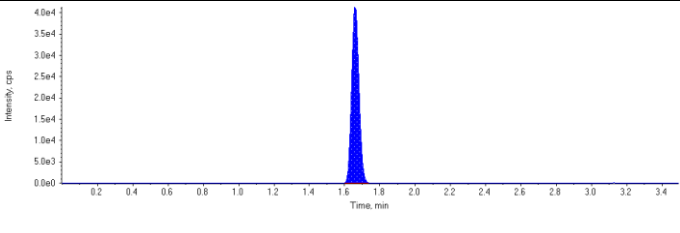
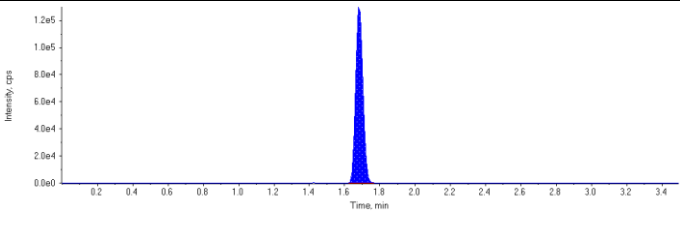
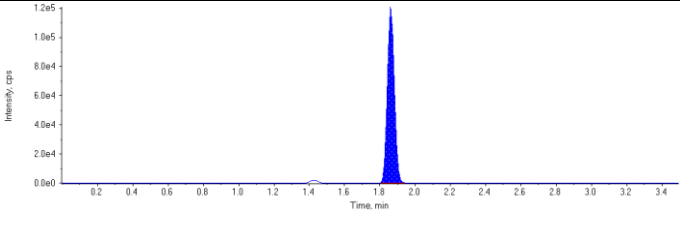
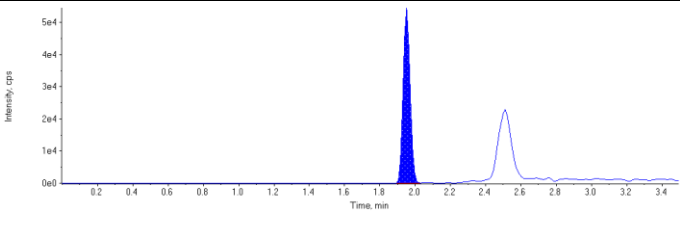
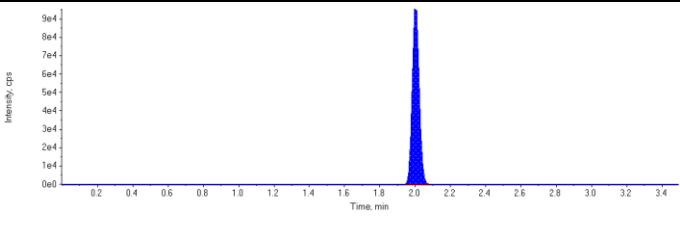
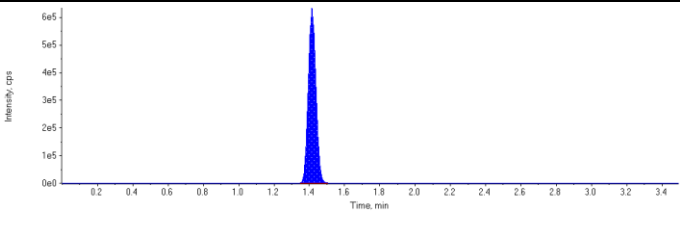
Sample Name	4396598~BWH247-01	Injection Vial	17
Sample ID	4396598~BWH247-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:39:28 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	121000.	1.66	1.00	-
MPFHpA	374000.	1.68	1.00	-
MPFOA	331000.	1.86	1.00	-
MPFOS	148000.	1.95	1.00	-
MPFNA	268000.	2.00	1.00	-
13C6-PFHxA IS	1920000.	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	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	121000	1.66	N/A	96.1	N/A
13C4-PFHpA	374000	1.68	N/A	91.1	N/A
13C4-PFOA	331000	1.86	N/A	92.9	N/A
13C4-PFOS	148000	1.95	N/A	86.4	N/A
13C5-PFNA	268000	2.00	N/A	87.4	N/A
13C6-PFHxA	1920000	1.42	N/A	97.3	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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

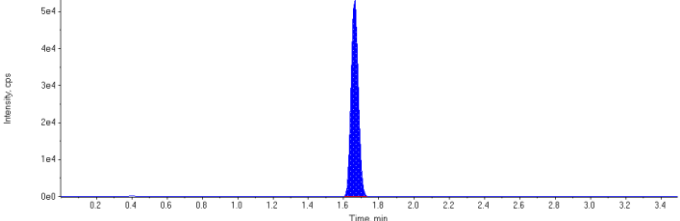
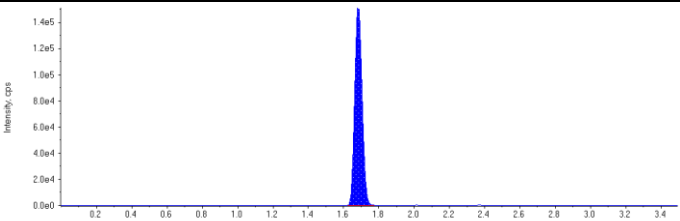
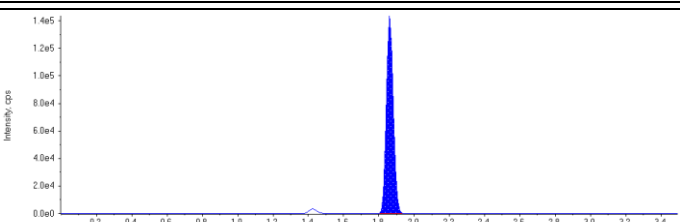
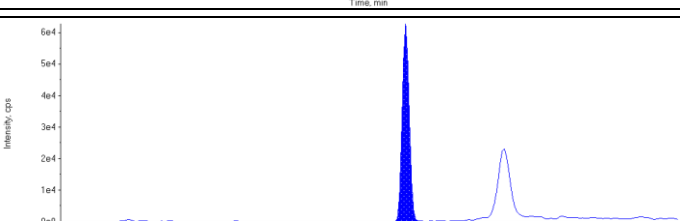
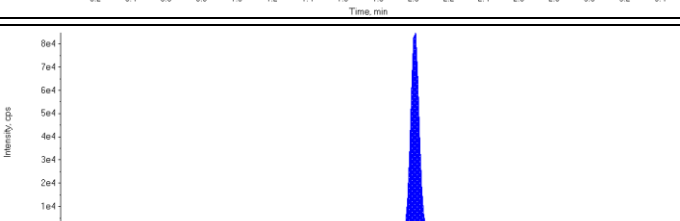
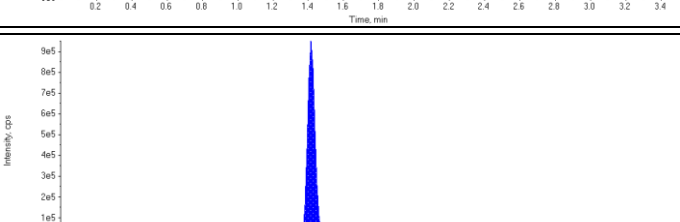
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) 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)	

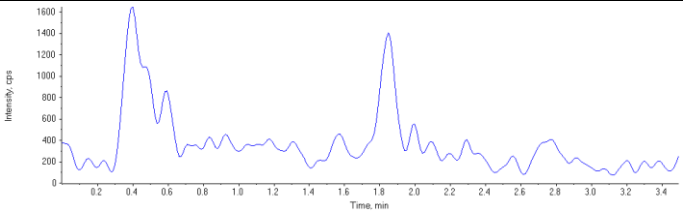
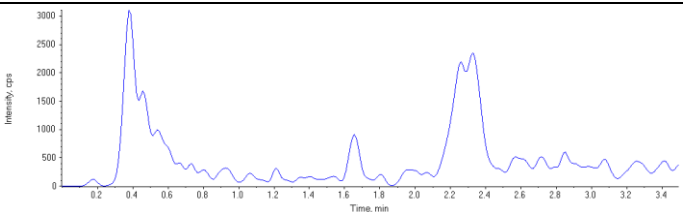
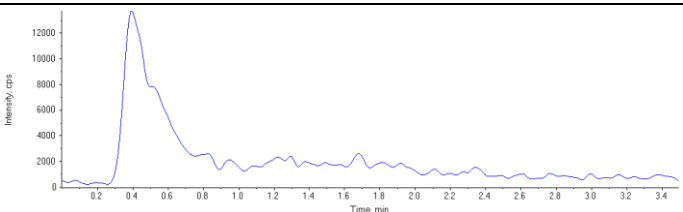
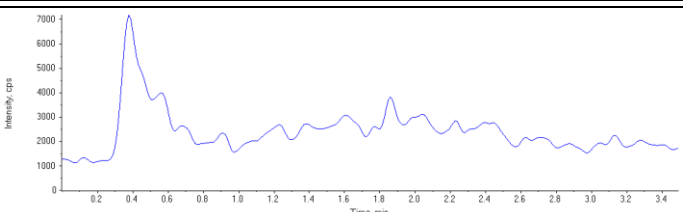
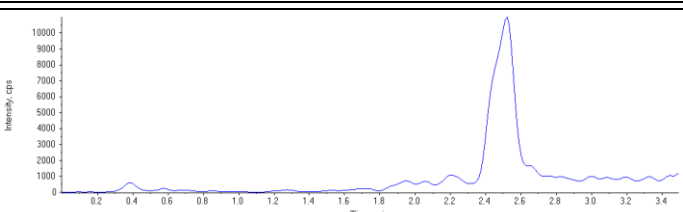
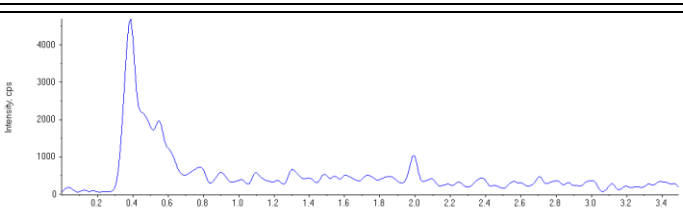
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 96.1 ng/L Area Ratio: 0.0631 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 91.1 ng/L Area Ratio: 0.195 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 92.9 ng/L Area Ratio: 0.172 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 86.4 ng/L Area Ratio: 0.0771 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 87.4 ng/L Area Ratio: 0.140 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 97.3 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

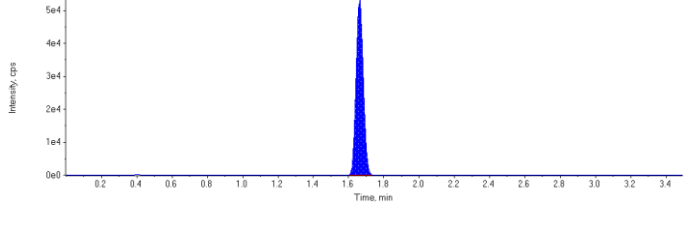
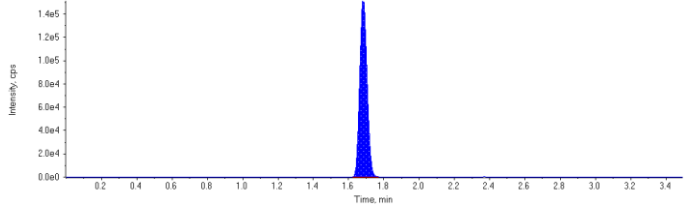
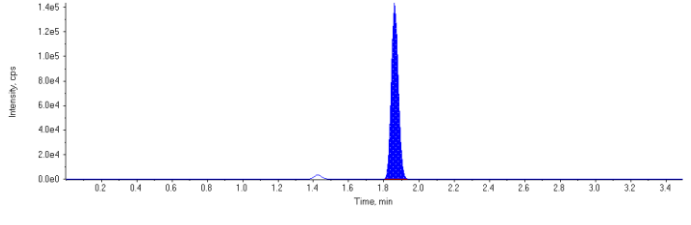
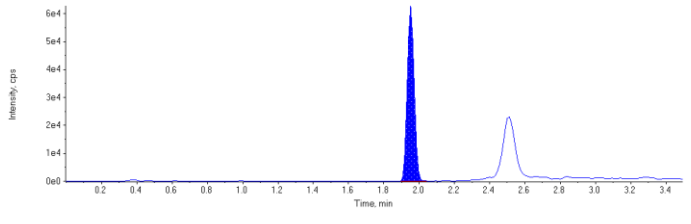
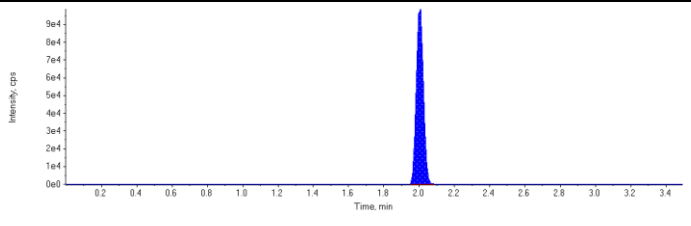
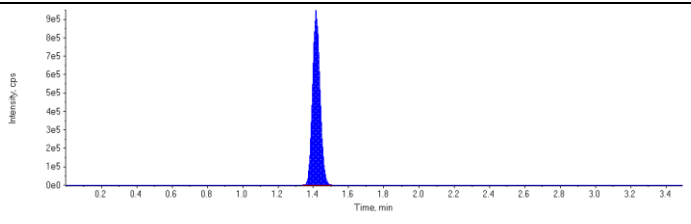
Sample Name	4396598~BWH248-01	Injection Vial	18
Sample ID	4396598~BWH248-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:44:34 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	152000.	1.66	1.00	-
MPFHpA	444000.	1.68	1.00	-
MPFOA	388000.	1.86	1.00	-
MPFOS	171000.	1.95	1.00	-
MPFNA	281000.	2.00	1.00	-
13C6-PFHxA IS	2800000.	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	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	152000	1.66	N/A	82.4	N/A
13C4-PFHpA	444000	1.68	N/A	74.3	N/A
13C4-PFOA	388000	1.86	N/A	74.9	N/A
13C4-PFOS	171000	1.95	N/A	68.3	N/A
13C5-PFNA	281000	2.00	N/A	62.9	N/A
13C6-PFHxA	2800000	1.42	N/A	142.	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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

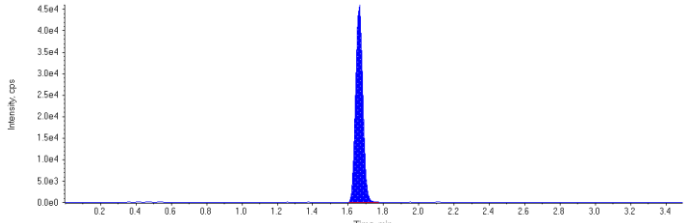
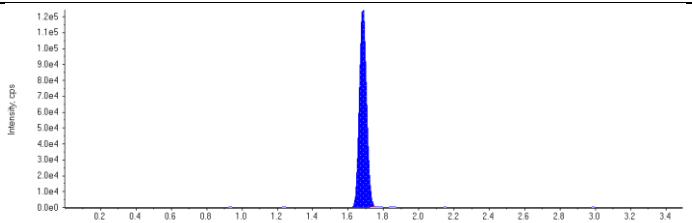
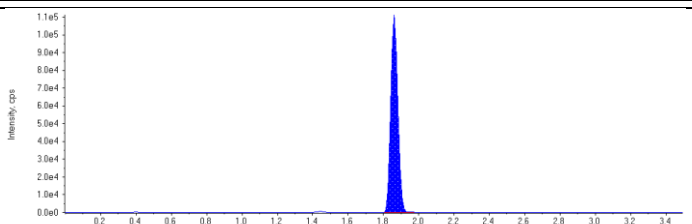
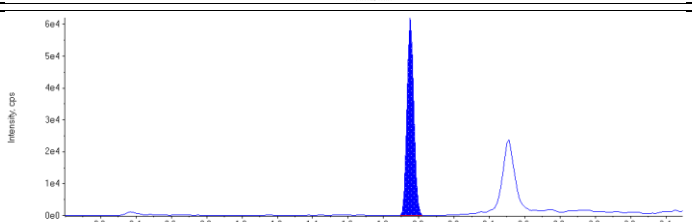
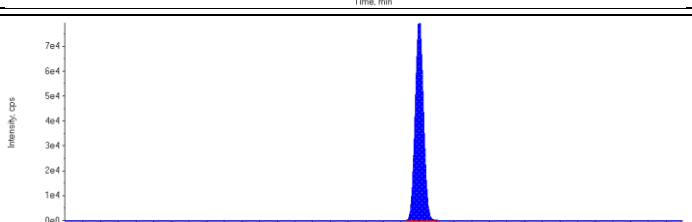
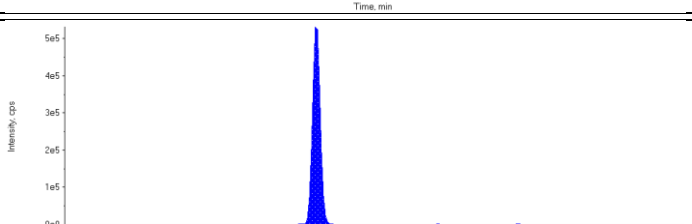
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) 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)	

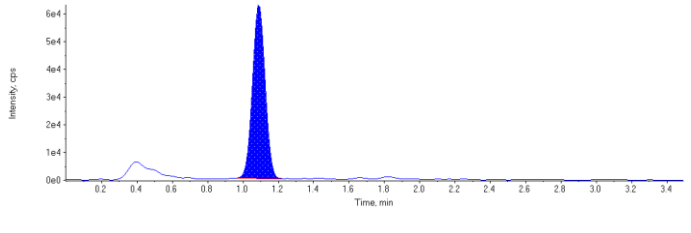
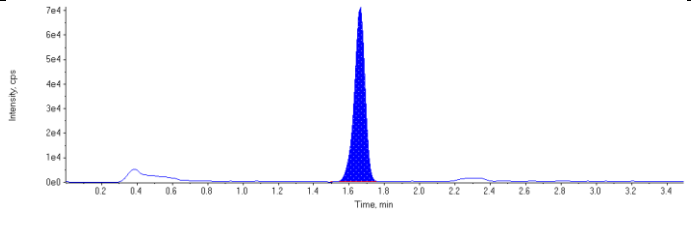
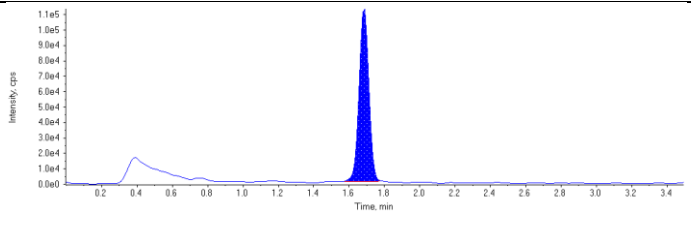
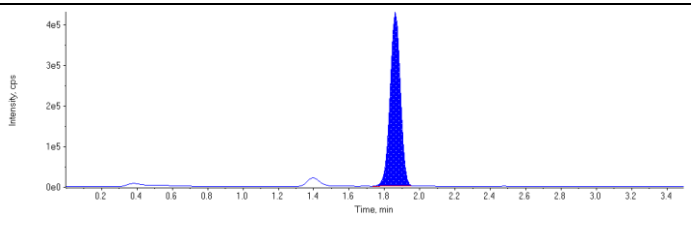
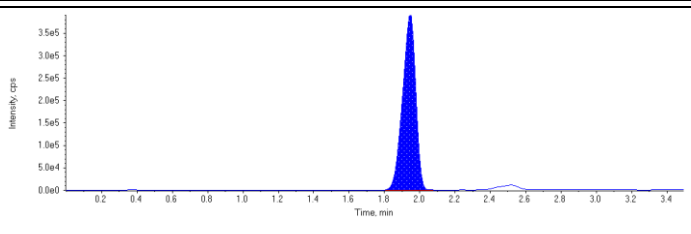
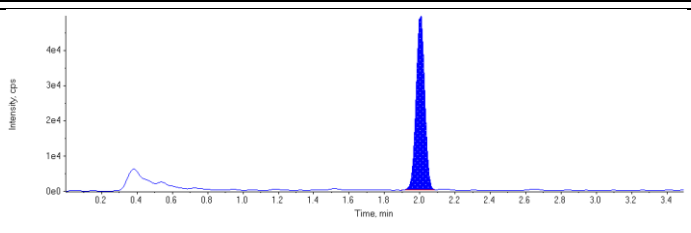
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 82.4 ng/L Area Ratio: 0.0542 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 74.3 ng/L Area Ratio: 0.159 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 74.9 ng/L Area Ratio: 0.139 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 68.3 ng/L Area Ratio: 0.0610 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 62.9 ng/L Area Ratio: 0.100 Sample Type: (Unknown)	
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: (Unknown)	

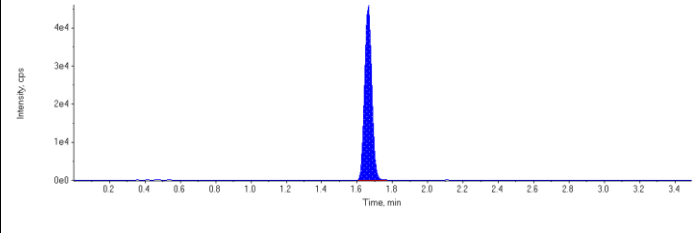
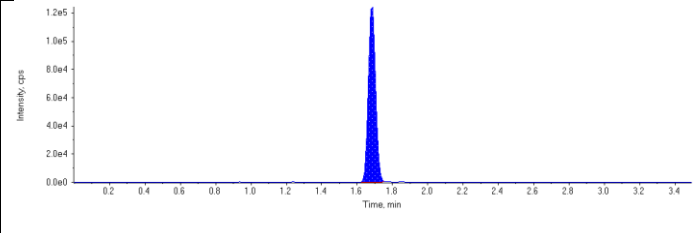
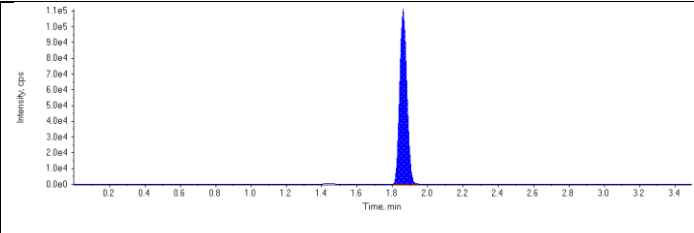
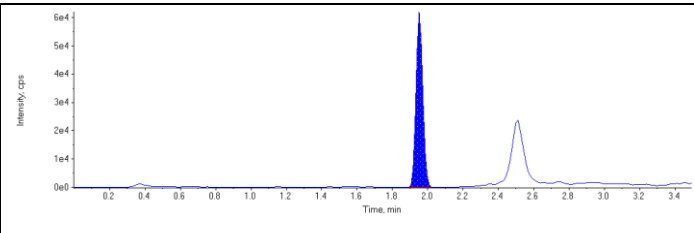
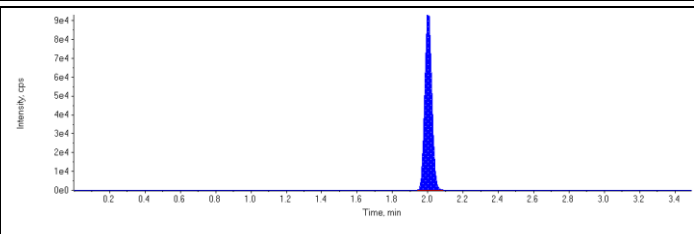
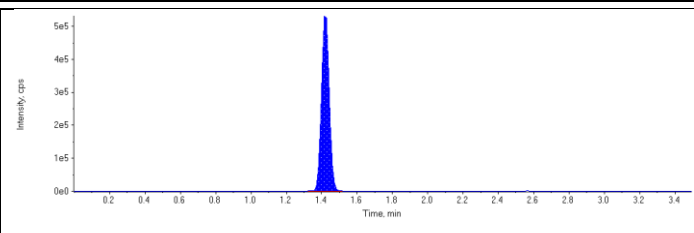
Sample Name	4396598~BWH244-01	Injection Vial	30
Sample ID	4396598~BWH244-01	Injection Volume (µL)	3
Sample Type	Unknown	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 5:50:55 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Reported
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	130000.	1.66	1.00	-
MPFHpA	358000.	1.68	1.00	-
MPFOA	308000.	1.86	1.00	-
MPFOS	164000.	1.95	1.00	-
MPFNA	263000.	2.00	1.00	-
13C6-PFHxA IS	1650000.	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	311000	1.09	N/A	9.35	N/A
PFHxS 1	299000	1.66	N/A	8.35	N/A
PFHpA 1	430000	1.68	N/A	11.2	N/A
PFOA 1	1720000	1.86	N/A	41.5	N/A
PFOS 1	2020000	1.95	N/A	85.8	N/A
PFNA 1	167000	2.00	N/A	5.47	N/A
18O2-PFHxS	130000	1.66	N/A	120.	N/A
13C4-PFHpA	358000	1.68	N/A	102.	N/A
13C4-PFOA	308000	1.86	N/A	101.	N/A
13C4-PFOS	164000	1.95	N/A	111.	N/A
13C5-PFNA	264000	2.00	N/A	100.	N/A
13C6-PFHxA	1650000	1.42	N/A	83.4	N/A

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Unknown)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.42(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): 1.09 (1.15) min Calculated Conc: 9.35 ng/L Area Ratio: 2.40 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 8.35 ng/L Area Ratio: 2.30 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 11.2 ng/L Area Ratio: 1.20 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 41.5 ng/L Area Ratio: 5.59 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 85.8 ng/L Area Ratio: 12.3 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 5.47 ng/L Area Ratio: 0.634 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 120. ng/L Area Ratio: 0.0788 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 102. ng/L Area Ratio: 0.217 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.187 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 111. ng/L Area Ratio: 0.0994 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 100. ng/L Area Ratio: 0.160 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 83.4 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	



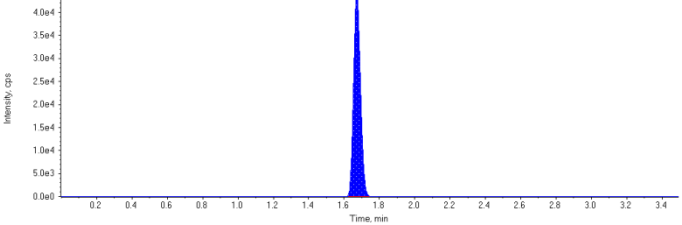
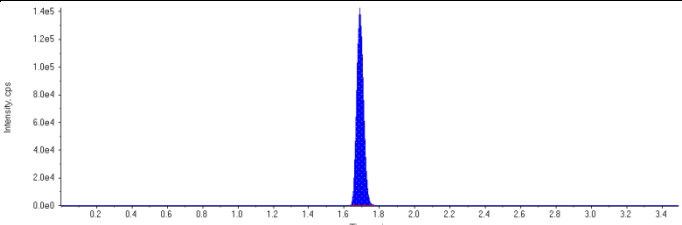
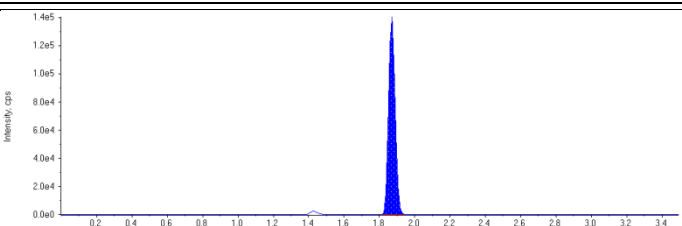
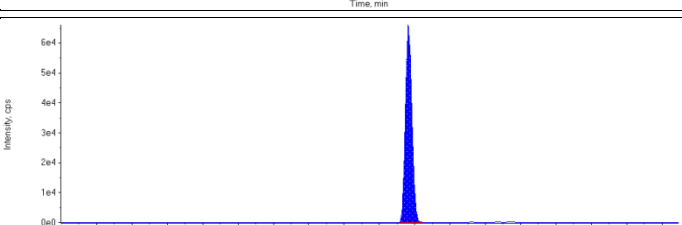
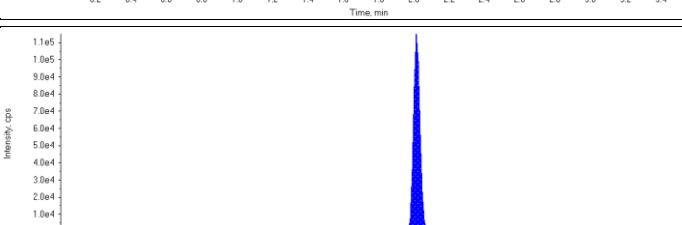
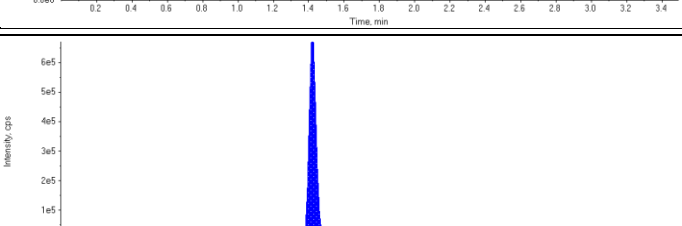
4. QA/QC Data

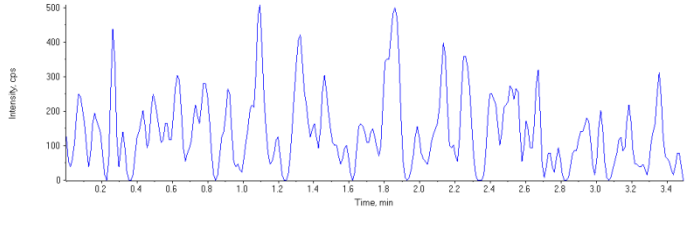
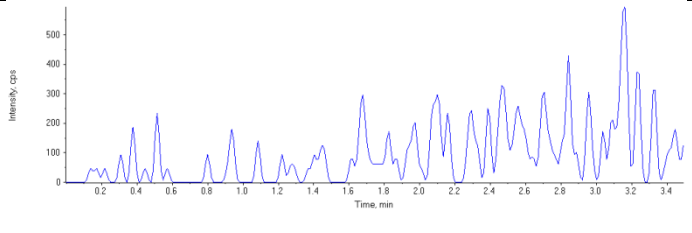
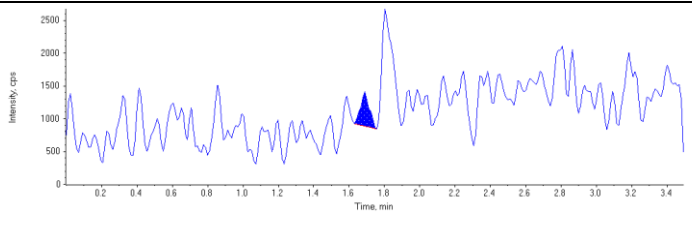
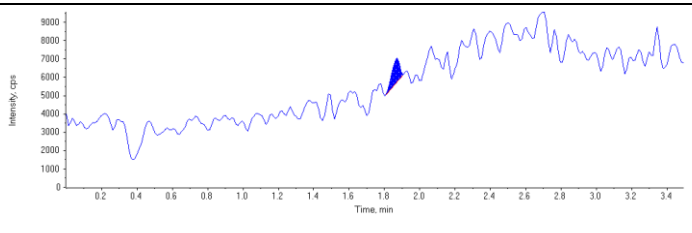
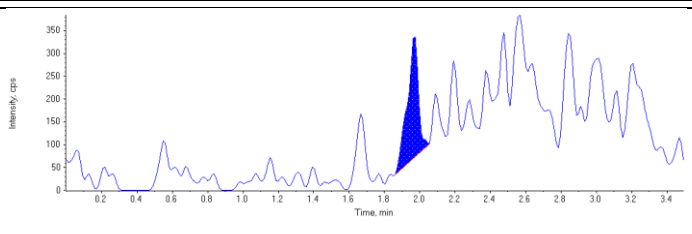
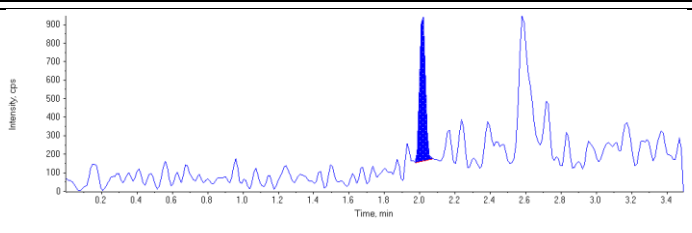
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

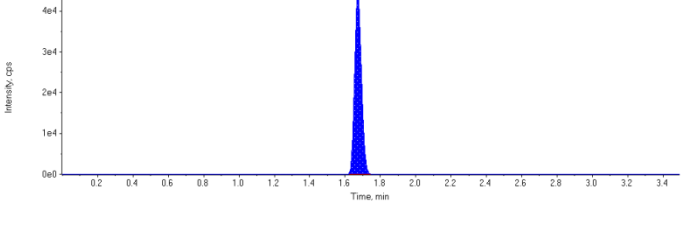
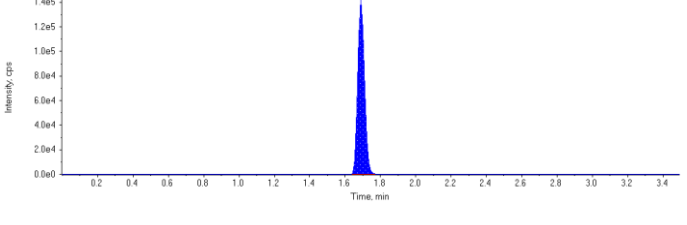
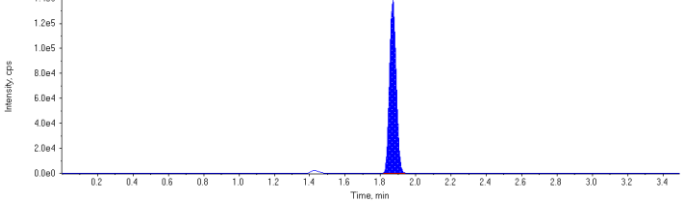
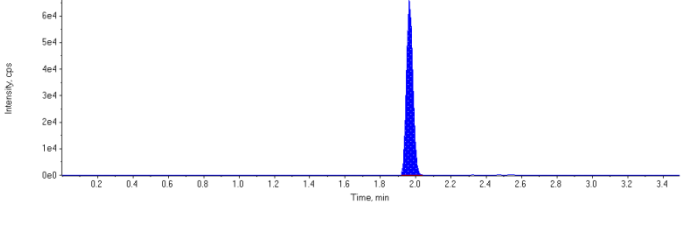
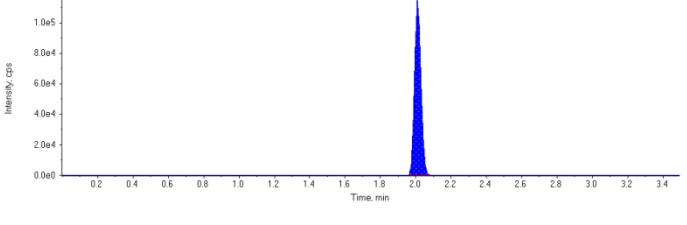
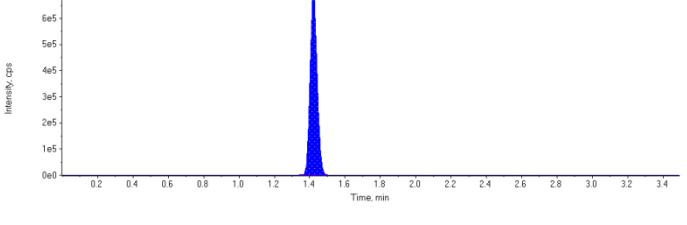
Sample Name	4390179~BLANK	Injection Vial	2
Sample ID	4390179~BLANK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 1:55:57 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	120000.	1.67	1.00	-
MPFHpA	374000.	1.69	1.00	-
MPFOA	361000.	1.87	1.00	-
MPFOS	167000.	1.96	1.00	-
MPFNA	292000.	2.01	1.00	-
13C6-PFHxA IS	1930000.	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	1770	1.69	0.00	0.118	0.0
PFOA 1	4050	1.87	0.00	N/A	0.0
PFOS 1	1160	1.97	0.00	0.375	0.0
PFNA 1	1770	2.02	0.00	N/A	0.0
18O2-PFHxS	120000	1.67	100.	77.7	77.7
13C4-PFHpA	374000	1.69	100.	83.8	83.8
13C4-PFOA	361000	1.87	100.	90.1	90.1
13C4-PFOS	167000	1.96	100.	83.8	83.8
13C5-PFNA	292000	2.01	100.	86.3	86.3
13C6-PFHxA	1930000	1.42	100.	98.1	98.1

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

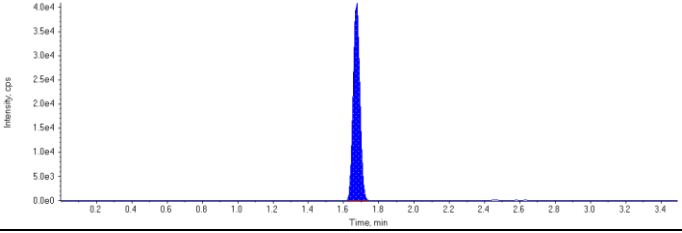
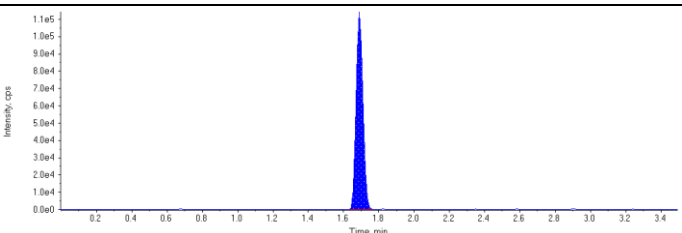
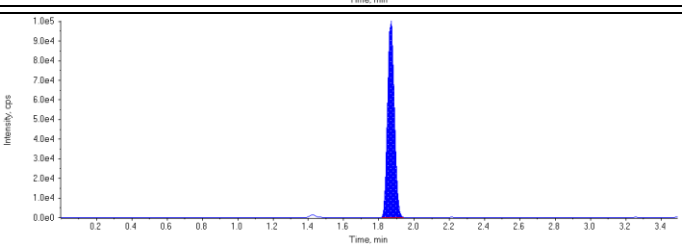
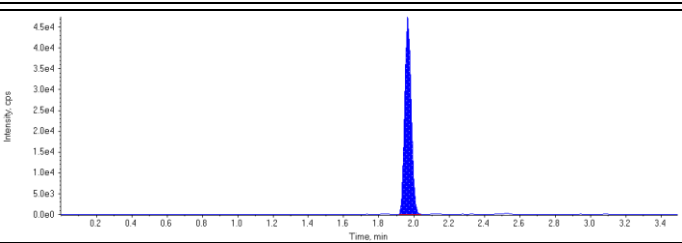
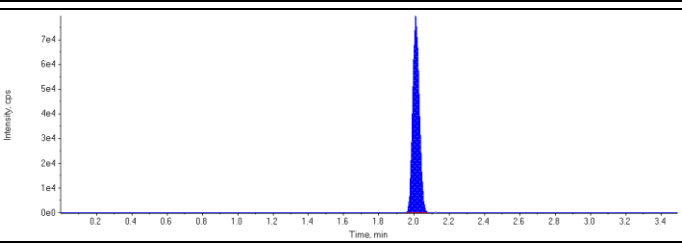
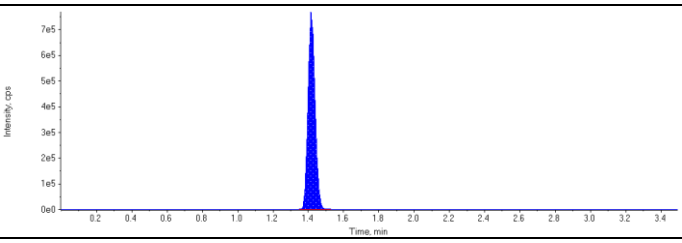
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 0.118 ng/L Area Ratio: 0.00472 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: N/A ng/L Area Ratio: 0.0112 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 0.375 ng/L Area Ratio: 0.00693 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.02 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00605 Sample Type: (Quality Control)	

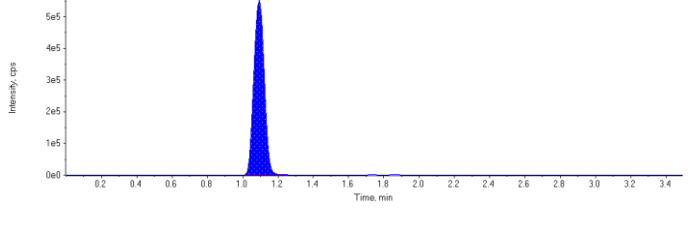
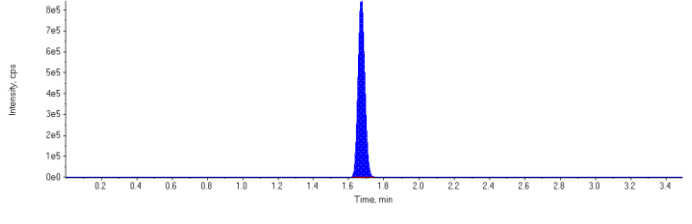
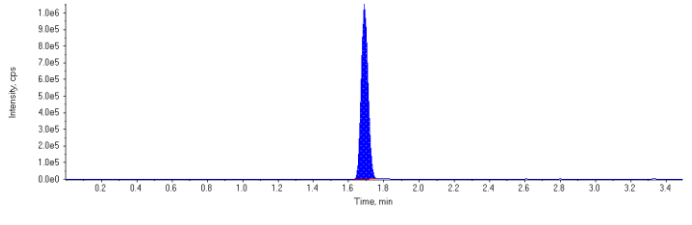
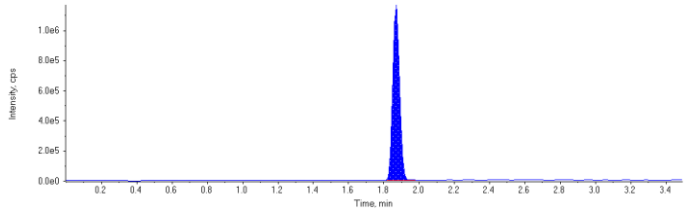
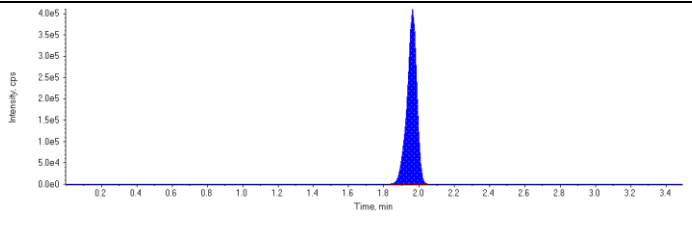
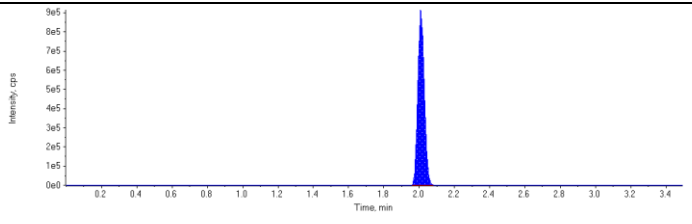
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 77.7 ng/L Area Ratio: 0.0622 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 83.8 ng/L Area Ratio: 0.193 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 90.1 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: 83.8 ng/L Area Ratio: 0.0864 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 86.3 ng/L Area Ratio: 0.151 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 98.1 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

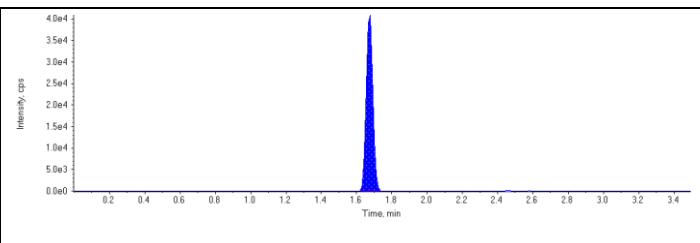
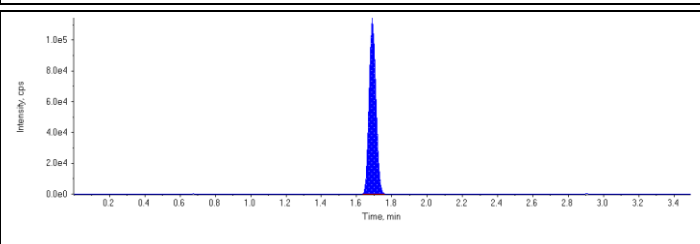
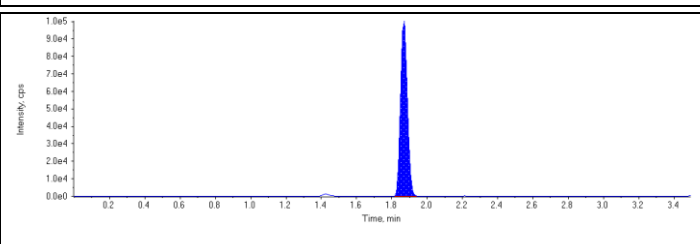
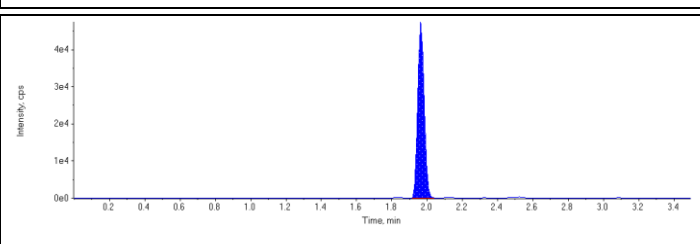
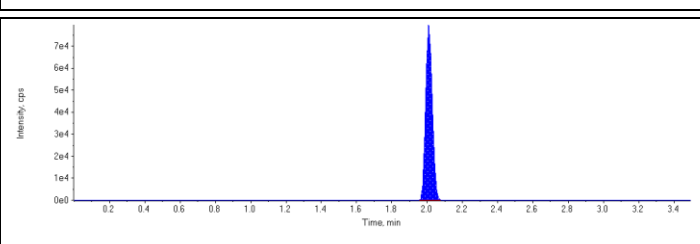
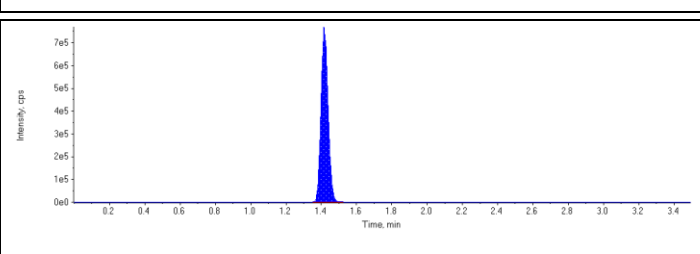
Sample Name	4390179~MTRX SPK	Injection Vial	10
Sample ID	4390179~MTRX SPK (BVX757)	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:41:55 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	108000.	1.67	1.00	-
MPFHpA	303000.	1.69	1.00	-
MPFOA	268000.	1.87	1.00	-
MPFOS	120000.	1.96	1.00	-
MPFNA	208000.	2.01	1.00	-
13C6-PFHxA IS	2140000.	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	2270000	1.09	50.0	69.6	139.0
PFHxS 1	2280000	1.67	50.0	71.6	143.0
PFHpA 1	2760000	1.69	50.0	73.6	147.0
PFOA 1	3120000	1.87	50.0	80.3	161.0
PFOS 1	1550000	1.96	50.0	76.6	153.0
PFNA 1	2320000	2.01	50.0	83.9	168.0
18O2-PFHxS	108000	1.67	100.	62.9	62.9
13C4-PFHpA	303000	1.69	100.	61.4	61.4
13C4-PFOA	268000	1.87	100.	60.5	60.5
13C4-PFOS	120000	1.96	100.	54.6	54.6
13C5-PFNA	208000	2.01	100.	55.4	55.4
13C6-PFHxA	2140000	1.42	100.	108.	108.0

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

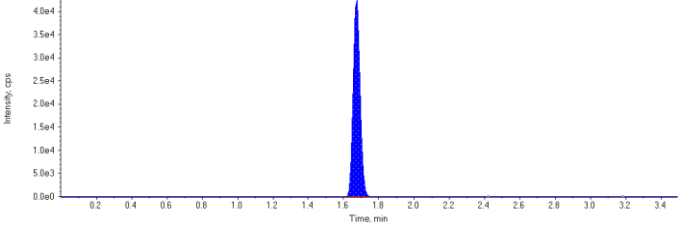
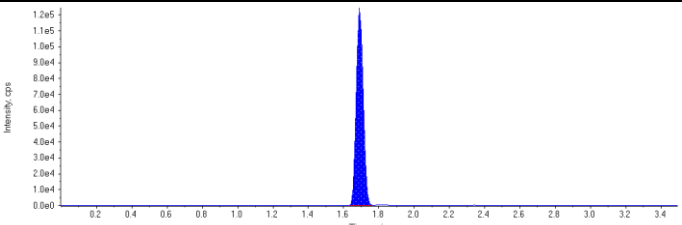
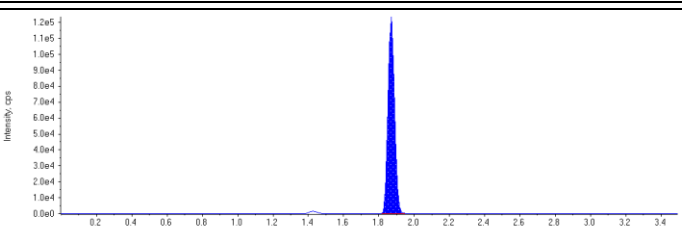
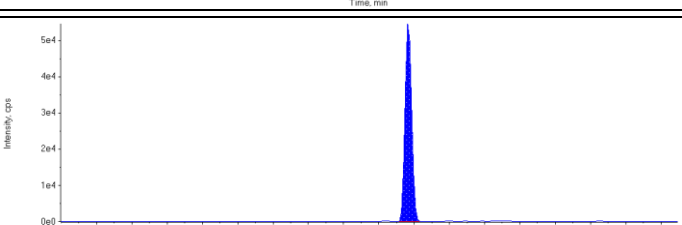
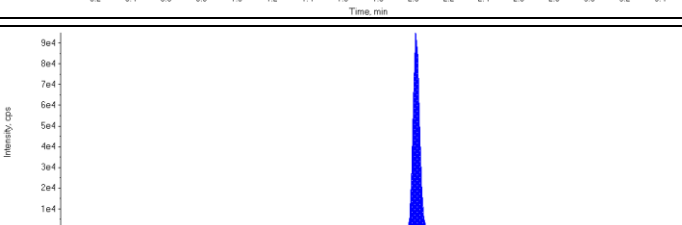
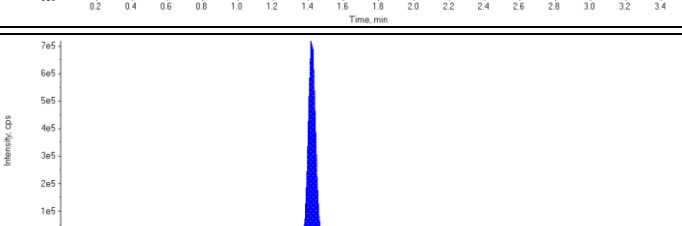
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 69.6 ng/L Area Ratio: 21.1 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 71.6 ng/L Area Ratio: 21.2 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 73.6 ng/L Area Ratio: 9.13 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 80.3 ng/L Area Ratio: 11.6 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 76.6 ng/L Area Ratio: 12.9 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 83.9 ng/L Area Ratio: 11.2 Sample Type: (Quality Control)	

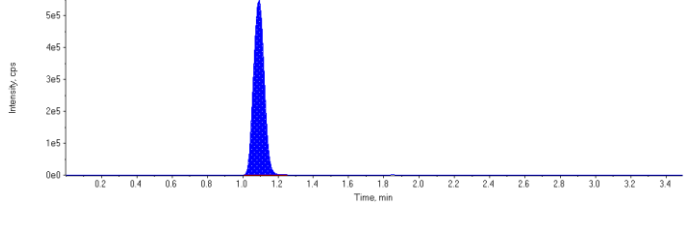
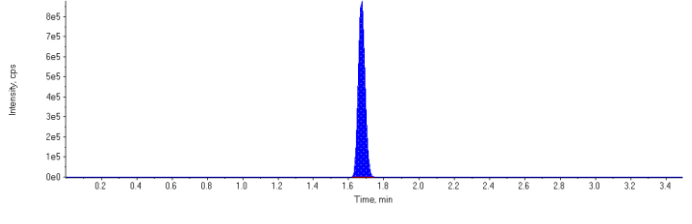
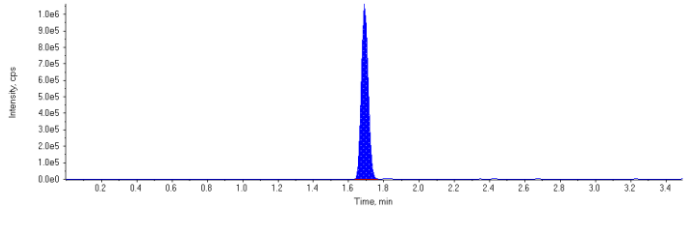
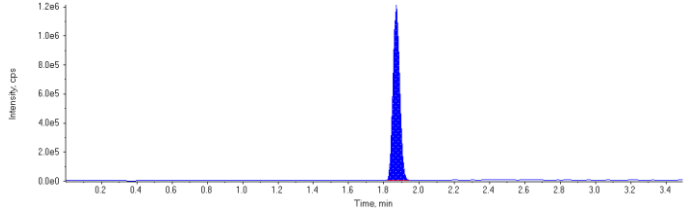
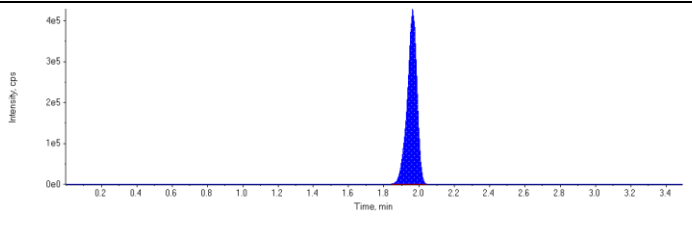
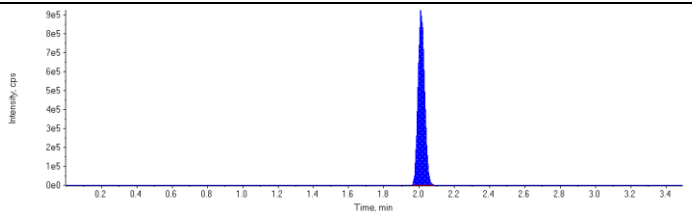
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 62.9 ng/L Area Ratio: 0.0504 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 61.4 ng/L Area Ratio: 0.142 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 60.5 ng/L Area Ratio: 0.125 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 54.6 ng/L Area Ratio: 0.0563 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 55.4 ng/L Area Ratio: 0.0972 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 108. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

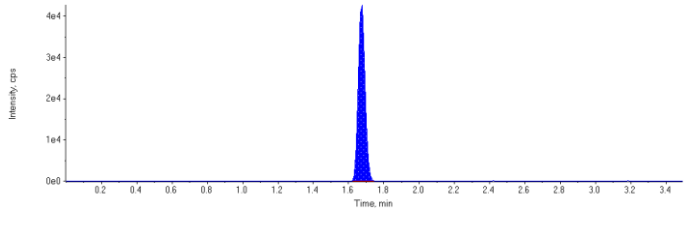
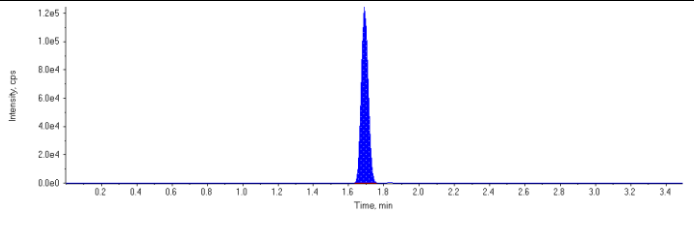
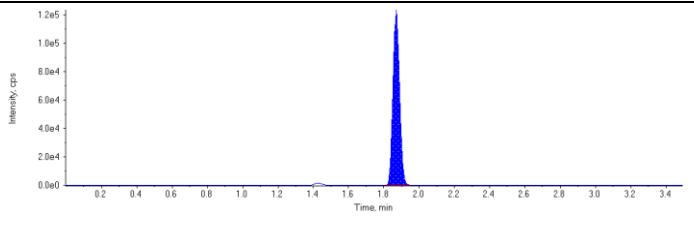
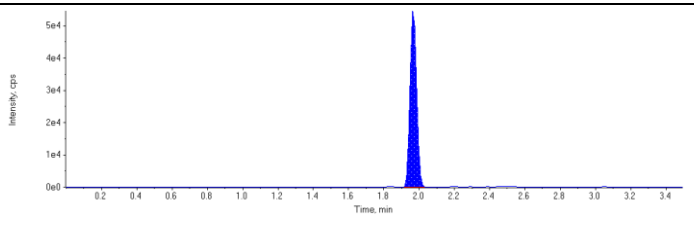
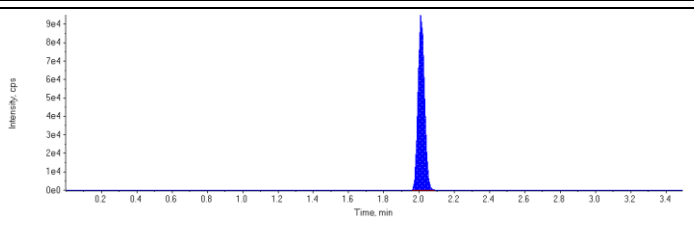
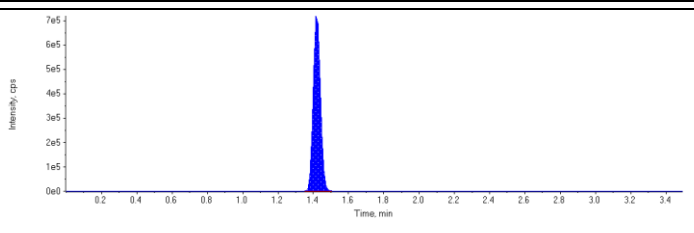
Sample Name	4390179~MTRX SPK:D1	Injection Vial	11
Sample ID	4390179~MTRX SPK:D1 (BVX757)	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:47:05 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	115000.	1.67	1.00	-
MPFHpA	335000.	1.69	1.00	-
MPFOA	316000.	1.87	1.00	-
MPFOS	143000.	1.97	1.00	-
MPFNA	243000.	2.01	1.00	-
13C6-PFHxA IS	2080000.	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	2320000	1.09	50.0	66.4	133.0
PFHxS 1	2360000	1.67	50.0	69.0	138.0
PFHpA 1	2810000	1.69	50.0	67.6	135.0
PFOA 1	3120000	1.87	50.0	68.1	136.0
PFOS 1	1620000	1.96	50.0	67.0	134.0
PFNA 1	2390000	2.01	50.0	73.7	147.0
18O2-PFHxS	115000	1.67	100.	69.4	69.4
13C4-PFHpA	335000	1.69	100.	70.0	70.0
13C4-PFOA	316000	1.87	100.	73.5	73.5
13C4-PFOS	143000	1.97	100.	67.0	67.0
13C5-PFNA	243000	2.01	100.	66.8	66.8
13C6-PFHxA	2080000	1.42	100.	105.	105.0

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): 1.97(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

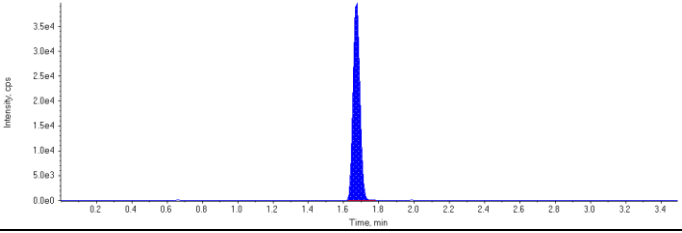
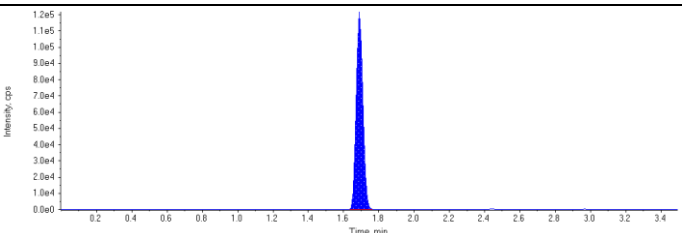
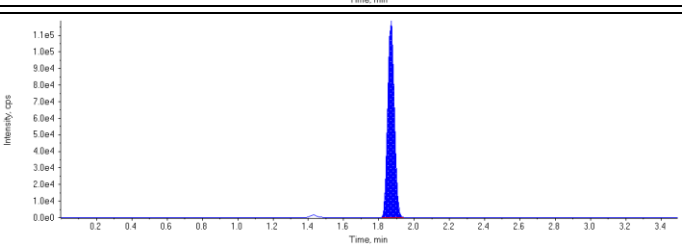
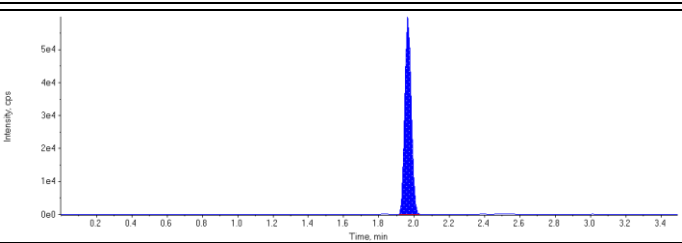
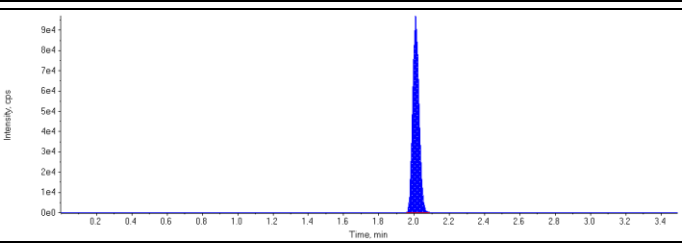
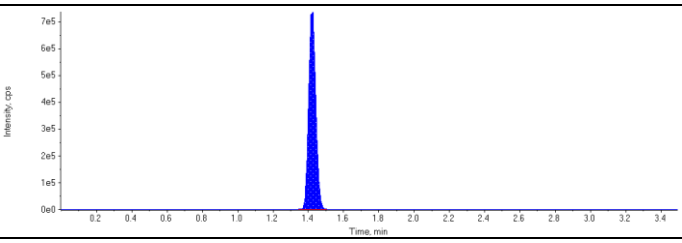
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 66.4 ng/L Area Ratio: 20.1 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 69.0 ng/L Area Ratio: 20.4 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 67.6 ng/L Area Ratio: 8.38 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 68.1 ng/L Area Ratio: 9.86 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 67.0 ng/L Area Ratio: 11.3 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 73.7 ng/L Area Ratio: 9.81 Sample Type: (Quality Control)	

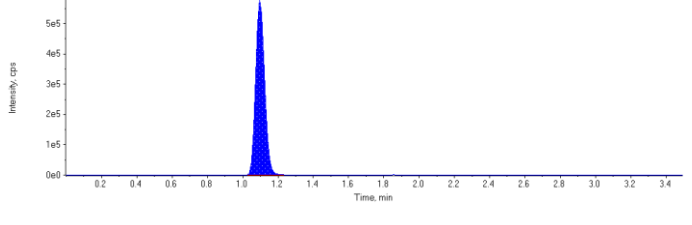
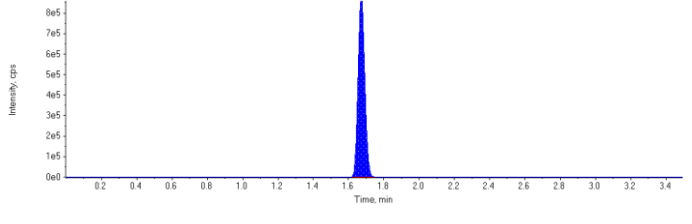
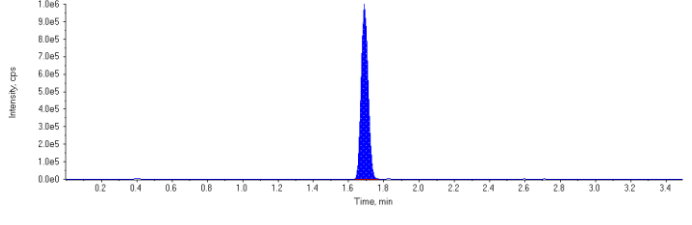
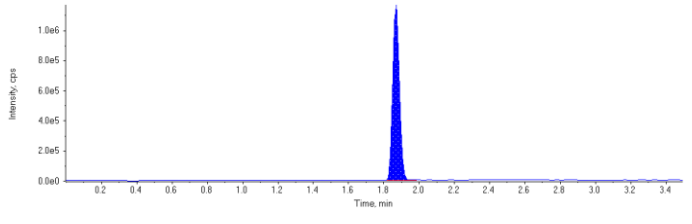
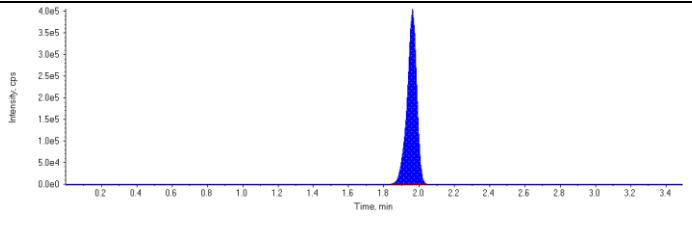
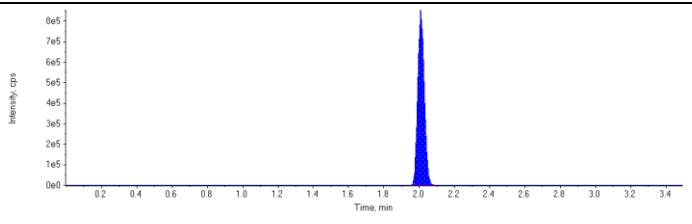
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 69.4 ng/L Area Ratio: 0.0556 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 70.0 ng/L Area Ratio: 0.161 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 73.5 ng/L Area Ratio: 0.152 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 67.0 ng/L Area Ratio: 0.0690 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 66.8 ng/L Area Ratio: 0.117 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 105. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

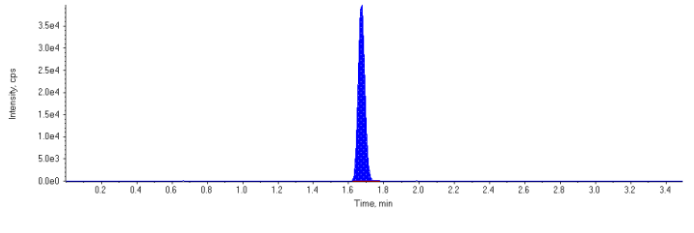
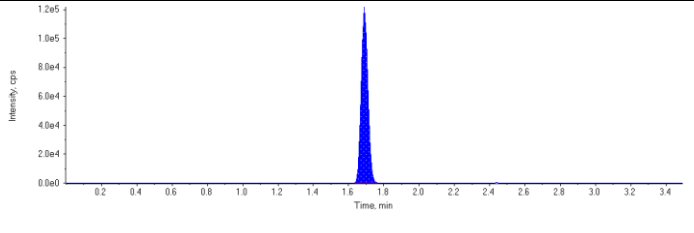
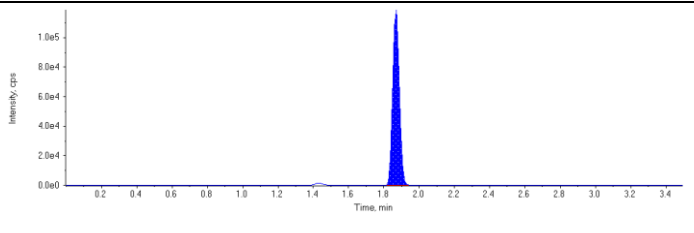
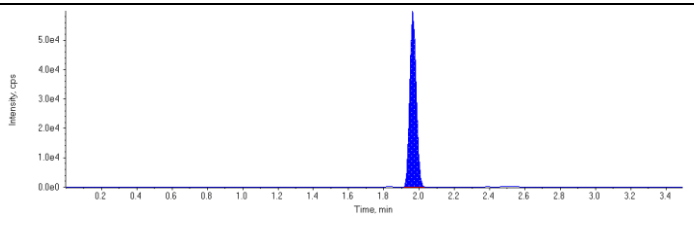
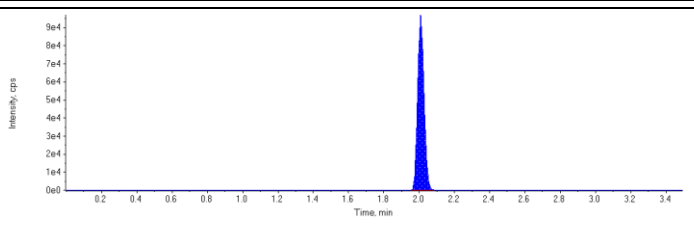
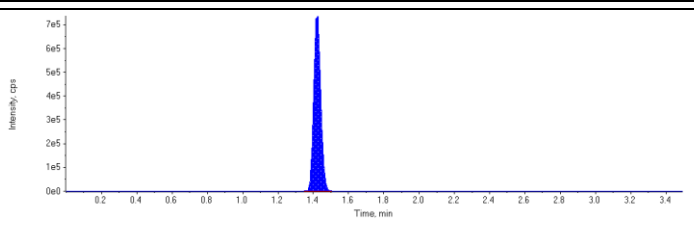
Sample Name	4390179~SPIKE	Injection Vial	12
Sample ID	4390179~SPIKE	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:52:10 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	107000.	1.67	1.00	-
MPFHpA	316000.	1.69	1.00	-
MPFOA	310000.	1.87	1.00	-
MPFOS	152000.	1.96	1.00	-
MPFNA	244000.	2.01	1.00	-
13C6-PFHxA IS	2100000.	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	2040000	1.10	50.0	62.7	125.0
PFHxS 1	2320000	1.67	50.0	73.2	146.0
PFHpA 1	2670000	1.69	50.0	68.1	136.0
PFOA 1	3050000	1.87	50.0	68.0	136.0
PFOS 1	1500000	1.96	50.0	58.7	117.0
PFNA 1	2170000	2.01	50.0	66.9	134.0
18O2-PFHxS	107000	1.67	100.	63.8	63.8
13C4-PFHpA	316000	1.69	100.	65.2	65.2
13C4-PFOA	310000	1.87	100.	71.3	71.3
13C4-PFOS	152000	1.96	100.	70.5	70.5
13C5-PFNA	244000	2.01	100.	66.3	66.3
13C6-PFHxA	2100000	1.42	100.	106.	106.0

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

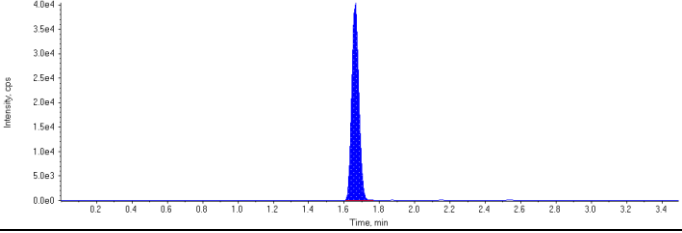
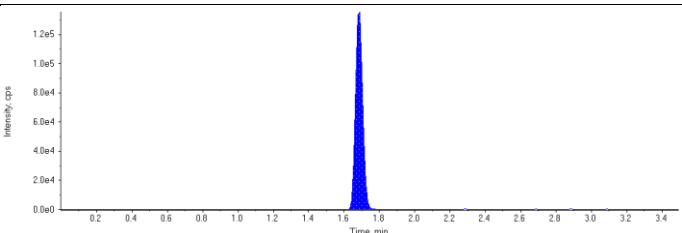
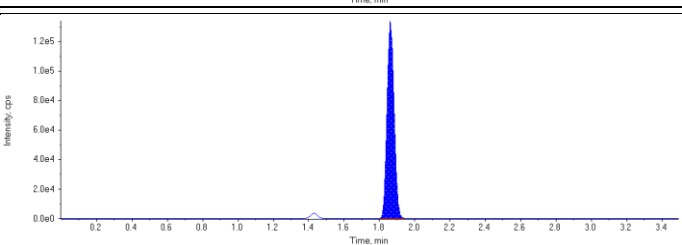
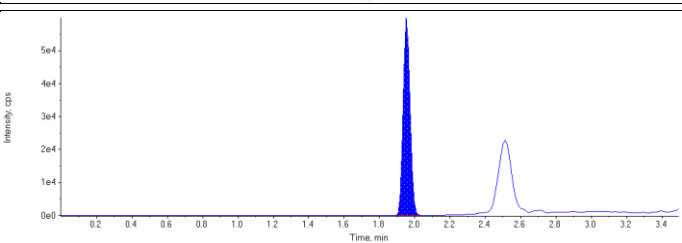
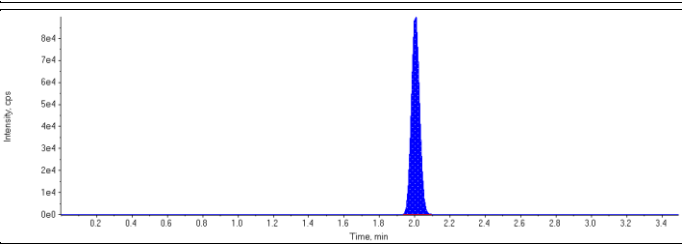
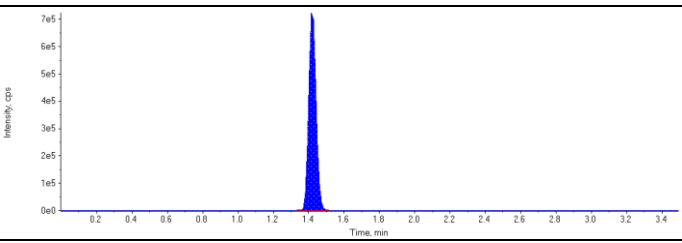
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 62.7 ng/L Area Ratio: 19.0 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 73.2 ng/L Area Ratio: 21.7 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 68.1 ng/L Area Ratio: 8.44 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 68.0 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: 58.7 ng/L Area Ratio: 9.87 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 66.9 ng/L Area Ratio: 8.90 Sample Type: (Quality Control)	

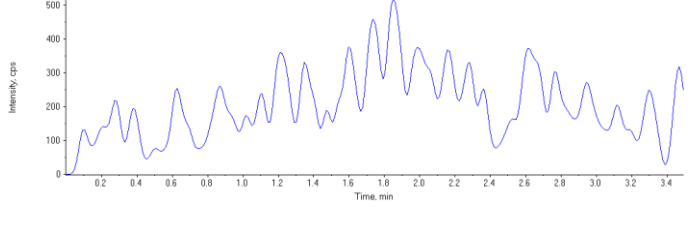
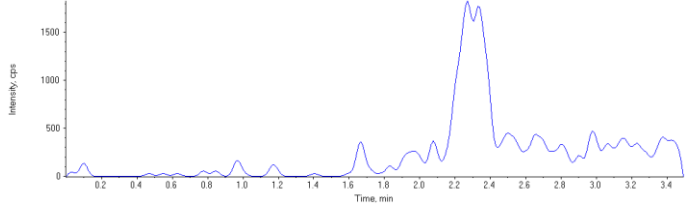
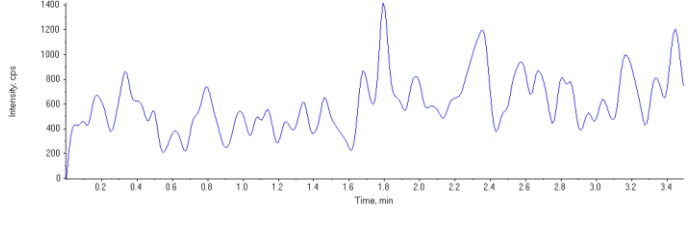
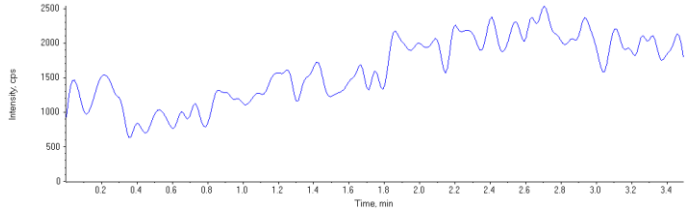
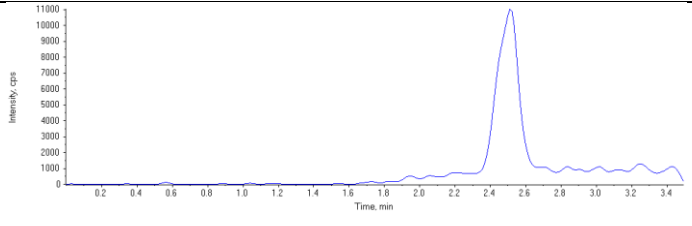
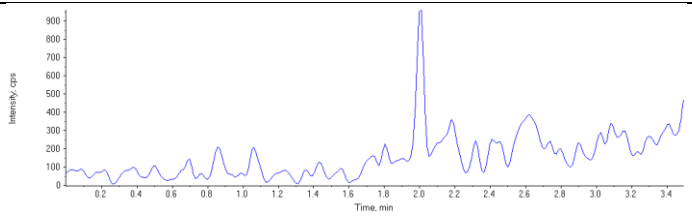
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 63.8 ng/L Area Ratio: 0.0511 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 65.2 ng/L Area Ratio: 0.151 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 71.3 ng/L Area Ratio: 0.148 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 70.5 ng/L Area Ratio: 0.0727 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 66.3 ng/L Area Ratio: 0.116 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 106. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

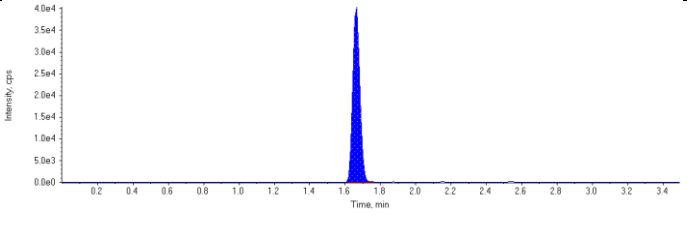
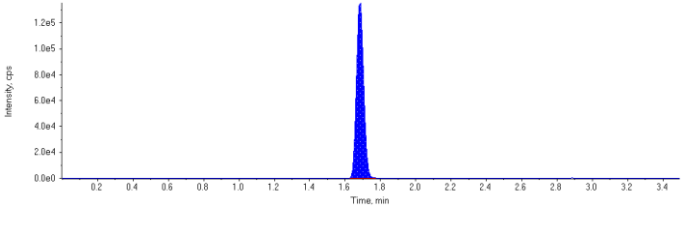
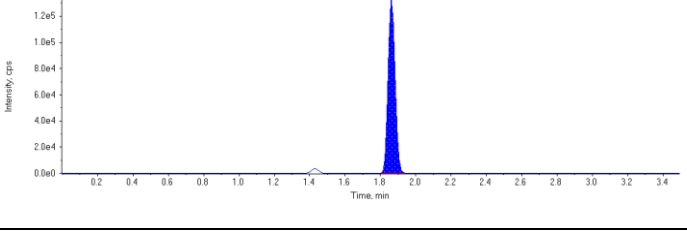
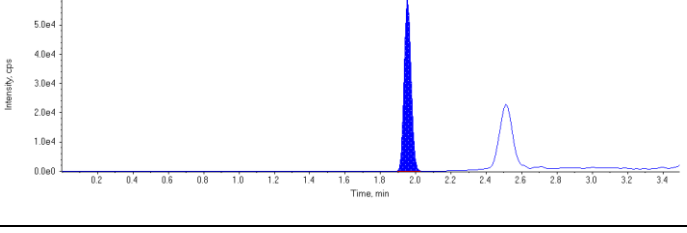
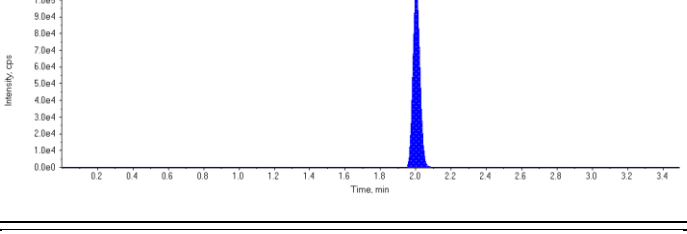
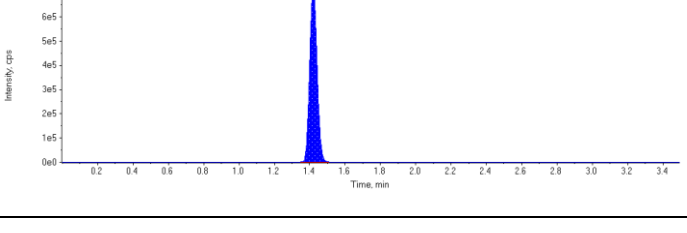
Sample Name	4396598~BLANK	Injection Vial	2
Sample ID	4396598~BLANK	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:17:55 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	112000.	1.66	1.00	-
MPFHpA	387000.	1.68	1.00	-
MPFOA	367000.	1.86	1.00	-
MPFOS	160000.	1.95	1.00	-
MPFNA	295000.	2.00	1.00	-
13C6-PFHxA IS	2120000.	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	112000	1.66	0.00	80.7	0.0
13C4-PFHpA	387000	1.68	0.00	85.4	0.0
13C4-PFOA	367000	1.86	0.00	93.4	0.0
13C4-PFOS	160000	1.95	0.00	84.8	0.0
13C5-PFNA	296000	2.00	0.00	87.5	0.0
13C6-PFHxA	2120000	1.42	0.00	107.	0.0

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(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

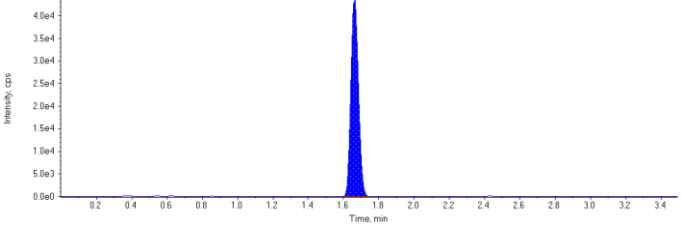
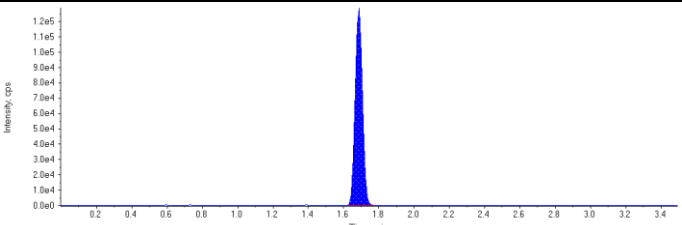
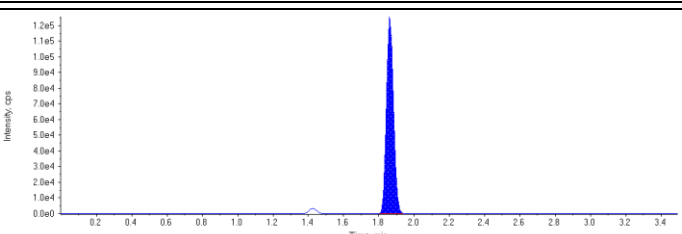
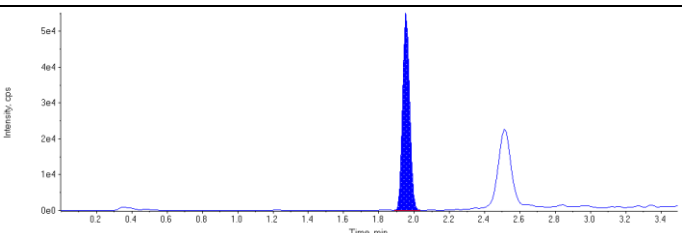
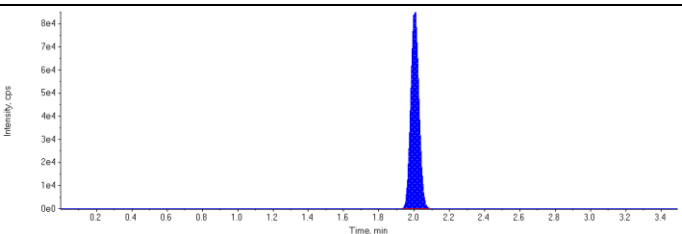
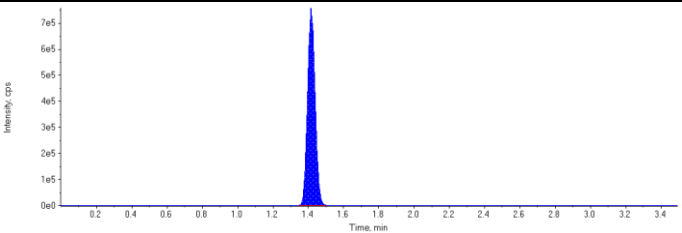
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.15) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. 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)	

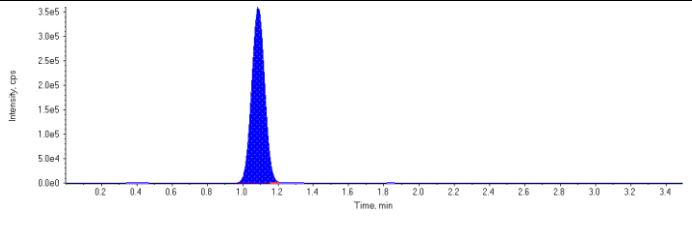
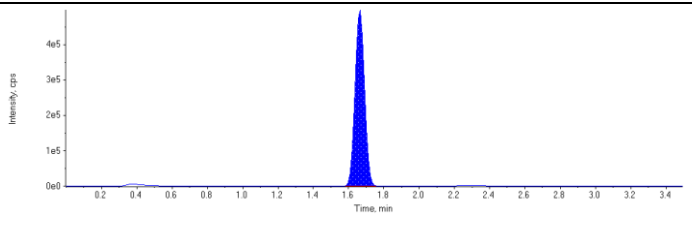
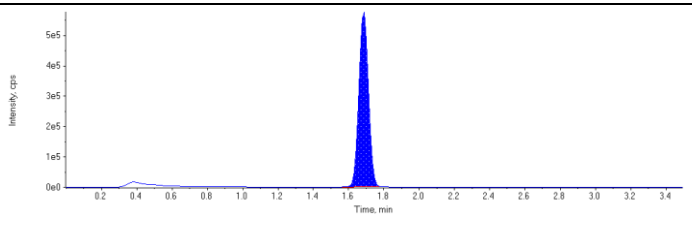
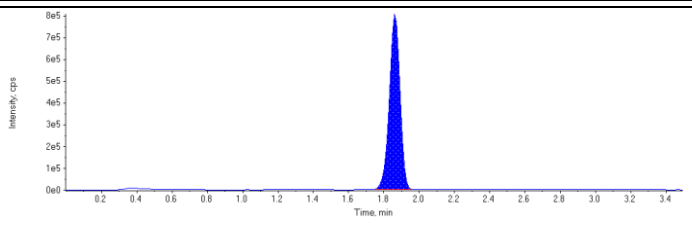
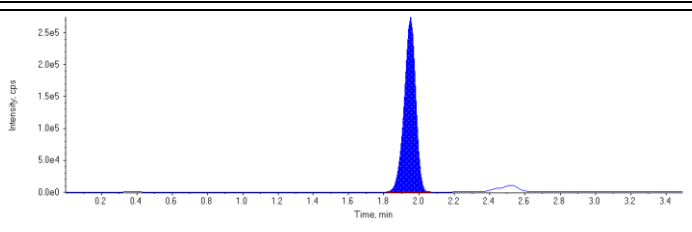
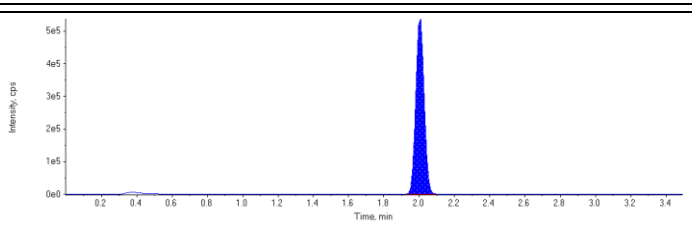
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 80.7 ng/L Area Ratio: 0.0530 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 85.4 ng/L Area Ratio: 0.182 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 93.4 ng/L Area Ratio: 0.173 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 84.8 ng/L Area Ratio: 0.0757 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 87.5 ng/L Area Ratio: 0.140 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 107. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

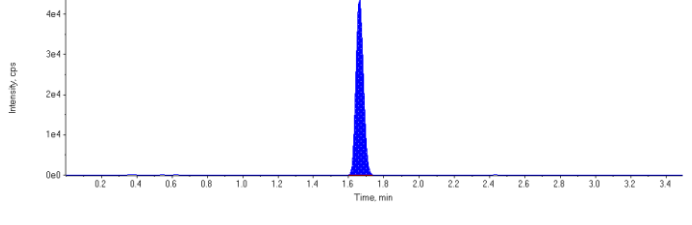
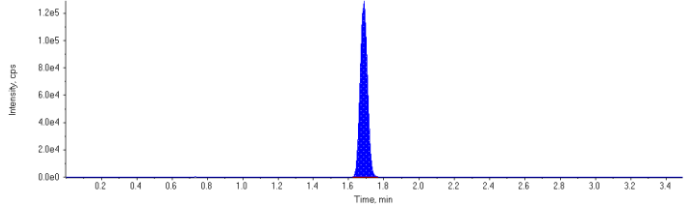
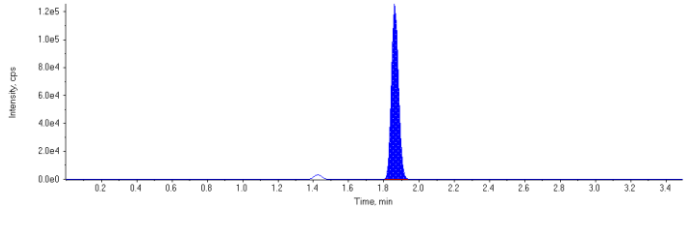
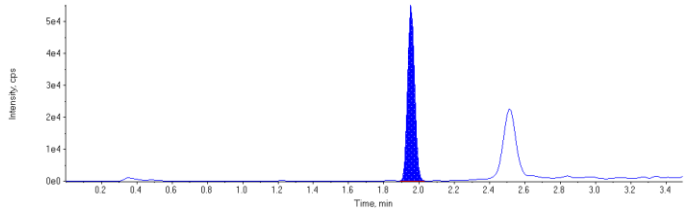
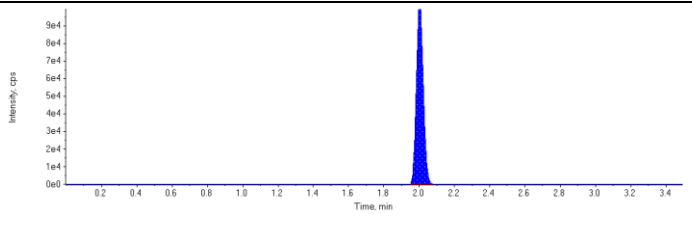
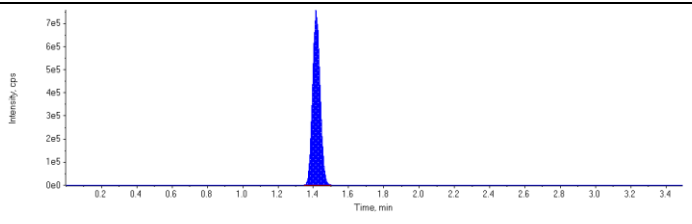
Sample Name	4396598~MTRX SPK	Injection Vial	10
Sample ID	4396598~MTRX SPK (BWR509)	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:03:46 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	130000.	1.66	1.00	-
MPFHpA	369000.	1.69	1.00	-
MPFOA	345000.	1.86	1.00	-
MPFOS	151000.	1.95	1.00	-
MPFNA	279000.	2.00	1.00	-
13C6-PFHxA IS	2260000.	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	1840000	1.09	50.0	52.8	106.0
PFHxS 1	1860000	1.66	50.0	50.6	101.0
PFHpA 1	2170000	1.69	50.0	54.4	109.0
PFOA 1	3370000	1.86	50.0	72.7	145.0
PFOS 1	1230000	1.95	50.0	56.6	113.0
PFNA 1	1760000	2.00	50.0	56.5	113.0
18O2-PFHxS	130000	1.66	100.	87.5	87.5
13C4-PFHpA	369000	1.69	100.	76.4	76.4
13C4-PFOA	345000	1.86	100.	82.3	82.3
13C4-PFOS	151000	1.95	100.	75.0	75.0
13C5-PFNA	279000	2.00	100.	77.4	77.4
13C6-PFHxA	2260000	1.42	100.	114.	114.0

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(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(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

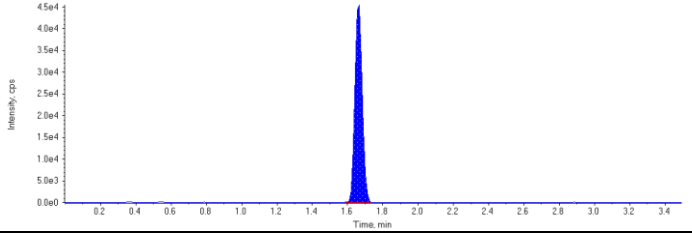
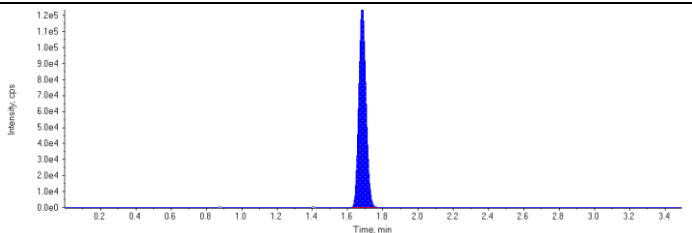
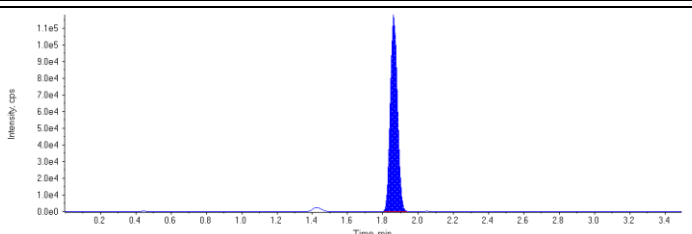
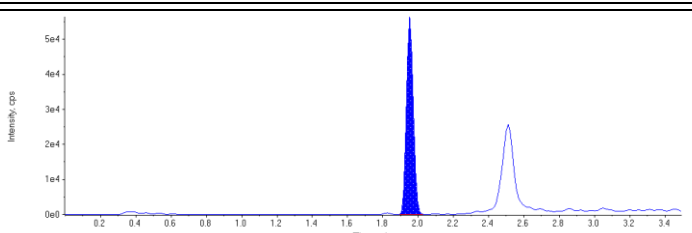
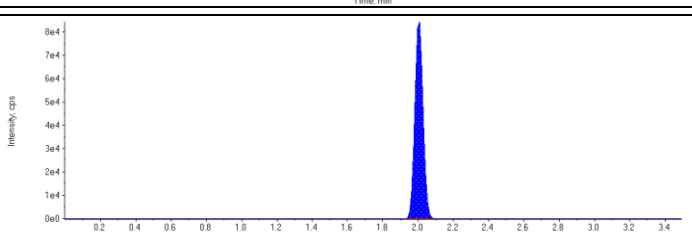
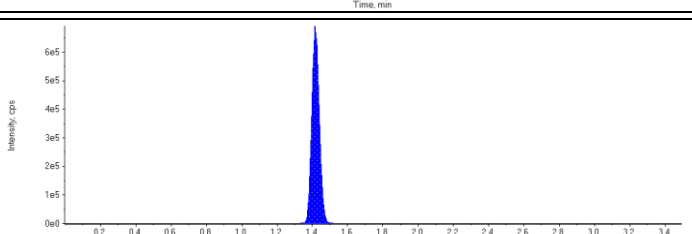
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.15) min Calculated Conc: 52.8 ng/L Area Ratio: 14.2 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 50.6 ng/L Area Ratio: 14.3 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 54.4 ng/L Area Ratio: 5.88 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 72.7 ng/L Area Ratio: 9.79 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 56.6 ng/L Area Ratio: 8.12 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 56.5 ng/L Area Ratio: 6.32 Sample Type: (Quality Control)	

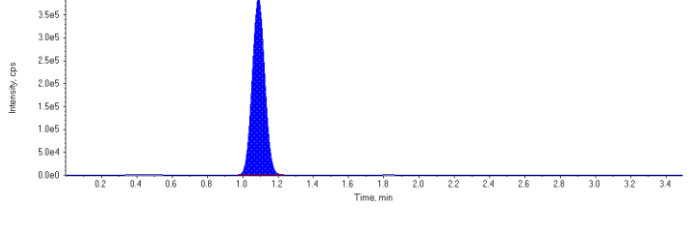
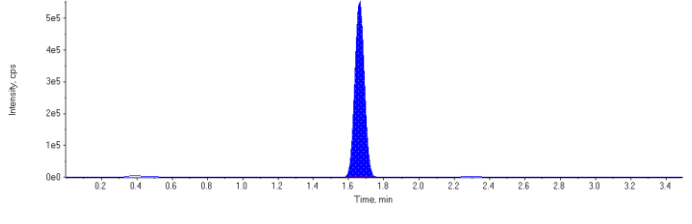
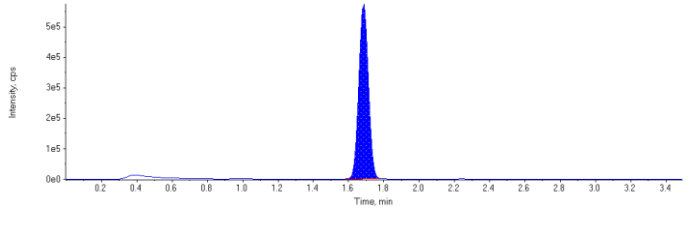
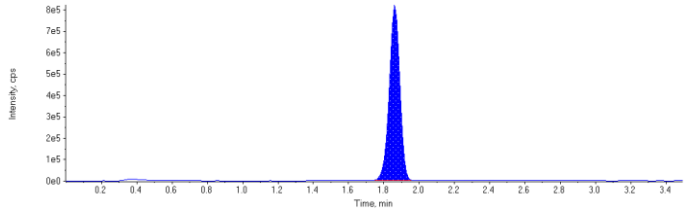
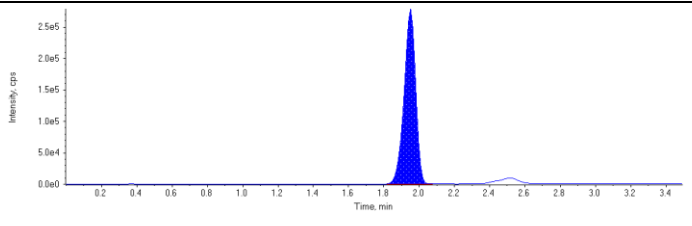
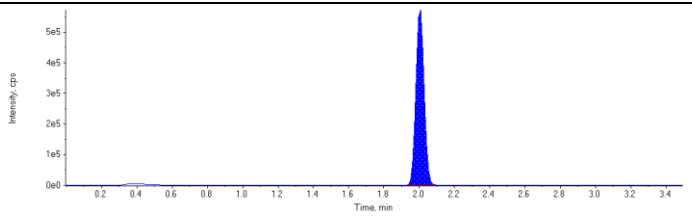
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 87.5 ng/L Area Ratio: 0.0575 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.73) min Calculated Conc: 76.4 ng/L Area Ratio: 0.163 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 82.3 ng/L Area Ratio: 0.153 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 75.0 ng/L Area Ratio: 0.0669 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 77.4 ng/L Area Ratio: 0.124 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 114. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

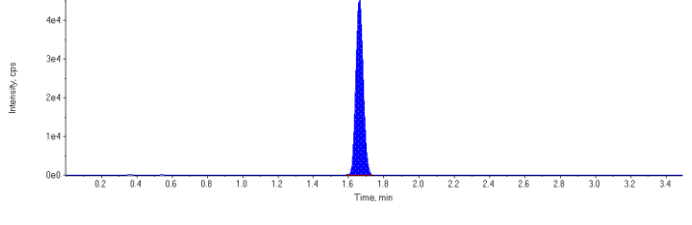
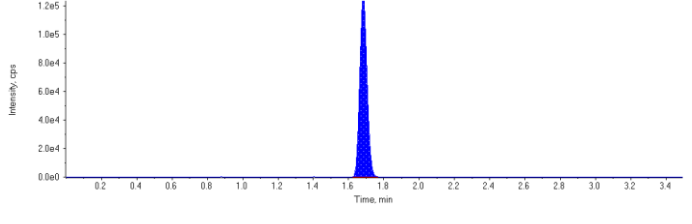
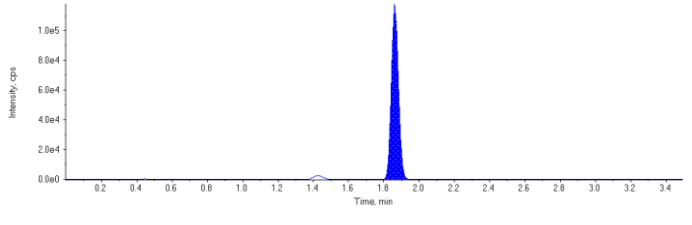
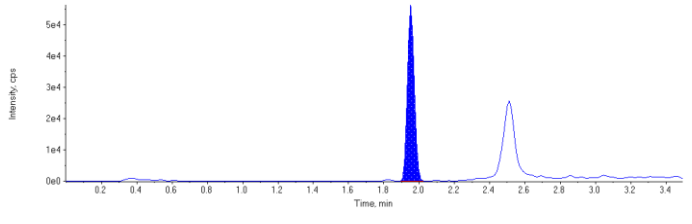
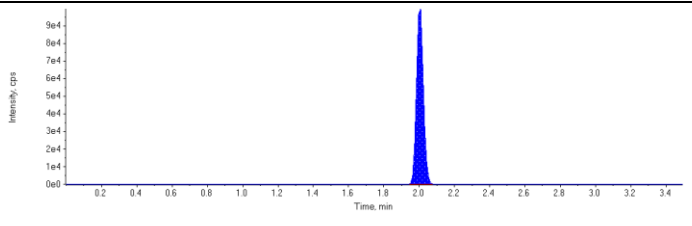
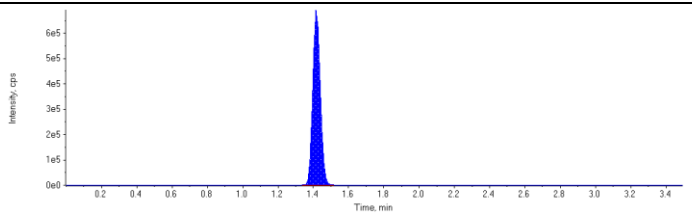
Sample Name	4396598~MTRX SPK:D1	Injection Vial	11
Sample ID	4396598~MTRX SPK:D1 (BWR509)	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:08:52 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	133000.	1.66	1.00	-
MPFHpA	364000.	1.68	1.00	-
MPFOA	325000.	1.86	1.00	-
MPFOS	152000.	1.95	1.00	-
MPFNA	275000.	2.00	1.00	-
13C6-PFHxA IS	2060000.	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	1910000	1.09	50.0	53.7	107.0
PFHxS 1	2070000	1.66	50.0	55.2	110.0
PFHpA 1	2150000	1.69	50.0	54.8	110.0
PFOA 1	3400000	1.86	50.0	77.5	155.0
PFOS 1	1260000	1.95	50.0	58.0	116.0
PFNA 1	1860000	2.00	50.0	60.5	121.0
18O2-PFHxS	133000	1.66	100.	97.9	97.9
13C4-PFHpA	364000	1.68	100.	82.5	82.5
13C4-PFOA	325000	1.86	100.	85.1	85.1
13C4-PFOS	152000	1.95	100.	82.3	82.3
13C5-PFNA	275000	2.00	100.	83.3	83.3
13C6-PFHxA	2060000	1.42	100.	104.	104.0

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(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

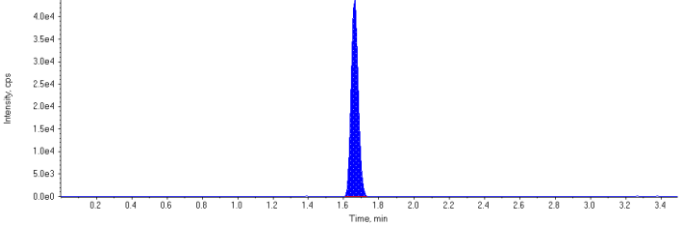
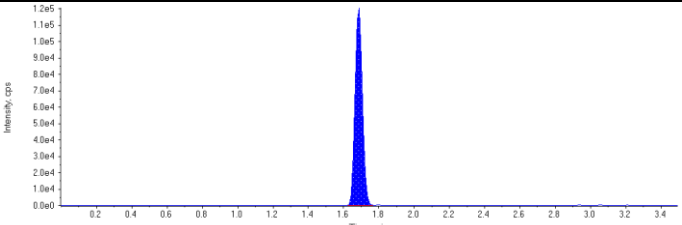
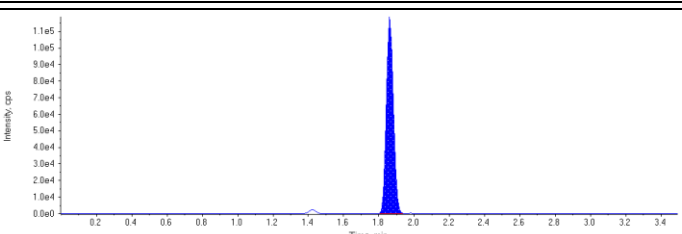
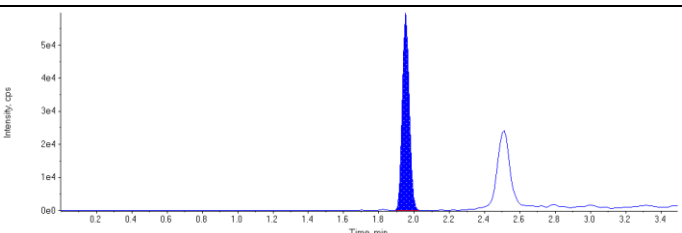
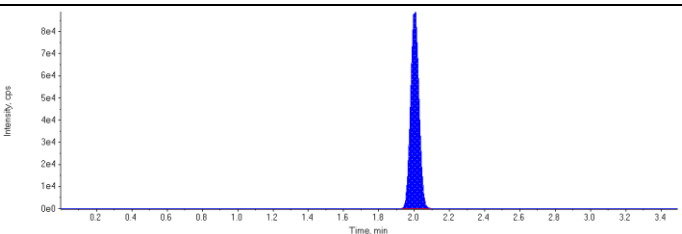
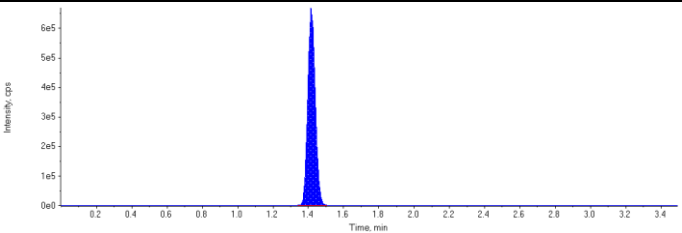
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.15) min Calculated Conc: 53.7 ng/L Area Ratio: 14.4 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 55.2 ng/L Area Ratio: 15.6 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 54.8 ng/L Area Ratio: 5.91 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 77.5 ng/L Area Ratio: 10.4 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 58.0 ng/L Area Ratio: 8.31 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 60.5 ng/L Area Ratio: 6.77 Sample Type: (Quality Control)	

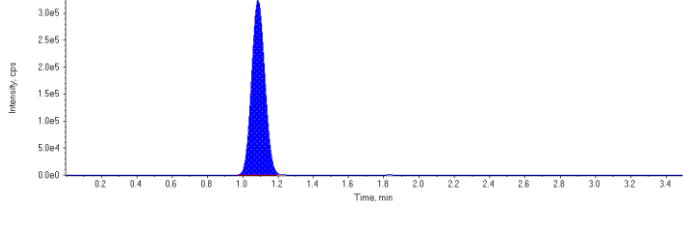
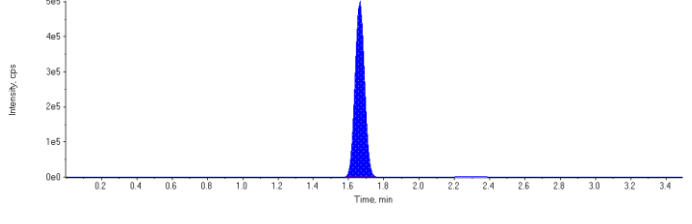
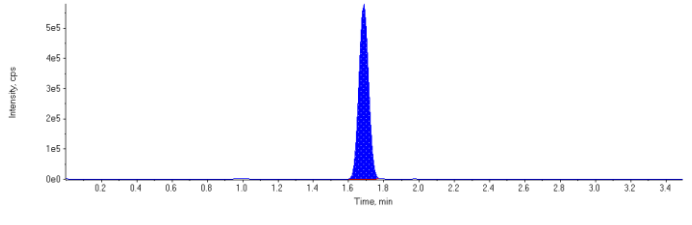
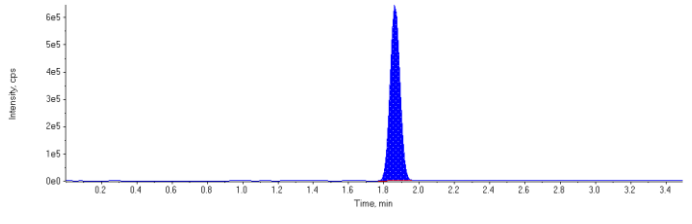
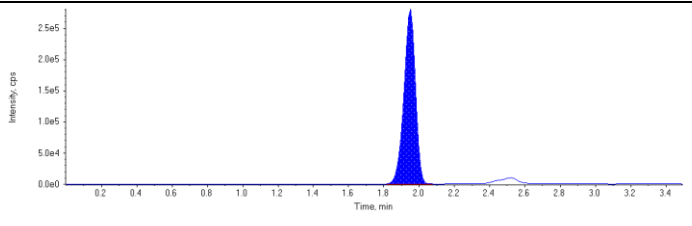
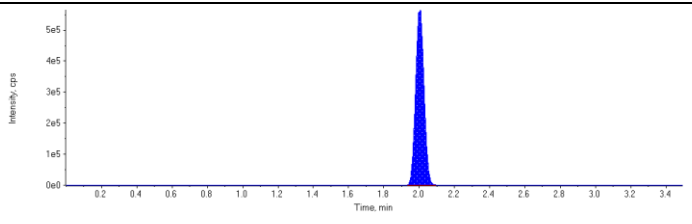
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 97.9 ng/L Area Ratio: 0.0643 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 82.5 ng/L Area Ratio: 0.176 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 85.1 ng/L Area Ratio: 0.158 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 82.3 ng/L Area Ratio: 0.0734 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 83.3 ng/L Area Ratio: 0.133 Sample Type: (Quality Control)	
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: (Quality Control)	

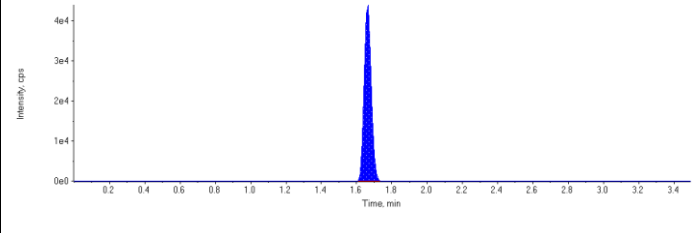
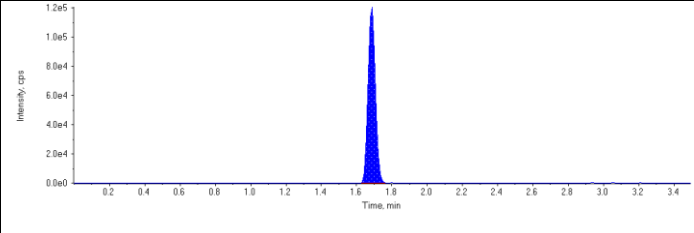
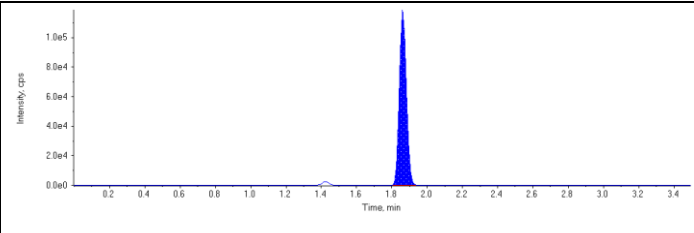
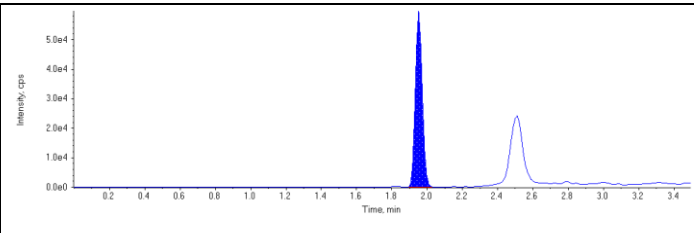
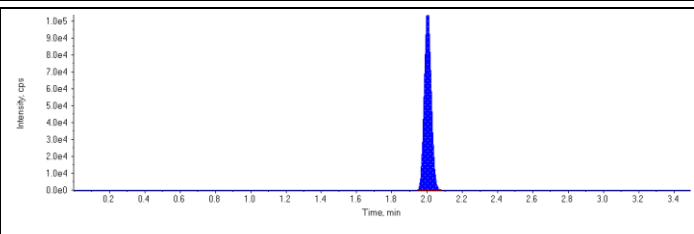
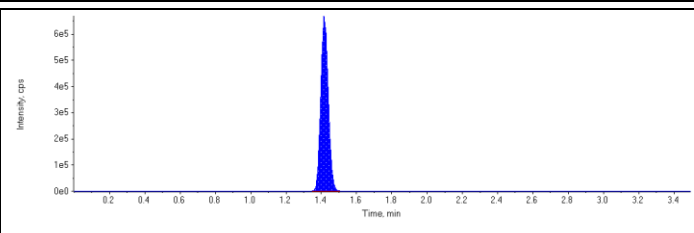
Sample Name	4396598~SPIKE	Injection Vial	12
Sample ID	4396598~SPIKE	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 4:13:58 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	123000.	1.66	1.00	-
MPFHpA	348000.	1.69	1.00	-
MPFOA	326000.	1.86	1.00	-
MPFOS	162000.	1.95	1.00	-
MPFNA	295000.	2.00	1.00	-
13C6-PFHxA IS	1980000.	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	1690000	1.09	50.0	51.0	102.0
PFHxS 1	1860000	1.66	50.0	53.6	107.0
PFHpA 1	2200000	1.69	50.0	58.4	117.0
PFOA 1	2510000	1.86	50.0	57.2	114.0
PFOS 1	1260000	1.95	50.0	54.5	109.0
PFNA 1	1890000	2.00	50.0	57.2	114.0
18O2-PFHxS	123000	1.66	100.	94.7	94.7
13C4-PFHpA	348000	1.69	100.	82.3	82.3
13C4-PFOA	326000	1.86	100.	88.7	88.7
13C4-PFOS	162000	1.95	100.	91.5	91.5
13C5-PFNA	295000	2.00	100.	93.3	93.3
13C6-PFHxA	1980000	1.42	100.	100.	100.0

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(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(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 (1.15) min Calculated Conc: 51.0 ng/L Area Ratio: 13.7 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 53.6 ng/L Area Ratio: 15.1 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 58.4 ng/L Area Ratio: 6.31 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 57.2 ng/L Area Ratio: 7.71 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 54.5 ng/L Area Ratio: 7.81 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 57.2 ng/L Area Ratio: 6.40 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 94.7 ng/L Area Ratio: 0.0622 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.73) min Calculated Conc: 82.3 ng/L Area Ratio: 0.176 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 88.7 ng/L Area Ratio: 0.164 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 91.5 ng/L Area Ratio: 0.0817 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 93.3 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: 100. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

DoD Projects - Internal Data Validation Checklist				
Run date: 2016/02/23				
Worksheet # (s): 4390179				
Analysis: PFO SLOW - 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>AM</i>		Date: 2016/02/23		
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>AM</i>		Date: 2016/03/01		
Comments: All samples were sent for re-work due to QC criteria not being met. The samples will be re-extracted and re-analyzed.				

*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 # 4390179		Testcode: PFOSLOW-W		
Sample Preparation		yes	no	n/a
1	Samples extracted within hold time	/		
2	Client sample ID verified against Lab ID (waters & oils)	/		
3	Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	/		
4	Height of sediment or if sample was decanted, recorded on worksheet	/		
5	Method required QC processed with samples, maximum batch size = 20 client samples.	/		
6	Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	/		
7	Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	/		
8	If performed any additional dilution clearly recorded			/
9	Matrix spike / Duplicate performed on IOL samples if present			/
10	Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	/		
11	Spiking process witnessed and signed off	/		
12	Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)			/
13	Sample prep deviations documented within CompliantPro as a Policy Deviation			/
14	Job Remarks reviewed on 2nd page of worksheet.	/		
15	Worksheet and reagent tracking record completed and authorized.	/		
Reviewed by: G52		Date: 2016/02/22		
Comments:				
Worksheet Approval		yes	no	n/a
1	Verified the position of the vials in autosampler against sequence list; signed off sequence list	/		
2	Calibration and CCV standards valid (haven't expired)	/		
3	Initial calibration curve and 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: SM		Date: 2016/03/01		
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: SM		Date: 2016/03/01		
Comments: All samples sent for re-work due to QC criteria not being met. The samples will be re-extracted and re-analyzed.				

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Monday, February 22, 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
(cm) ml ml

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 BVX757-01		0	125	0.3	1X					2016/02/22
	MTRX SPK	1	PFOSL BVX757-01		0	125	0.3	1X					2016/02/22
	SPIKE		PFOSL		0	125	0.3	1X					2016/02/22
	BLANK				0	125	0.3	1X					2016/02/22
B630790*	*BVX757-01R		OF-FB62-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX758-01R		OF-RW62-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX759-01R		OF-FB63-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX760-01R		OF-RW63-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX761-01R		OF-FB59-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX762-01R		OF-RW59-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX763-01R		OF-FB50-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX764-01R		OF-RW50-0216		<0.1	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX765-01R		OF-FB34-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX766-01R		OF-RW34-0216		<0.1	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX767-01R		OF-FB38-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B630790*	*BVX768-01R		OF-RW38-0216		0	125	0.3	1X	2	2016/02/23	2016/02/23 17:00		2016/02/22
B632546	*BWH243-01R		OF-FB02-0216		0	125	0.3	1X	2	2016/02/26	2016/03/03 18:00		2016/02/22
B632546	*BWH244-01R		OF-RW02-0216		0	125	0.3	1X	2	2016/02/26	2016/03/03 18:00		2016/02/22
B632546	*BWH245-01R		OF-FB15-0216		0	125	0.3	1X	2	2016/02/26	2016/03/03 18:00		2016/02/22
B632546	*BWH246-01R		OF-RW15-0216		<0.1	125	0.3	1X	2	2016/02/26	2016/03/03 18:00		2016/02/22
B632546	*BWH247-01R		OF-FB18-0216		0	125	0.3	1X	2	2016/03/01	2016/03/03 18:00		2016/02/22
B632546	*BWH248-01R		OF-RW18-0216		0	125	0.3	1X	2	2016/03/01	2016/03/03 18:00		2016/02/22
B633696*	*BWN123-01R		4957 RT 67		<0.1	125	0.3	1X	2	2016/03/01	2016/02/23 23:00		2016/02/22
B633696*	*BWN124-01R		416 BOVIE HILL R*		<0.1	125	0.3	1X	2	2016/03/01	2016/02/23 23:00		2016/02/22
						652	2016/02/22						

Remarks:

Samples extracted by:

Geoffrey Sanchez, 652 2016/02/22

Instrumentation performed by:

SW

Date:

2016/02/23

Calculations performed by:

SW

Date:

2016/03/01

Validated by:

SW

Date:

2016/03/01

Job No.	Rep	Client Name	Contact	Client Tier	National
	Remarks				
GB630790	MDG	TestAmerica	PFC Reporting Group	Tier 1 (Air.)	Test America
	NREG PFOSLOW-W Level IV required Project #: 320-17241				
GB632546	MDG	TestAmerica	PFC Reporting Group	Tier 1 (Air.)	Test America
	NREG PFOSALOW-W Level IV required Project #: 320-17321-1				
GB633696	MDG	TestAmerica	Judy Stone	Tier 1 (Air.)	Test America
	NREG PFOSALOW-W MS/MSD required on BWN090 Level IV required Project #: 480-95289				

Surrogates/Spikes		PFC Spk C	PFC Spk A	PFC Spk A	IS	Method Spike	Spikes	Samples
Calib	MeOH	SK-6720	I-4675	I-4676	SI-6010			
STD	ul	ul	ul	ul	ul			
1	- 2825	+	25		+	150		
2	- 2800	+	50		+	150		
3	- 2700	+	150		+	150		
4	- 2813	+		37.5	+	150		
5	- 2775	+		75	+	150		
6	- 2725	+		125	+	150		
IEV	- 2788	+		62.5	+	150		

[illegible][illegible]

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

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	DL	B630790 BVX757
Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorobutane Sulfonate (PFBS)	ng/L	!! 139.200	!! 132.800	125.40000	0	2	0
Perfluorodecane Sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroheptanoic Acid (PFHpA)	ng/L	!! 147.200	!! 135.200	!! 136.200	0.11800	2	0.13600
Perfluoroheptane sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexanoic Acid (PFHxA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexane Sulfonate (PFHxS)	ng/L	!! 143.200	!! 138.000	!! 146.400	0	2	0
Perfluorononanoic Acid (PFNA)	ng/L	!! 167.800	!! 147.400	!! 133.800	0	2	0
Perfluoropentanoic Acid (PFPeA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotetradecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotridecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroundecanoic Acid (PFUnA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorodecanoic Acid (PFDA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorododecanoic Acid (PFDoA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	!! 160.600	!! 136.200	!! 136.000	0	2	0
Perfluorooctane Sulfonate (PFOS)	ng/L	!! 153.200	!! 134.000	117.40000	0.37500	2	0.43100
13C2-perfluorotetradecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C5-Perfluorononanoic acid	ng/L	55.4	66.8	66.3	86.3		50.2
13C2-Perfluorodecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorododecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorohexanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluoroundecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluoroheptanoic acid	ng/L	61.4	70.0	65.2	83.8		58.0
13C4-Perfluorooctanoic acid	ng/L	60.5	73.5	71.3	90.1		59.4
13C4-Perfluorooctanesulfonate	ng/L	54.6	67.0	70.5	83.8		53.7
13C5-Perfluoropentanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
18O2-Perfluorohexanesulfonate	ng/L	62.9	69.4	63.8	77.7		53.3

Parameter Name	B630790 BVX758	B630790 BVX759	B630790 BVX760	B630790 BVX761	B630790 BVX762	B630790 BVX763	B630790 BVX764
Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorobutane Sulfonate (PFBS)	0.75100	0	9.40000	0	31.00000	0	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroheptanoic Acid (PFHpA)	0.24000	0.13500	8.62000	0.17500	8.36000	0.09090	0.14200
Perfluoroheptane sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexane Sulfonate (PFHxS)	0.81500	0	32.30000	0.30800	650.00000	0	0
Perfluorononanoic Acid (PFNA)	0	0	1.91000	0	1.10000	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotetradecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotridecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorodecanoic Acid (PFDA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	0.05140	0	52.10000	0	161.00000	0	0.06890
Perfluorooctane Sulfonate (PFOS)	1.22000	0.34600	81.50000	0.42600	988.00000	0.35800	0.42600
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C5-Perfluorononanoic acid	68.4	62.2	!! 39.0	57.1	!! 40.0	!! 41.1	!! 28.3
13C2-Perfluorodecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorohexanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluoroheptanoic acid	80.5	65.4	!! 43.7	65.4	!! 40.9	!! 43.1	!! 30.7
13C4-Perfluorooctanoic acid	82.1	68.9	!! 46.4	64.7	!! 42.3	!! 45.7	!! 32.0
13C4-Perfluorooctanesulfonate	68.3	63.9	!! 39.2	62.1	!! 32.6	!! 41.9	!! 26.1
13C5-Perfluoropentanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
18O2-Perfluorohexanesulfonate	79.2	61.1	!! 47.3	60.1	!! 37.1	!! 45.5	!! 30.9

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

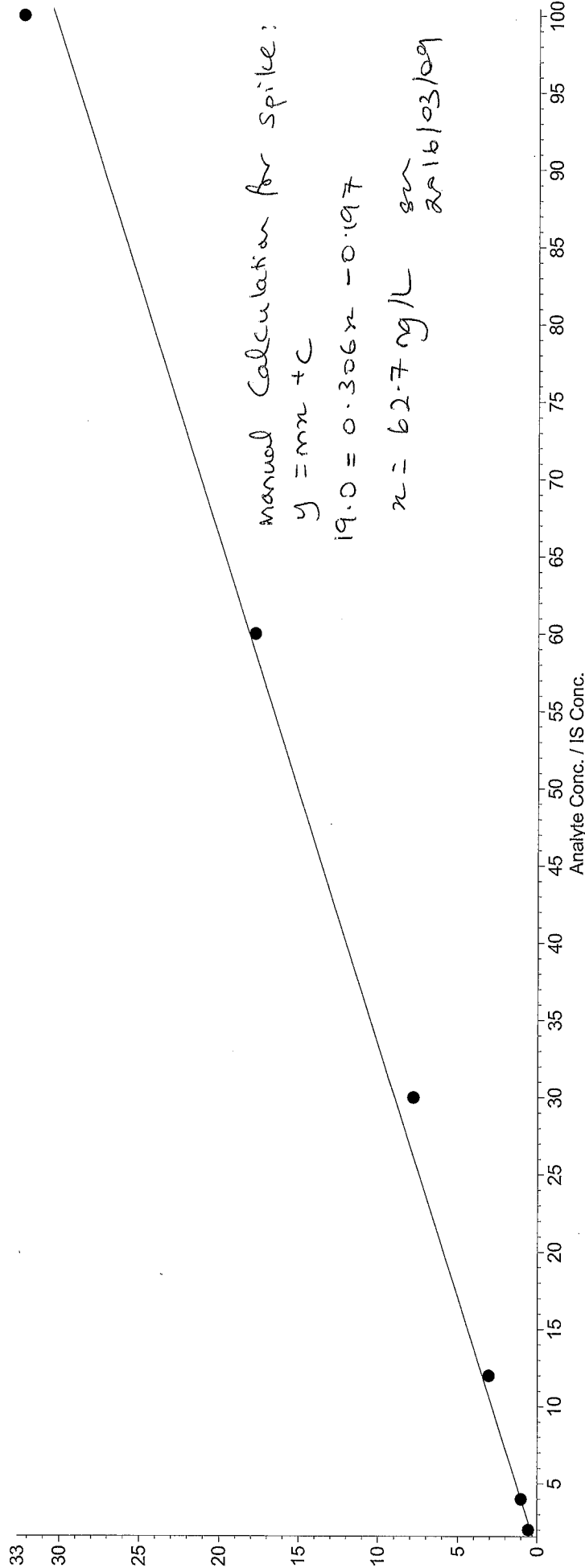
Parameter Name	B630790 BVX765	B630790 BVX766	B630790 BVX767	B630790 BVX768	B632546 BWH243	B632546 BWH244	B632546 BWH245
Perfluorobutanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorobutane Sulfonate (PFBS)	0	0	0	0.75900	0	12.40000	0
Perfluorodecane Sulfonate	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluoroheptanoic Acid (PFHpA)	0.13200	0.17300	0.21700	0.11600	0.11100	15.00000	0.10800
Perfluoroheptane sulfonate	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorohexanoic Acid (PFHxA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorohexane Sulfonate (PFHxS)	0	0.41600	0	0.32200	0	11.60000	0
Perfluorononanoic Acid (PFNA)	0	0	0	0	0	7.69000	0
Perfluoropentanoic Acid (PFPeA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorotetradecanoic Acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorotridecanoic Acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluoroundecanoic Acid (PFUnA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorodecanoic Acid (PFDA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluorododecanoic Acid (PFDaA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0.08740	55.00000	0.13800
Perfluorooctane Sulfonate (PFOS)	0.39100	0.49800	0.41000	0.44500	0.52000	108.00000	0.48300
13C2-perfluorotetradecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C4-Perfluorobutanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C5-Perfluorononanoic acid	58.3	11 47.5	50.3	11 30.2	51.0	55.4	70.1
13C2-Perfluorodecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C2-Perfluorododecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C2-Perfluorohexanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C2-Perfluoroundecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
13C4-Perfluoroheptanoic acid	61.8	56.7	11 47.9	11 36.5	54.1	59.3	74.1
13C4-Perfluorooctanoic acid	63.6	57.0	54.3	11 36.8	53.5	61.8	76.7
13C4-Perfluorooctanesulfonate	63.2	49.5	52.6	11 30.3	53.2	56.5	72.6
13C5-Perfluoropentanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****
18O2-Perfluorohexanesulfonate	59.7	59.4	52.7	11 32.5	11 48.3	66.8	71.7

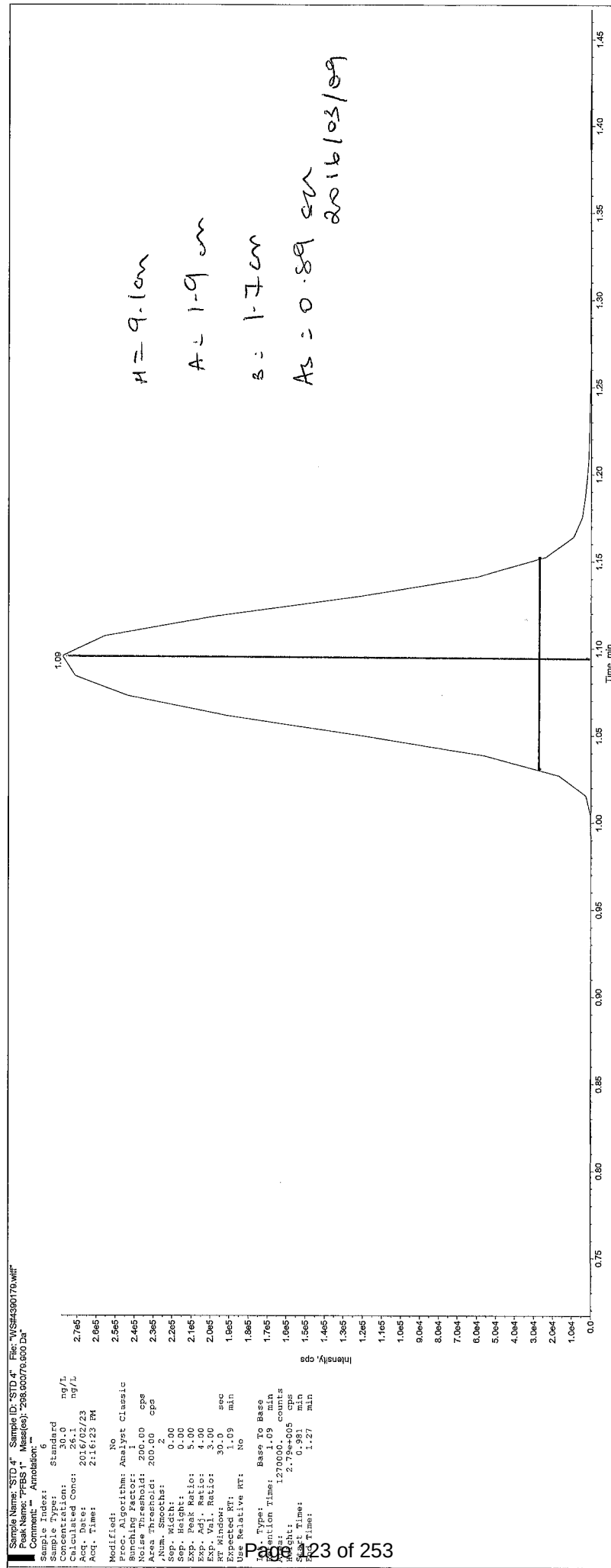
Parameter Name	B632546 BWH246	B632546 BWH247	B632546 BWH248	B633696 BWN123	B633696 BWN124	DL	RDL
Perfluorobutanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorobutane Sulfonate (PFBS)	0	0	0	0	0.72300	2	2
Perfluorodecane Sulfonate	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluoroheptanoic Acid (PFHpA)	0.11100	0.09120	0.11700	0.13000	2.21000	2	2
Perfluoroheptane sulfonate	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorohexanoic Acid (PFHxA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorohexane Sulfonate (PFHxS)	0	0	0.37600	0	0.37000	2	2
Perfluorononanoic Acid (PFNA)	0	0	0	0	0	2	2
Perfluoropentanoic Acid (PFPeA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorotetradecanoic Acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorotridecanoic Acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluoroundecanoic Acid (PFUnA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorodecanoic Acid (PFDA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluorododecanoic Acid (PFDaA)	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****	2	2
Perfluoro-n-Octanoic Acid (PFOA)	0	0.00640	0.05390	0	55.80000	2	2
Perfluorooctane Sulfonate (PFOS)	0.43700	0.42000	0.42000	0.49100	0.49600	2	2
13C2-perfluorotetradecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C4-Perfluorobutanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C5-Perfluorononanoic acid	11 39.5	70.1	11 35.9	59.5	94.9		
13C2-Perfluorodecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C2-Perfluorododecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C2-Perfluorohexanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C2-Perfluoroundecanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
13C4-Perfluoroheptanoic acid	11 43.8	73.2	11 41.4	57.4	97.4		
13C4-Perfluorooctanoic acid	11 44.0	79.3	11 43.5	58.8	98.7		
13C4-Perfluorooctanesulfonate	11 37.4	72.7	11 36.6	57.5	88.4		
13C5-Perfluoropentanoic acid	N/A *****	N/A *****	N/A *****	N/A *****	N/A *****		
18O2-Perfluorohexanesulfonate	11 45.5	68.7	11 39.9	60.4	92.1		

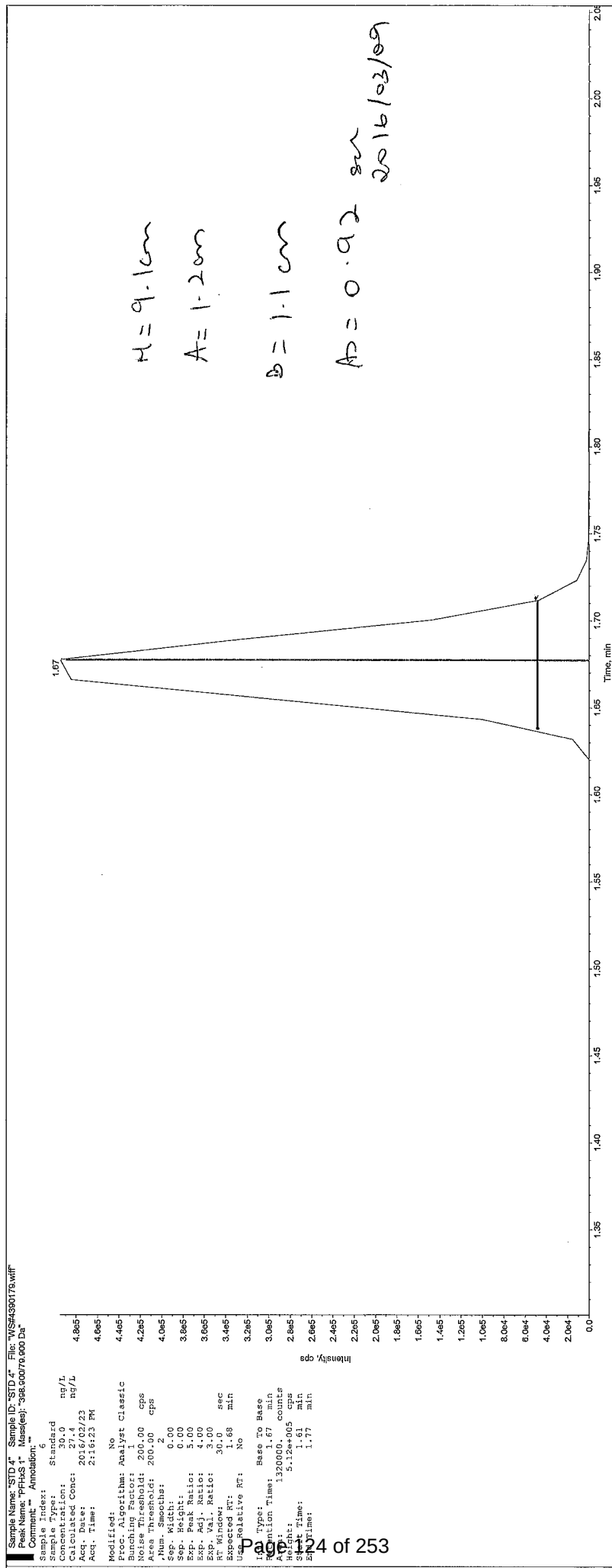
Low level PFOS and PFOA in water - Water
ng/L

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

■ PFC_Water_160223_4390179_ULow.rdb (PFBS 1): "Linear" Regression ("1 / x" weighting): $y = 0.306x + -0.197$ ($r = 0.9965$)

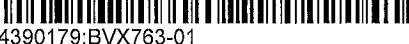
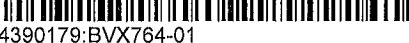
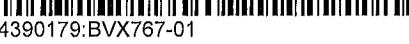
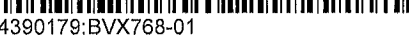
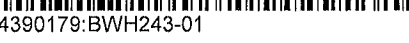
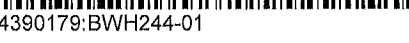
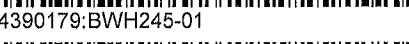
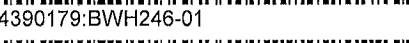
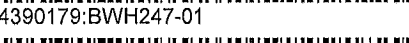
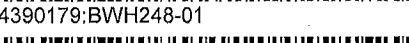
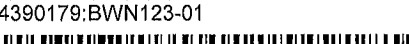
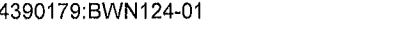






<u>Sample Number</u>	<u>Parameter</u>
BVX757-01	Perfluorobutane Sulfonate (PFBS)
BVX758-01	Perfluoroheptanoic Acid (PFHpA)
BVX759-01	Perfluorohexane Sulfonate (PFHxS)
BVX760-01	Perfluorononanoic Acid (PFNA)
BVX761-01	Perfluoro-n-Octanoic Acid (PFOA)
BVX762-01	Perfluorooctane Sulfonate (PFOS)
BVX763-01	
BVX764-01	
BVX765-01	
BVX766-01	
BVX767-01	
BVX768-01	
BWN123-01	
BWN124-01	
BWH243-01	Perfluorobutane Sulfonate (PFBS)
BWH244-01	Perfluoroheptane sulfonate
BWH245-01	Perfluorohexane Sulfonate (PFHxS)
BWH246-01	Perfluorononanoic Acid (PFNA)
BWH247-01	Perfluoro-n-Octanoic Acid (PFOA)
BWH248-01	Perfluorooctane Sulfonate (PFOS)

WorkSheet 4390179 Instrument Sequences

1.	 4390179:MTRX SPK	MTRX SPK
2.	 4390179:MTRX SPK:D1	MTRX SPK :D1
3.	 4390179:SPIKE	SPIKE
4.	 4390179:BLANK	BLANK
5.	 4390179:BVX757-01	OF-FB62-0216
6.	 4390179:BVX758-01	OF-RW62-0216
7.	 4390179:BVX759-01	OF-FB63-0216
8.	 4390179:BVX760-01	OF-RW63-0216
9.	 4390179:BVX761-01	OF-FB59-0216
10.	 4390179:BVX762-01	OF-RW59-0216
11.	 4390179:BVX763-01	OF-FB50-0216
12.	 4390179:BVX764-01	OF-RW50-0216
13.	 4390179:BVX765-01	OF-FB34-0216
14.	 4390179:BVX766-01	OF-RW34-0216
15.	 4390179:BVX767-01	OF-FB38-0216
16.	 4390179:BVX768-01	OF-RW38-0216
17.	 4390179:BWH243-01	OF-FB02-0216
18.	 4390179:BWH244-01	OF-RW02-0216
19.	 4390179:BWH245-01	OF-FB15-0216
20.	 4390179:BWH246-01	OF-RW15-0216
21.	 4390179:BWH247-01	OF-FB18-0216
22.	 4390179:BWH248-01	OF-RW18-0216
23.	 4390179:BWN123-01	4957 RT 67
24.	 4390179:BWN124-01	416 BOVIE HILL RD

Worksheet Reagent Tracking Record

Worksheet # 4390179

Worksheet: Tracking Record										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/µL	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	NA	NA
Comp. PFC Spiking Solution C		✓	SK-6229		100 ng/mL	125	62.5 NA	125	62.5 NA	NA	NA
Internal Standard Solution A		✓	SI-6010		50 ng/mL	50	15 100	50	15 100	50	15 100
Internal Standard Solution B					250ng/mL	50	NA	50	NA	50	NA
ICV/ECV PFC		✓	I-4676		1ug/mL		62.5				
Solvent/Reagent		✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/ Prepared		*Spiked by: 652	
DCM					50% NaOH					Spike Date 2016/02/22	
Hexane					20mM TBAS					Spike Syringe ID# Pignator M23487B	
Acetone					o-Phosphoric Acid					Int. Std Syringe ID# Pignator M23487B	
Ottawa Sand					Borax					*Spiking Witnessed by: ymw	
Methanol		✓	SHB66076V	2016/02/22	Calcium Chloride					Final pH	
2-Propanol (IPA)					EDTA					X	
Acetonitrile					Phosphate Buffer						
MTBE					Sodium Thiosulphate						
Sodium Sulfate					DNPH						
6040 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%	✓	87-205	2016/02/22			
0.05M KOH					Leachate Fluid						
0.05M HCl					Reagent Water	✓	SHB65572V	2016/02/21			
Equipment		ID#	✓	Equipment	ID#	✓	Equipment		Lot #	Bottle Tracking	
Pipettor		M15944C K19609D P29746D	✓ ✓ ✓	SPE Cartridge	002635315A	✓	10 mL Serological Pipet			Bottle# 14991	
Dispenser				Filter			QC Balance ID			Cap# 14443	
Syringe				Centrifuge			Thermometer ID &Temp		SN 140614017 45°C	Systems plus Lot# 16-01-06	

Comments: 125ml Ref Bottle (HDPE)

Ing. IG - SE-6039 - 2016/02/19

HPLC Evaporator

* - SPIKING ON MAXXAM ANALYTICS MUST BE WITNESSED AT ALL TIMES.

Batch Name: D:\Analyst Data\Projects\Enviro\PFOS\Batch\PFC_160223A.dab

Printing Date: Tuesday, February 23, 2016

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160223A 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_160223\WS#4390179	3.000
2	4390179-BLANK	2 Well Plates	1	*54VialPlate*	1	2	PFC_160223\WS#4390179	3.000
3	STD 1	2 Well Plates	1	*54VialPlate*	1	3	PFC_160223\WS#4390178	3.000
4	STD 2	2 Well Plates	1	*54VialPlate*	1	4	PFC_160223\WS#4390178	3.000
5	STD 3	2 Well Plates	1	*54VialPlate*	1	5	PFC_160223\WS#4390178	3.000
6	STD 4	2 Well Plates	1	*54VialPlate*	1	6	PFC_160223\WS#4390178	3.000
7	STD 5	2 Well Plates	1	*54VialPlate*	1	7	PFC_160223\WS#4390178	3.000
8	STD 6	2 Well Plates	1	*54VialPlate*	1	8	PFC_160223\WS#4390178	3.000
9	ICV	2 Well Plates	1	*54VialPlate*	1	9	PFC_160223\WS#4390178	3.000
10	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160223\WS#4390178	3.000
11	4390179-MFRX SPK	2 Well Plates	1	*54VialPlate*	1	10	PFC_160223\WS#4390179	3.000
12	4390179-MFRX SPK D1	2 Well Plates	1	*54VialPlate*	1	11	PFC_160223\WS#4390179	3.000
13	4390179-SPKE	2 Well Plates	1	*54VialPlate*	1	12	PFC_160223\WS#4390179	3.000
14	4390179-BVX757-01	2 Well Plates	1	*54VialPlate*	1	13	PFC_160223\WS#4390179	3.000
15	4390179-BVX758-01	2 Well Plates	1	*54VialPlate*	1	14	PFC_160223\WS#4390179	3.000
16	4390179-BVX759-01	2 Well Plates	1	*54VialPlate*	1	15	PFC_160223\WS#4390179	3.000
17	4390179-BVX760-01	2 Well Plates	1	*54VialPlate*	1	16	PFC_160223\WS#4390179	3.000
18	4390179-BVX761-01	2 Well Plates	1	*54VialPlate*	1	17	PFC_160223\WS#4390179	3.000
19	4390179-BVX762-01	2 Well Plates	1	*54VialPlate*	1	18	PFC_160223\WS#4390179	3.000
20	4390179-BVX763-01	2 Well Plates	1	*54VialPlate*	1	19	PFC_160223\WS#4390179	3.000
21	4390179-BVX764-01	2 Well Plates	1	*54VialPlate*	1	20	PFC_160223\WS#4390179	3.000
22	4390179-BVX765-01	2 Well Plates	1	*54VialPlate*	1	21	PFC_160223\WS#4390179	3.000
23	4390179-BVX766-01	2 Well Plates	1	*54VialPlate*	1	22	PFC_160223\WS#4390179	3.000
24	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160223\WS#4390179	3.000
25	4390179-BVX767-01	2 Well Plates	1	*54VialPlate*	1	23	PFC_160223\WS#4390179	3.000
26	4390179-BVX768-01	2 Well Plates	1	*54VialPlate*	1	24	PFC_160223\WS#4390179	3.000
27	4390179-BVH243-01	2 Well Plates	1	*54VialPlate*	1	25	PFC_160223\WS#4390179	3.000
28	4390179-BVH244-01	2 Well Plates	1	*54VialPlate*	1	26	PFC_160223\WS#4390179	3.000
29	4390179-BVH245-01	2 Well Plates	1	*54VialPlate*	1	27	PFC_160223\WS#4390179	3.000
30	4390179-BVH246-01	2 Well Plates	1	*54VialPlate*	1	28	PFC_160223\WS#4390179	3.000
31	4390179-BVH247-01	2 Well Plates	1	*54VialPlate*	1	29	PFC_160223\WS#4390179	3.000
32	4390179-BVH248-01	2 Well Plates	1	*54VialPlate*	1	30	PFC_160223\WS#4390179	3.000
33	4390179-BWN123-01	2 Well Plates	1	*54VialPlate*	1	31	PFC_160223\WS#4390179	3.000
34	4390179-BWN124-01	2 Well Plates	1	*54VialPlate*	1	32	PFC_160223\WS#4390179	3.000
35	CCV	2 Well Plates	1	*54VialPlate*	1	6	PFC_160223\WS#4390179	3.000

Column #122

MPA = Soln #513, FSRE17

MPB = Methanol
(Fisher lot #158013)

sn 2016/02/23

verified sn 2016/02/24

Results Path: \\miss-netapp2\loms\loms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160223_4390179_Ulow.rdb

Printing Date: Tuesday, March 01, 2016

Maxxam Analytics

Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1 4390179-BLANK	2016/02/23 1:55:57 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	2	*54VialPlate*	1
2 STD 1	2016/02/23 2:01:03 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	3	*54VialPlate*	1
3 STD 2	2016/02/23 2:06:08 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	4	*54VialPlate*	1
4 STD 3	2016/02/23 2:11:18 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	5	*54VialPlate*	1
5 STD 4	2016/02/23 2:16:23 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	6	*54VialPlate*	1
6 STD 5	2016/02/23 2:21:28 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	7	*54VialPlate*	1
7 STD 6	2016/02/23 2:26:34 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	8	*54VialPlate*	1
8 ICV	2016/02/23 2:31:40 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	9	*54VialPlate*	1
9 CCV	2016/02/23 2:36:50 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	6	*54VialPlate*	1
10 4390179-MTRX SPK (BVX757)	2016/02/23 2:41:55 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	10	*54VialPlate*	1
11 4390179-MTRX SPK:D1 (BVX757)	2016/02/23 2:47:05 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	11	*54VialPlate*	1
12 4390179-SPIKE	2016/02/23 2:52:10 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	12	*54VialPlate*	1
13 4390179-BVX757-01	2016/02/23 2:57:15 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	13	*54VialPlate*	1
14 4390179-BVX758-01	2016/02/23 3:02:25 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	14	*54VialPlate*	1
15 4390179-BVX759-01	2016/02/23 3:07:31 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	15	*54VialPlate*	1
16 4390179-BVX760-01	2016/02/23 3:12:36 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	16	*54VialPlate*	1
17 4390179-BVX761-01	2016/02/23 3:17:42 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	17	*54VialPlate*	1
18 4390179-BVX762-01	2016/02/23 3:22:47 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	18	*54VialPlate*	1
19 4390179-BVX763-01	2016/02/23 3:27:52 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	19	*54VialPlate*	1
20 4390179-BVX764-01	2016/02/23 3:32:58 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	20	*54VialPlate*	1
21 4390179-BVX765-01	2016/02/23 3:38:04 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	21	*54VialPlate*	1
22 4390179-BVX766-01	2016/02/23 3:43:10 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	22	*54VialPlate*	1
23 CCV	2016/02/23 3:48:16 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	6	*54VialPlate*	1
24 4390179-BVX767-01	2016/02/23 3:53:21 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	23	*54VialPlate*	1
25 4390179-BVX768-01	2016/02/23 3:58:27 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	24	*54VialPlate*	1
26 4390179-BWH243-01	2016/02/23 4:03:33 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	25	*54VialPlate*	1
27 4390179-BWH244-01	2016/02/23 4:08:39 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	26	*54VialPlate*	1
28 4390179-BWH245-01	2016/02/23 4:13:45 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	27	*54VialPlate*	1
29 4390179-BWH246-01	2016/02/23 4:18:50 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	28	*54VialPlate*	1
30 4390179-BWH247-01	2016/02/23 4:23:56 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	29	*54VialPlate*	1
31 4390179-BWH248-01	2016/02/23 4:29:01 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	30	*54VialPlate*	1
32 4390179-BWN123-01	2016/02/23 4:34:07 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	31	*54VialPlate*	1
33 4390179-BWN124-01	2016/02/23 4:39:13 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	32	*54VialPlate*	1
34 CCV	2016/02/23 4:44:19 PM	PFC_Water_Low.dam	PFC_160223\WS#4390179.wiff	2 Well Plates	1	6	*54VialPlate*	1

DoD Projects - Internal Data Validation Checklist				
Run date: 20160229				
Worksheet # (s): 4396598				
Analysis: PFOS Low - W				1st 100% review
Primary review by the analyst - 1st 100 % analysis review				*2nd 100% review
		yes	no	n/a
1	Sample analyses meet hold time criteria	✓		✓
2	Analysis set-up meets method criteria	✓		✓
3	Tuning and correct calibration used - criteria meets method criteria	✓		✓
4	SQC/Control Charts updated, analysis in statistical/method control			✓
5	Internal area counts checked (if applicable)	✓		✓
6	LCS, SRM are within acceptance criteria	✓		✓
7	Surrogate Recovery(s) is within acceptance criteria	✓		✓
8	Method Blank meets acceptance criteria	✓		✓
9	Matrix Spike recovery(s) meets acceptance criteria	✓		✓
10	Duplicate precision meets acceptance criteria	✓		✓
11	QC is documented on the run logs	✓		✓
12	Runs checked for carryover	✓		✓
13	Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts	✓		✓
14	Initial weights, splits, imprinter volumes (where applicable) are documented	✓		✓
15	Standards and reagents traceable to Certificates of Analysis	✓		✓
16	Samples above calibration range diluted and reanalyzed			✓
17	Dilution factors (where justified) have been checked for correctness and entered	✓		✓
18	Analytical observations/anomalies documented in LIMS	✓		✓
19	Random calculation checked and in correct units	✓		✓
20	If corrective actions were applied they are documented, initialed & dated			✓
21	Manual integration – before & after data with a reason included, initialed & dated			✓
22	Transferred data is validated in LIMS for correctness	✓		✓
23	Data package assembled (where required)	✓		✓
Reviewed by: CM		Date: 20160301		
Comments:				
Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review				
		yes	no	n/a
1	Repeats documented and referenced			✓
2	Method and sample deviations noted, anomalies described (if applicable)	✓		
3	Data and QC validated in LIMS	✓		
4	Random calculation checked	✓		
5	Benchsheet (s) signed and dated	✓		
6	Data Package (if required) checked for completeness	✓		
Reviewed by: AM		Date: 2016/03/01		
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 # 4396598		Testcode: PFOSLOW-W		
Sample Preparation		yes	no	n/a
1	Samples extracted within hold time	/		
2	Client sample ID verified against Lab ID (waters & oils)	/		
3	Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	/		
4	Height of sediment or if sample was decanted, recorded on worksheet	/		
5	Method required QC processed with samples, maximum batch size = 20 client samples.	/		
6	Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	/		
7	Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	/		
8	If performed any additional dilution clearly recorded	/		
9	Matrix spike / Duplicate performed on IOL samples if present			/
10	Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	/		
11	Spiking process witnessed and signed off	/		
12	Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)			/
13	Sample prep deviations documented within CompliantPro as a Policy Deviation			/
14	Job Remarks reviewed on 2nd page of worksheet.	/		
15	Worksheet and reagent tracking record completed and authorized.	/		
Reviewed by: EM		Date: 2016/02/26		
Comments:				
Worksheet Approval				
		yes	no	n/a
1	Verified the position of the vials in autosampler against sequence list; signed off sequence list	/		
2	Calibration and CCV standards valid (haven't expired)	/		
3	Initial calibration curve and 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: W		Date: 2016/03/01		
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: M		Date: 2016/03/01		
Comments:				

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Friday, February 26, 2016

Assigned to : Emily Henderson

Test Code : PFOSLOW-W

Instrument Id:

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

Remarks: BWH246-01R is yellow.

Samples extracted by: Emily Henderson

Instrumentation performed by:

Emily Henderson

Date:

201662/29

Calculations performed by:

Cm

Date:

2016/03/10

Validated by:

AP

Date:

2016/03/01

Job No.	Rep	Client Name	Contact	Client Tier	National
	Remarks				
GB632546	MDG	TestAmerica	PFC Reporting Group	Tier 1 (Air.)	Test America
	NREG PFOSALOW-W Level IV required Project #: 320-17321-1				
GB633696	MDG	TestAmerica	Judy Stone	Tier 1 (Air.)	Test America
	NREG PFOSALOW-W MS/MSD required on BWN090 Level IV required Project #: 480-95289				
GB634585	MDG	TestAmerica	Judy Stone	Tier 1 (Air.)	Test America
	NREG PFOSLOW-W MS/MSD required on sample BWR509 Level IV required Project #: 480-95287				
GB637004	MDG	TestAmerica	Judy Stone	Tier 1 (Air.)	Test America
	NREG PFOSLOW-W MS/MSD required on BXE902 Received CoCs indicated 1 of 6 and 2 of 6. Waybill indicated 2 coolers were sent, which were received. RGN Project #: 48013453				

[illegible]

Sample	Preparation Remarks	
	MeOH (mL)	Amount Spiked (mL)
S1	2825	25
S2	2800	50
S3	2700	150
S4	2813	37.5
S5	2775	75
S6	2725	125
ICV	2788	62.5

[illegible]

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

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	DL	B632546 BWH243 ReWork
Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorobutane Sulfonate (PFBS)	ng/L	105.60000	107.40000	102.00000	0	2	0
Perfluorodecane Sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroheptanoic Acid (PFHpA)	ng/L	106.80400	107.60400	116.80000	0	2	0
Perfluoroheptane sulfonate	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexanoic Acid (PFHxA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorohexane Sulfonate (PFHxS)	ng/L	101.20000	110.40000	107.20000	0	2	0
Perfluorononanoic Acid (PFNA)	ng/L	113.00000	121.00000	114.40000	0	2	0
Perfluoropentanoic Acid (PFPeA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotetradecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorotridecanoic Acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoroundecanoic Acid (PFUnA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorodecanoic Acid (PFDA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluorododecanoic Acid (PFDoA)	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	100.60000	110.20000	114.40000	0	2	0
Perfluorooctane Sulfonate (PFOS)	ng/L	113.20000	116.00000	109.00000	0	2	0
13C2-perfluorotetradecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluorobutanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C5-Perfluorononanoic acid	ng/L	77.4	83.3	93.3	87.5		88.7
13C2-Perfluorodecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorododecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorohexanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluoroundecanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C4-Perfluoroheptanoic acid	ng/L	76.4	82.5	82.3	85.4		87.0
13C4-Perfluorooctanoic acid	ng/L	82.3	85.1	88.7	93.4		89.8
13C4-Perfluorooctanesulfonate	ng/L	75.0	82.3	91.5	84.8		84.2
13C5-Perfluoropentanoic acid	ng/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
18O2-Perfluorohexanesulfonate	ng/L	87.5	97.9	94.7	80.7		87.3

Parameter Name	B632546 BWH244 ReWork	B632546 BWH245 ReWork	B632546 BWH246 ReWork	B632546 BWH247 ReWork	B632546 BWH248 ReWork	B633696 BWN123 ReWork	B633696 BWN124 ReWork
Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorobutane Sulfonate (PFBS)	9.35000	0	0	0	0	0	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroheptanoic Acid (PFHpA)	11.20000	0	0	0	0	0	2.28000
Perfluoroheptane sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexane Sulfonate (PFHxS)	8.35000	0	0	0	0	0	0
Perfluorononanoic Acid (PFNA)	5.47000	0	0	0	0	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotetradecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotridecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorodecanoic Acid (PFDA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	41.50000	0	0	0	0	0	55.10000
Perfluorooctane Sulfonate (PFOS)	85.80000	0	0	0	0	0	0
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C5-Perfluorononanoic acid	100.	96.2	61.7	87.4	62.9	80.7	84.2
13C2-Perfluorodecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorohexanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluoroheptanoic acid	102.	101.	65.7	91.1	74.3	90.8	80.3
13C4-Perfluorooctanoic acid	101.	101.	70.6	92.9	74.9	84.8	85.9
13C4-Perfluorooctanesulfonate	111.	104.	56.2	86.4	68.3	94.0	93.5
13C5-Perfluoropentanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
18O2-Perfluorohexanesulfonate	120.	106.	70.9	96.1	82.4	100.	104.

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

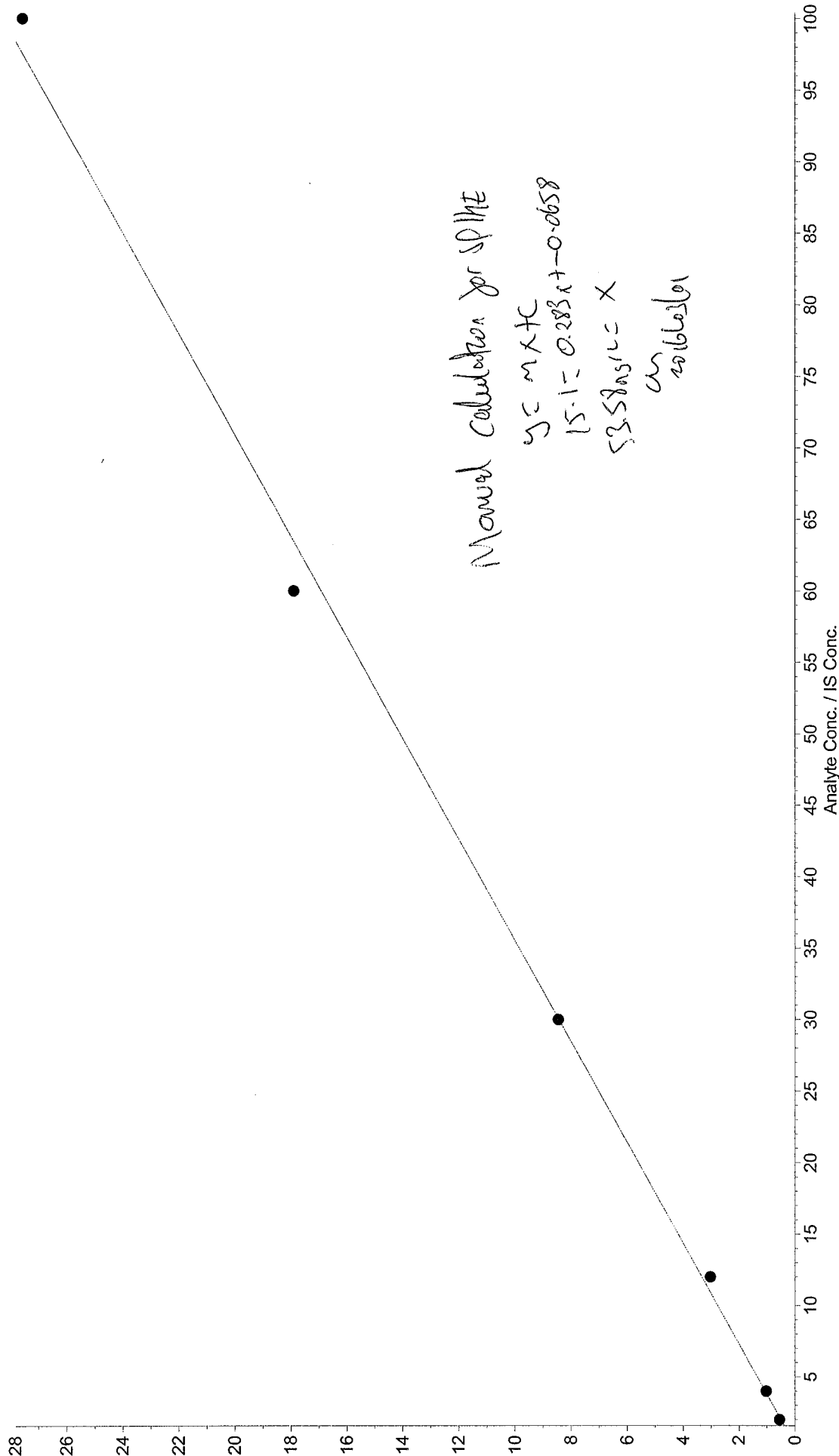
Parameter Name	B634585 BWR509	B634585 BWR510	B634585 BWR511	B634585 BWR512	B634585 BWR513	B634585 BWR514	B634585 BWR515
Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorobutane Sulfonate (PFBS)	0	0	0	4.53000	0	0	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroheptanoic Acid (PFHpA)	0.99800	1.04000	3.20000	7.42000	0	0.94900	0
Perfluoroheptane sulfonate	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorohexane Sulfonate (PFHxS)	0	0	0	1.67000	0	0	0
Perfluorononanoic Acid (PFNA)	0	0	0	1.07000	0	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotetradecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorotridecanoic Acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorodecanoic Acid (PFDA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
Perfluoro-n-Octanoic Acid (PFOA)	22.40000	23.50000	66.00000	86.60000	1.05000	13.30000	2.55000
Perfluorooctane Sulfonate (PFOS)	0	0	0	13.60000	0	0.86600	0
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C5-Perfluorononanoic acid	86.6	84.2	87.5	77.3	91.3	83.4	80.4
13C2-Perfluorodecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorododecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluorohexanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
13C4-Perfluoroheptanoic acid	86.6	90.4	85.6	77.4	90.3	86.6	85.3
13C4-Perfluorooctanoic acid	96.6	87.0	85.7	82.0	97.1	88.9	84.1
13C4-Perfluorooctanesulfonate	94.5	85.4	92.9	86.8	107.	95.0	102.
13C5-Perfluoropentanoic acid	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****
18O2-Perfluorohexanesulfonate	106.	95.9	99.4	99.9	101.	101.	95.6

Parameter Name	B637004 BXE985	B637004 BXE986	DL	RDL	MDL	IDL
Perfluorobutanoic acid	N/A*****	N/A*****	2	2	0.41	0
Perfluorobutane Sulfonate (PFBS)	0	0	2	2	0.27	0
Perfluorodecane Sulfonate	N/A*****	N/A*****	2	2	0.38	0
Perfluoroheptanoic Acid (PFHpA)	0	0	2	2	0.39	0
Perfluoroheptane sulfonate	N/A*****	N/A*****	2	2	0.4	0
Perfluorohexanoic Acid (PFHxA)	N/A*****	N/A*****	2	2	0.42	0
Perfluorohexane Sulfonate (PFHxS)	0	0	2	2	0.4	0
Perfluorononanoic Acid (PFNA)	0	0	2	2	0.33	0
Perfluoropentanoic Acid (PFPeA)	N/A*****	N/A*****	2	2	0.46	0
Perfluorotetradecanoic Acid	N/A*****	N/A*****	2	2	0.61	0
Perfluorotridecanoic Acid	N/A*****	N/A*****	2	2	0.6	0
Perfluoroundecanoic Acid (PFUnA)	N/A*****	N/A*****	2	2	0.5	0
Perfluorodecanoic Acid (PFDA)	N/A*****	N/A*****	2	2	0.24	0
Perfluorododecanoic Acid (PFDoA)	N/A*****	N/A*****	2	2	0.63	0
Perfluoro-n-Octanoic Acid (PFOA)	0	0	2	2	0.39	0
Perfluorooctane Sulfonate (PFOS)	0	0	2	2	0.3	0
13C2-perfluorotetradecanoic acid	N/A*****	N/A*****				
13C4-Perfluorobutanoic acid	N/A*****	N/A*****				
13C5-Perfluorononanoic acid	90.2	96.0				
13C2-Perfluorodecanoic acid	N/A*****	N/A*****				
13C2-Perfluorododecanoic acid	N/A*****	N/A*****				
13C2-Perfluorohexanoic acid	N/A*****	N/A*****				
13C2-Perfluoroundecanoic acid	N/A*****	N/A*****				
13C4-Perfluoroheptanoic acid	82.6	99.8				
13C4-Perfluorooctanoic acid	86.8	101.				
13C4-Perfluorooctanesulfonate	89.7	99.7				
13C5-Perfluoropentanoic acid	N/A*****	N/A*****				
18O2-Perfluorohexanesulfonate	105.	104.				

Results Path: \\miss-netapp2\lcm3\lcm33\Analyst
Data\Projects\Enviro\PFOS\Results\PFOS_Water_160229_4396598_ULow.rdb

Printing Date: Tuesday, March 01, 2016

PFOS_Water_160229_4396598_ULow.rdb (PFHxS 1): "Linear" Regression ("1 / x" weighting): $y = 0.283x + -0.0658$ ($r = 0.9989$)



Results Path: \\miss-netapp2\loms\loms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160229_4396598_ULow.rdb

Printing Date: Tuesday, March 01, 2016

Sample Name: STD 4 Sample ID: File: WS4396598.wrf

File Name: PFBS 1 Mass(es): 288.90079.900 Da

Comment: Annotation: -

Sample Index: 6

Standard: Standard

Concentration: 30.0 ng/L

Calculated Conc: 29.1 ng/L

Acquire: 2016/02/29

AcqTime: 3:38:18 PM

Mod: No

Proc. Algorithm: Analyst Classic

Bunching Factor: 1

Noise Threshold: 300.00 cps

Peak Threshold: 2000.0 cps

Num. Smoother: 1

Sep. Width: 0.00

Sep. Height: 1.565

Exp. Peak Ratio: 5.00

Exp. Val. Ratio: 3.00

RT Window: 10.0 sec

Expected RT: 1.15 min

Use Relative RT: No

Int. Type: Base To Base

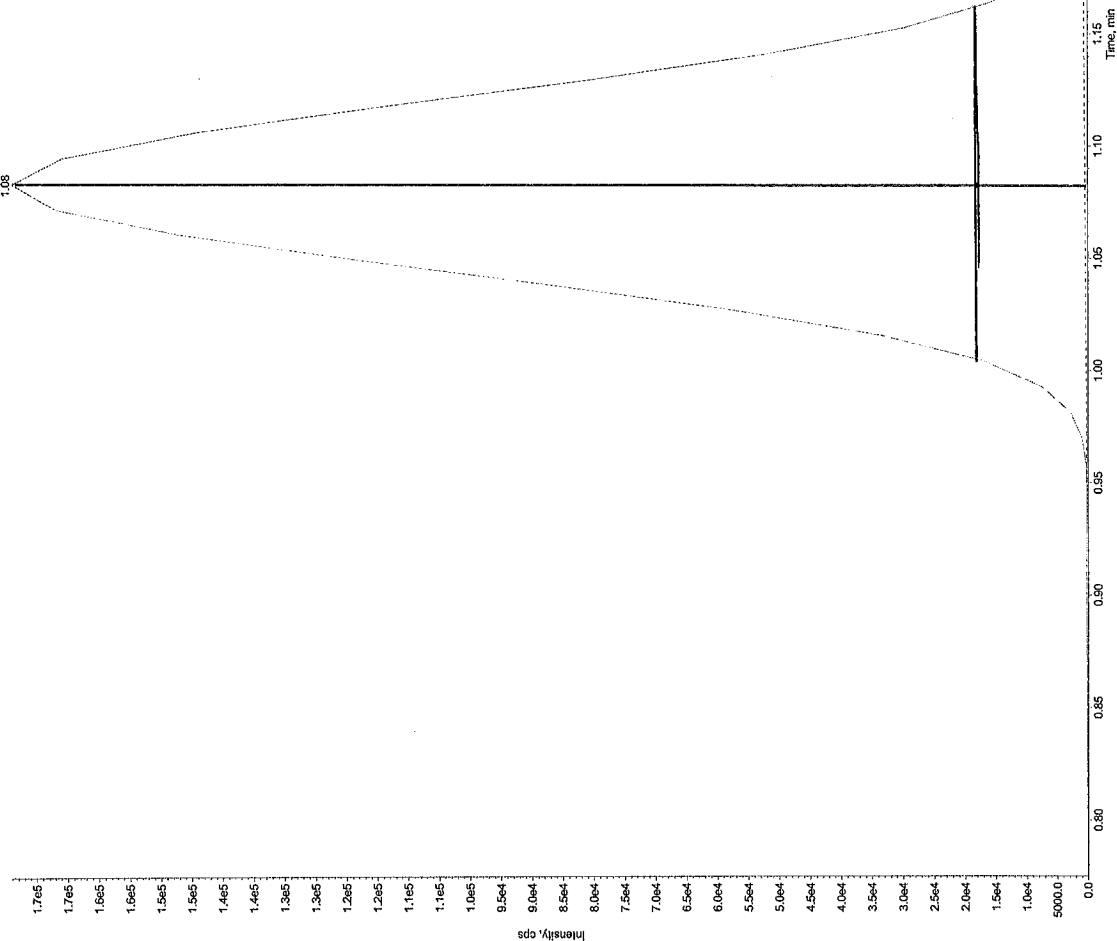
Retention Time: 1.08 min

Area: 972000. counts

Height: 1.74e+005 cps

Width: 0.123 min

End Time: 1.23 min



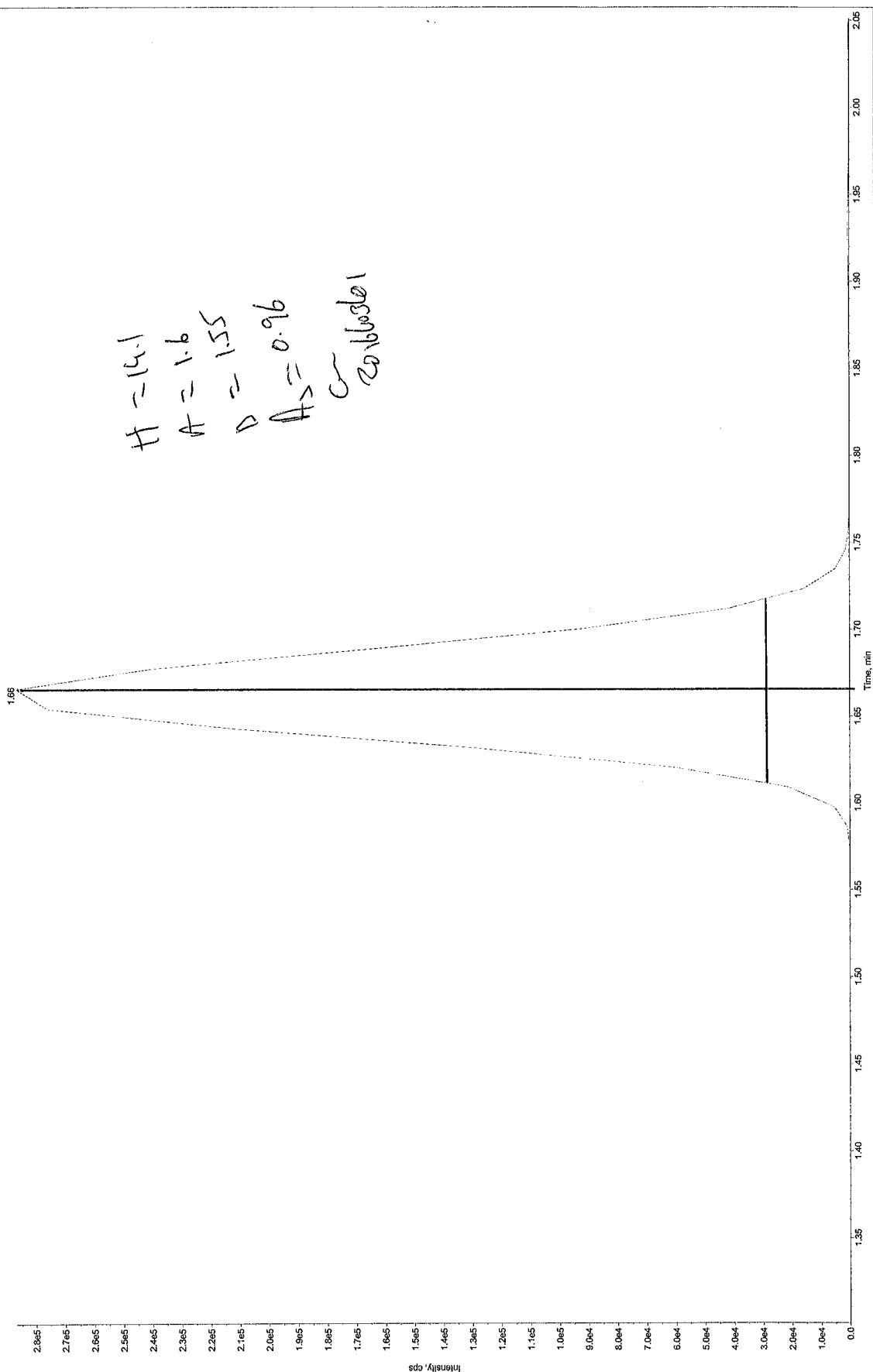
H = 14.1
A = 7.2
B = 2.3
A₂ = 1.04
20160301

Results Path: \\miss-netapp2\loms\loms3\Analyst
Data\Projects\Enviro\PFOS\Results\PFC_Water_160229_4396598_ULow.rdb

Printing Date: Tuesday, March 01, 2016

Sample Name: STD 4 Sample ID: File: WS4396598.wif
Peak Name: PFHxS 1 Mass(es): 398.90079.900 Da

Comment: Annotation
Sample Index: Standard
Concentration: 30.0 ng/L
Calculated Conc: 30.1 ng/L
Acq Date: 2016/02/29
Acq Time: 3:38:18 PM
Modif: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 200.00 cps
Num. Smoother: 5000.0
Sep. Width: 0.00
Sep. Height: 0.00
Exp. Peak Ratio: 2.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 1.68 min
Use Relative RT: No
Int. Type: Base To Base
Retention Time: 1.66 min
Area: 106000. counts
Height: 2.90e+005 cps
Start Time: 1.66 min
End Time: 1.79 min



Worksheet Reagent Tracking Record

Worksheet # 4396598

Surrogate/Spike solutions		✓	Solution ID #		Conc.	Blk-Spk		Volume (µL)		Samples	
						Solid	Liquid	Solid	Liquid	Solid	Liquid
DGT Spike					100 ug/mL	60	30	60	30	NA	NA
Diquat Dibromide					50 ug/mL	NA	350	NA	350	NA	NA
Explosives Spiking solution A					20 ug/mL	250	100	250	100	NA	NA
Explosives Spiking solution B					20/80 ug/mL	250	100	250	100	NA	NA
Formaldehyde Spike					100 ug/mL	25	25	25	25	NA	NA
Glyphosate Spike					25 ug/mL	500	20	500	20	NA	NA
Nonylphenol Ethoxylate Spike					100 ug/mL	100	100	100	100	NA	NA
Nonylphenol Spike					10 ug/mL	100	100	100	100	NA	NA
Paraquat Cl Tetrahydrate					20 ug/mL	NA	125	NA	125	NA	NA
Perchlorate Standard Spike					10 ng/mL	NA	100	NA	100	NA	NA
Perchlorate Standard Spike					500 ng/mL	40	NA	40	NA	NA	NA
Perchlorate O-18 Internal Standard					0.10 ng/uL	20	20	20	20	20	20
Morpholine Intermediate Std.					5 ug/mL	NA	50	NA	20	NA	NA
Morpholine-D8 Internal Standard					10 ug/mL	NA	100	NA	100	NA	100
Comp. PFC Spiking Solution A					1ug/mL	62.5	NA	62.5	NA	NA	NA
Comp. PFC Spiking Solution B					250 ng/mL	NA	40	75	NA	40	75
Comp. PFC Spiking Solution C	✓		SK 6237		100 ng/mL	125	62.5	NA	125	62.5	NA
Internal Standard Solution A	✓		SI 6010 (4/4)		50 ng/mL	50	100	15	50	100	15
Internal Standard Solution B					250ng/mL	50	NA		50	NA	
ICVCCV	✓		I 4676		1 ng/mL		62.5				
Solvent/Reagent	Supplier	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/ Prepared	*Spiked by: EHL		
DCM	Fisher				50% NaOH				Spike Date 2016/02/26		
Hexane	Fisher				20mM TBAS				Spike Syringe ID# M23487B		
Acetone	Fisher				o-Phosphoric Acid				Int. Std Syringe ID# M23487B		
Ottawa Sand	Fisher				Borax				*Spiking Witnessed by: GSZ		
Methanol	Fisher	✓	SHBG 6076V	2016/02/25	Calcium Chloride				Final pH		
2-Propanol (IPA)	Fisher				EDTA				X		
Acetonitrile	Fisher				Phosphate Buffer						
MTBE	Fisher				Sodium Thiosulphate						
Sodium Sulfate	Fisher				DNPH						
Recon Solution					5M Acetate Buffer						
DCM:Ethyl Ether (75:25)					FMOC						
Hexane:IPA (98:2)					0.25M Na ₂ CO ₃						
2% Formic Acid		✓	PRLRE	87-131	0.5M TBAS						
0.2% Formic Acid		✓	PRLRE	87-114	1% NH ₄ OH 0.2%	✓	PRLRE	87-214			
0.05M KOH					Leachate Fluid						
0.05M HCl					Reagent Water	✓	SHBG 5572V	2016/02/25			
Equipment	ID#	✓	Equipment	ID#	✓	Equipment	Lot #	Bottle Tracking			
Pipettor	P29746D	✓	SPE Cartridge	002635315A	✓	10 mL Serological Pipet		Bottle# 14991			
	K19609D	✓	Filter			QC Balance ID		Cap# 14443			
Dispenser			Centrifuge			Thermometer ID & Temp	140559167 45°C	Systems plus Lot# 16-01-06			
Syringe			Sonicator								

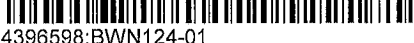
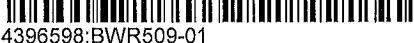
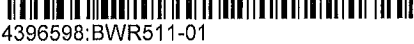
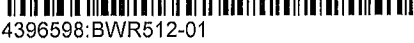
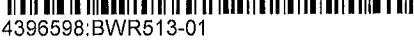
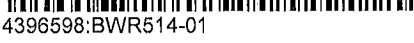
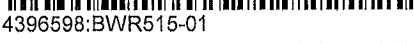
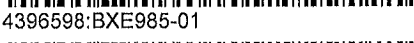
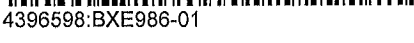
Comments: pipettor % I16295B, M15944C HPLC Evaporator
60:40 H₂O:MeOH → PRLRE 87-190
Inject I.S. & SI 6039

* SPIKING OF ALL SAMPLES MUST BE WITNESSED AT ALL TIMES.

[illegible]

	opened	2016/02/25
H ₂ O % SHBG	5572 V	
Pipettor	% I16295B	

WorkSheet 4396598 Instrument Sequences

1.	 4396598:MTRX SPK	MTRX SPK
2.	 4396598:MTRX SPK:D1	MTRX SPK :D1
3.	 4396598:SPIKE	SPIKE
4.	 4396598:BLANK	BLANK
5.	 4396598:BWH243-01	OF-FB02-0216
6.	 4396598:BWH244-01	OF-RW02-0216
7.	 4396598:BWH245-01	OF-FB15-0216
8.	 4396598:BWH246-01	OF-RW15-0216
9.	 4396598:BWH247-01	OF-FB18-0216
10.	 4396598:BWH248-01	OF-RW18-0216
11.	 4396598:BWN123-01	4957 RT 67
12.	 4396598:BWN124-01	416 BOVIE HILL RD
13.	 4396598:BWR509-01	616 COTTRELL RD
14.	 4396598:BWR510-01	616 COTTRELL RD (DUP)
15.	 4396598:BWR511-01	616 COTTRELL RD (BARN)
16.	 4396598:BWR512-01	507 COTTRELL RD
17.	 4396598:BWR513-01	4831 RB 67
18.	 4396598:BWR514-01	30 ST CROIX DR
19.	 4396598:BWR515-01	95 ST CROIX DR
20.	 4396598:BXE985-01	79 BAYER RD
21.	 4396598:BXE986-01	2 BURGESS RD

Report Name: Worksheet - Parameter Lists

Report Date: 2016/02/26

Test Code: PFOSLOW-W

Worksheet Number: 4396598

<u>Sample Number</u>	<u>Parameter</u>
BWH243-01	Perfluorobutane Sulfonate (PFBS)
BWH244-01	Perfluoroheptanoic Acid (PFHpA)
BWH245-01	Perfluorohexane Sulfonate (PFHxS)
BWH246-01	Perfluorononanoic Acid (PFNA)
BWH247-01	Perfluoro-n-Octanoic Acid (PFOA)
BWH248-01	Perfluorooctane Sulfonate (PFOS)
BWN123-01	
BWN124-01	
BWR509-01	
BWR510-01	
BWR511-01	
BWR512-01	
BWR513-01	
BWR514-01	
BWR515-01	
BXE985-01	
BXE986-01	

Batch Name: D:\Analyst Data\Projects\Enviro\PFOS\Batch\PFC_160229.dab

Printing Date: Monday, February 29, 2016

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160229 Tab:Sample Set:SET1 AcqMethod:PFC_Water_Low.dam
Sample

	Sample Name	Rack Code	Rack Position	Plate Code	Plate Position	Vial Position	Data File	Inj. Volume (µl)
1	RINSE	2 Well Plates	1	*54VialPlate	2	1	PFC_160229WSH4396598	3.000
2	4396598-BLANK	2 Well Plates	1	*54VialPlate	2	2	PFC_160229WSH4396598	3.000
3	STD 1	2 Well Plates	1	*54VialPlate	2	3	PFC_160229WSH4396598	3.000
4	STD 2	2 Well Plates	1	*54VialPlate	2	4	PFC_160229WSH4396598	3.000
5	STD 3	2 Well Plates	1	*54VialPlate	2	5	PFC_160229WSH4396598	3.000
6	STD 4	2 Well Plates	1	*54VialPlate	2	6	PFC_160229WSH4396598	3.000
7	STD 5	2 Well Plates	1	*54VialPlate	2	7	PFC_160229WSH4396598	3.000
8	STD 6	2 Well Plates	1	*54VialPlate	2	8	PFC_160229WSH4396598	3.000
9	ICV	2 Well Plates	1	*54VialPlate	2	9	PFC_160229WSH4396598	3.000
10	CCV	2 Well Plates	1	*54VialPlate	2	6	PFC_160229WSH4396598	3.000
11	4396598-MTRX SPK	2 Well Plates	1	*54VialPlate	2	10	PFC_160229WSH4396598	3.000
12	4396598-MTRX SPK:DI	2 Well Plates	1	*54VialPlate	2	11	PFC_160229WSH4396598	3.000
13	4396598-SPKE	2 Well Plates	1	*54VialPlate	2	12	PFC_160229WSH4396598	3.000
14	4396598-BWH243-01	2 Well Plates	1	*54VialPlate	2	13	PFC_160229WSH4396598	3.000
15	4396598-BWH244-01(10X)	2 Well Plates	1	*54VialPlate	2	14	PFC_160229WSH4396598	3.000
16	4396598-BWH245-01	2 Well Plates	1	*54VialPlate	2	15	PFC_160229WSH4396598	3.000
17	4396598-BWH246-01	2 Well Plates	1	*54VialPlate	2	16	PFC_160229WSH4396598	3.000
18	4396598-BWH247-01	2 Well Plates	1	*54VialPlate	2	17	PFC_160229WSH4396598	3.000
19	4396598-BWH248-01	2 Well Plates	1	*54VialPlate	2	18	PFC_160229WSH4396598	3.000
20	4396598-BWN123-01	2 Well Plates	1	*54VialPlate	2	19	PFC_160229WSH4396598	3.000
21	4396598-BWN124-01	2 Well Plates	1	*54VialPlate	2	20	PFC_160229WSH4396598	3.000
22	4396598-BWR509-01	2 Well Plates	1	*54VialPlate	2	21	PFC_160229WSH4396598	3.000
23	4396598-BWR510-01	2 Well Plates	1	*54VialPlate	2	22	PFC_160229WSH4396598	3.000
24	CCV	2 Well Plates	1	*54VialPlate	2	6	PFC_160229WSH4396598	3.000
25	4396598-BWR511-01	2 Well Plates	1	*54VialPlate	2	23	PFC_160229WSH4396598	3.000
26	4396598-BWR512-01	2 Well Plates	1	*54VialPlate	2	24	PFC_160229WSH4396598	3.000
27	4396598-BWR513-01	2 Well Plates	1	*54VialPlate	2	25	PFC_160229WSH4396598	3.000
28	4396598-BWR514-01	2 Well Plates	1	*54VialPlate	2	26	PFC_160229WSH4396598	3.000
29	4396598-BWR515-01	2 Well Plates	1	*54VialPlate	2	27	PFC_160229WSH4396598	3.000
30	4396598-BXE985-01	2 Well Plates	1	*54VialPlate	2	28	PFC_160229WSH4396598	3.000
31	4396598-BXE986-01	2 Well Plates	1	*54VialPlate	2	29	PFC_160229WSH4396598	3.000
32	4396598-BWH244-01	2 Well Plates	1	*54VialPlate	2	30	PFC_160229WSH4396598	3.000
33	CCV	2 Well Plates	1	*54VialPlate	2	6	PFC_160229WSH4396598	3.000

Column # 124
 MPAC Sol# 513, JREI7
 MPB = MeOH, tube 61 # 152613
 on
 20160229

Results Path: \\miss-netapp2\lcm3\lcm3\Analyst
Data\Projects\Enviro\PEOS\Results\PFC_Water_160229_4396598_ULow.rdb

Maxxam Analytics

Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1 4396598-BLANK	2016/02/29 3:17:55 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	2	*54VialPlate*	2
2 STD 1	2016/02/29 3:23:01 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	3	*54VialPlate*	2
3 STD 2	2016/02/29 3:28:07 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	4	*54VialPlate*	2
4 STD 3	2016/02/29 3:33:12 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	5	*54VialPlate*	2
5 STD 4	2016/02/29 3:38:18 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	6	*54VialPlate*	2
6 STD 5	2016/02/29 3:43:23 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	7	*54VialPlate*	2
7 STD 6	2016/02/29 3:48:29 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	8	*54VialPlate*	2
8 ICV	2016/02/29 3:53:36 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	9	*54VialPlate*	2
9 CCV	2016/02/29 3:58:41 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	6	*54VialPlate*	2
10 4396598-MTRX SPK (BWR509)	2016/02/29 4:03:46 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	10	*54VialPlate*	2
11 4396598-MTRX SPK:D1 (BWR509)	2016/02/29 4:08:52 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	11	*54VialPlate*	2
12 4396598-SPIKE	2016/02/29 4:13:58 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	12	*54VialPlate*	2
13 4396598-BWH243-01	2016/02/29 4:19:04 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	13	*54VialPlate*	2
14 4396598-BWH244-01(10X)	2016/02/29 4:24:10 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	14	*54VialPlate*	2
15 4396598-BWH245-01	2016/02/29 4:29:15 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	15	*54VialPlate*	2
16 4396598-BWH246-01	2016/02/29 4:34:22 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	16	*54VialPlate*	2
17 4396598-BWH247-01	2016/02/29 4:39:28 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	17	*54VialPlate*	2
18 4396598-BWH248-01	2016/02/29 4:44:34 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	18	*54VialPlate*	2
19 4396598-BWN123-01	2016/02/29 4:49:39 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	19	*54VialPlate*	2
20 4396598-BWN124-01	2016/02/29 4:54:45 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	20	*54VialPlate*	2
21 4396598-BWR509-01	2016/02/29 4:59:51 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	21	*54VialPlate*	2
22 4396598-BWR510-01	2016/02/29 5:04:58 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	22	*54VialPlate*	2
23 CCV	2016/02/29 5:10:08 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	6	*54VialPlate*	2
24 4396598-BWR511-01	2016/02/29 5:15:13 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	23	*54VialPlate*	2
25 4396598-BWR512-01	2016/02/29 5:20:19 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	24	*54VialPlate*	2
26 4396598-BWR513-01	2016/02/29 5:25:25 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	25	*54VialPlate*	2
27 4396598-BWR514-01	2016/02/29 5:30:31 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	26	*54VialPlate*	2
28 4396598-BWR515-01	2016/02/29 5:35:37 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	27	*54VialPlate*	2
29 4396598-BXE985-01	2016/02/29 5:40:43 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	28	*54VialPlate*	2
30 4396598-BXE986-01	2016/02/29 5:45:49 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	29	*54VialPlate*	2
31 4396598-BWH244-01	2016/02/29 5:50:55 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	30	*54VialPlate*	2
32 CCV	2016/02/29 5:56:02 PM	PFC_Water_Low.dam	PFC_160229WS#4396598.wiff	2 Well Plates	1	6	*54VialPlate*	2



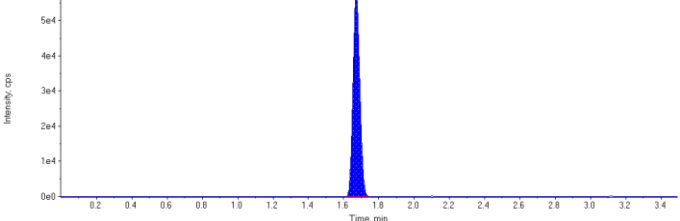
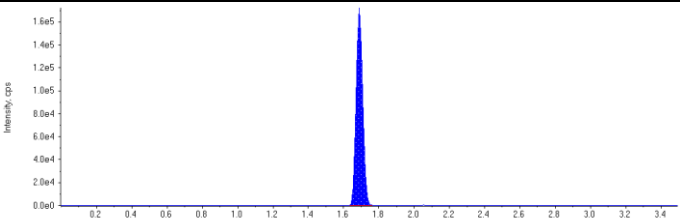
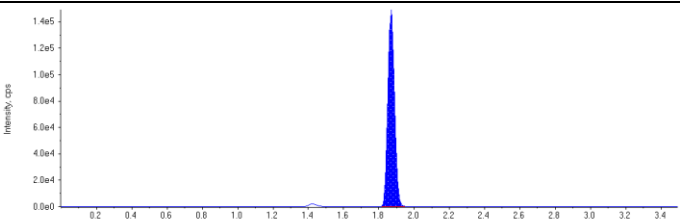
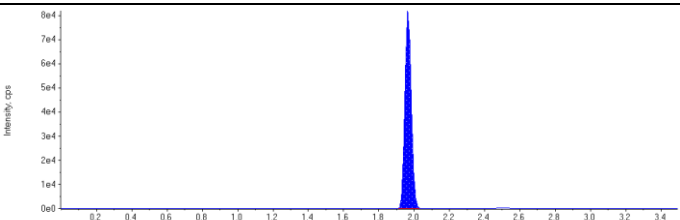
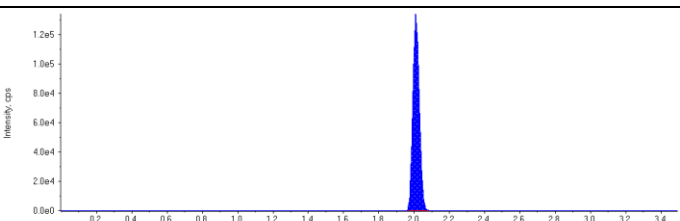
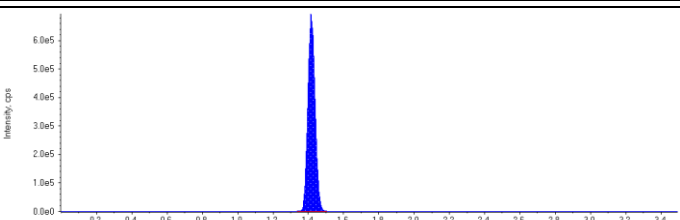
5. Initial Calibration

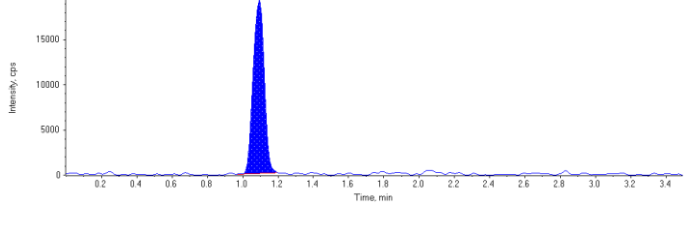
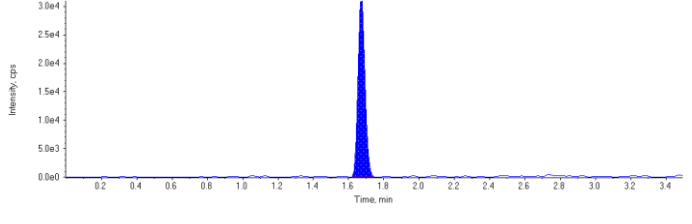
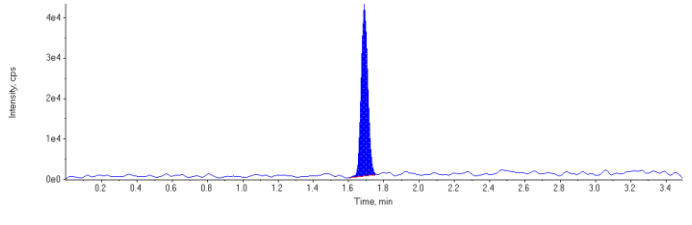
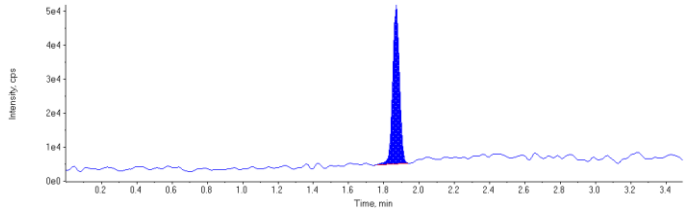
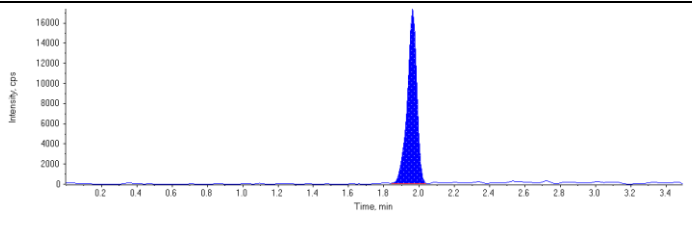
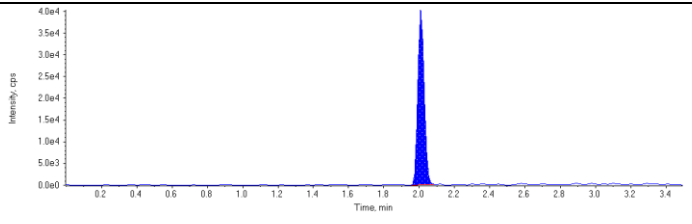
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

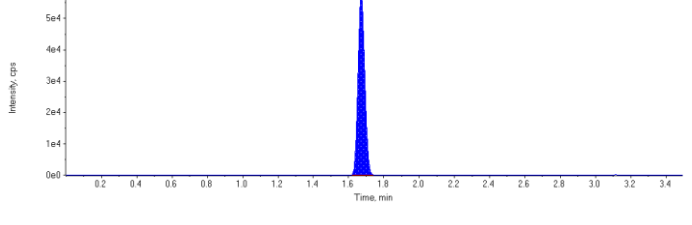
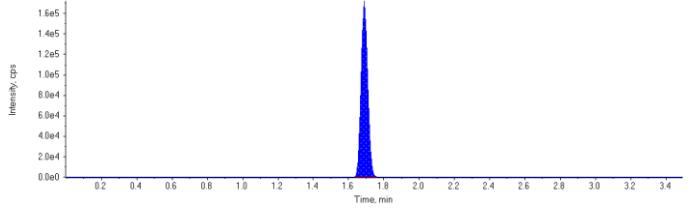
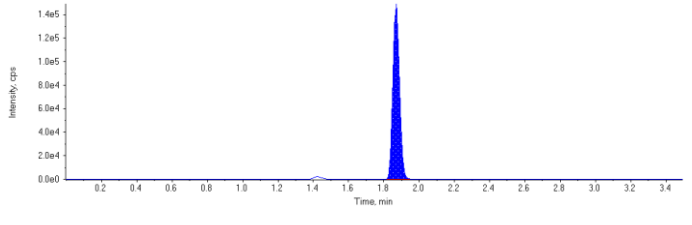
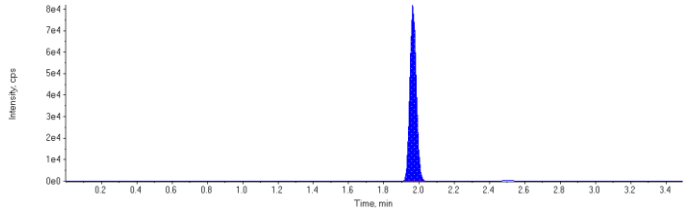
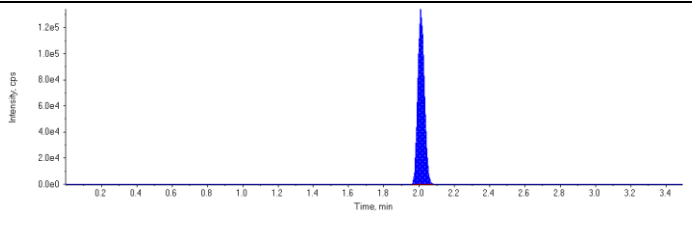
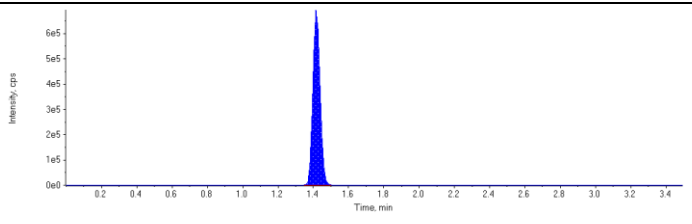
Sample Name	STD 1	Injection Vial	3
Sample ID	STD 1	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:01:03 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	441000.	1.69	1.00	-
MPFOA	388000.	1.87	1.00	-
MPFOS	206000.	1.96	1.00	-
MPFNA	345000.	2.01	1.00	-
13C6-PFHxA IS	1980000.	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	84000	1.09	2.00	2.43	122.0
PFHxS 1	86100	1.67	2.00	2.16	108.0
PFHpA 1	109000	1.69	2.00	2.06	103.0
PFOA 1	123000	1.87	2.00	2.03	101.0
PFOS 1	63800	1.96	2.00	2.17	109.0
PFNA 1	101000	2.01	2.00	1.97	98.5
18O2-PFHxS	153000	1.67	100.	96.6	96.6
13C4-PFHpA	441000	1.69	100.	96.4	96.4
13C4-PFOA	388000	1.87	100.	94.4	94.4
13C4-PFOS	206000	1.96	100.	101.	101.0
13C5-PFNA	345000	2.01	100.	99.2	99.2
13C6-PFHxA	1980000	1.42	100.	101.	101.0

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

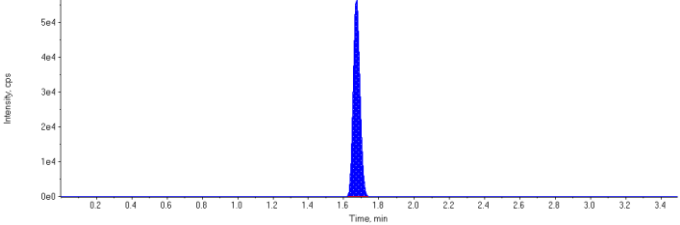
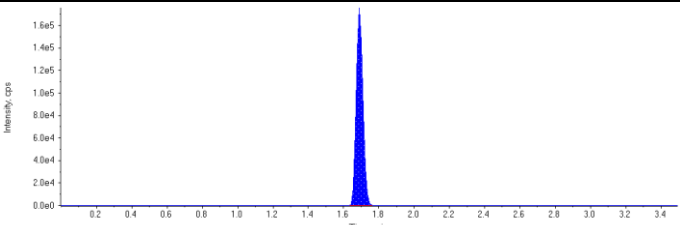
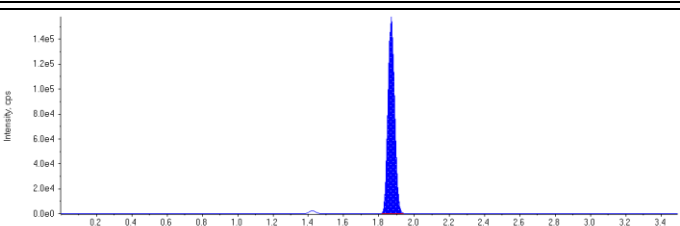
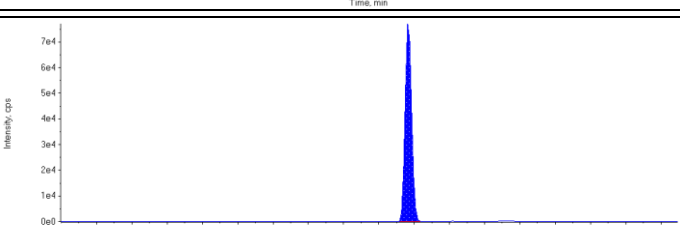
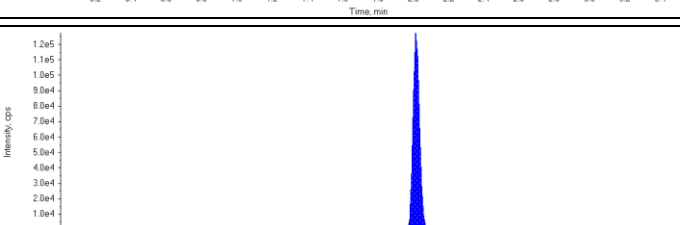
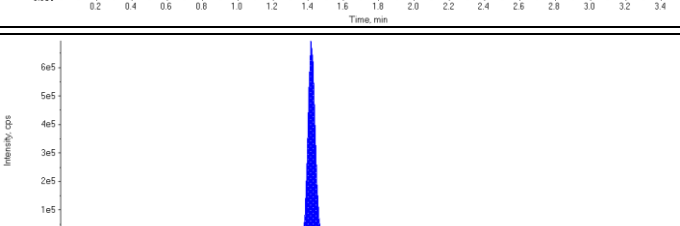
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 2.43 ng/L Area Ratio: 0.547 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 2.16 ng/L Area Ratio: 0.561 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 2.06 ng/L Area Ratio: 0.246 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 2.03 ng/L Area Ratio: 0.318 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 2.17 ng/L Area Ratio: 0.310 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 1.97 ng/L Area Ratio: 0.292 Sample Type: (Standard)	

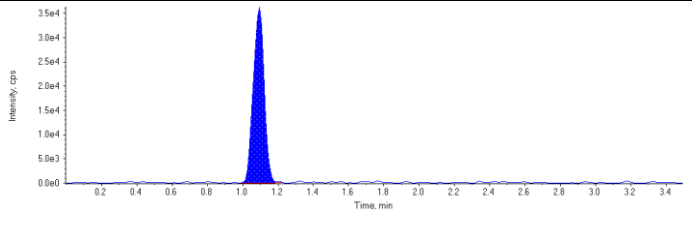
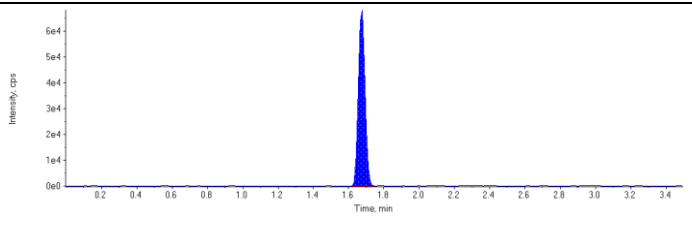
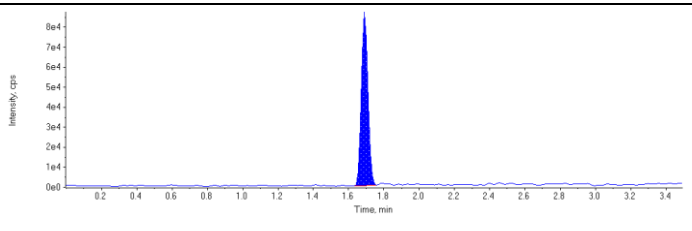
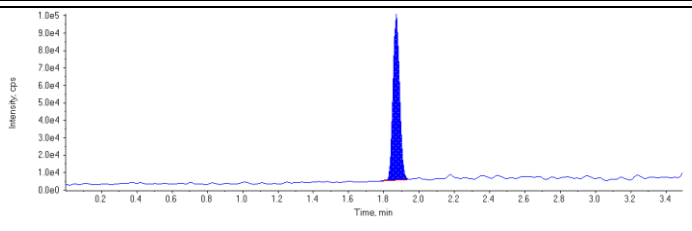
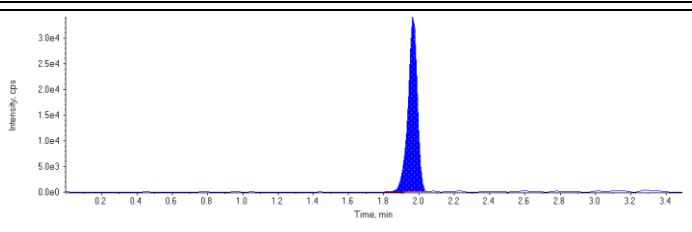
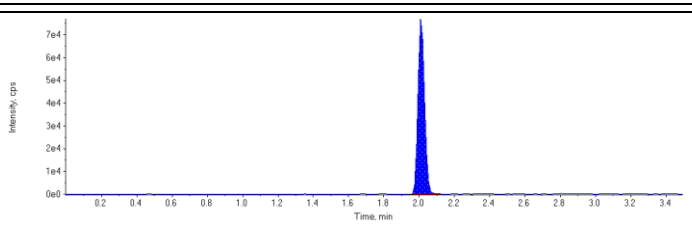
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 96.6 ng/L Area Ratio: 0.0774 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 96.4 ng/L Area Ratio: 0.223 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 94.4 ng/L Area Ratio: 0.196 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 101. ng/L Area Ratio: 0.104 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 99.2 ng/L Area Ratio: 0.174 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

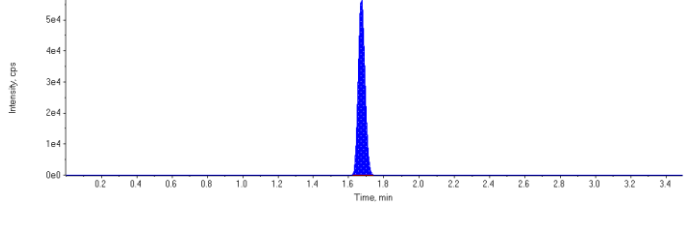
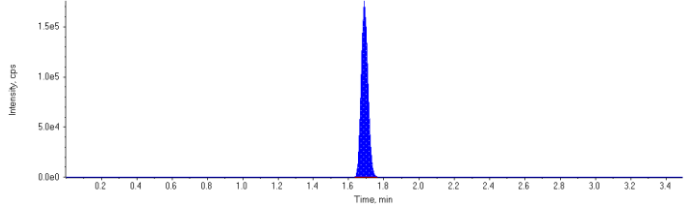
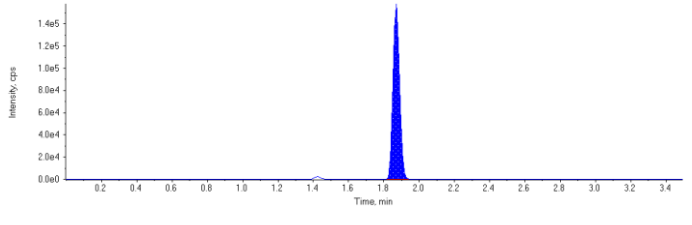
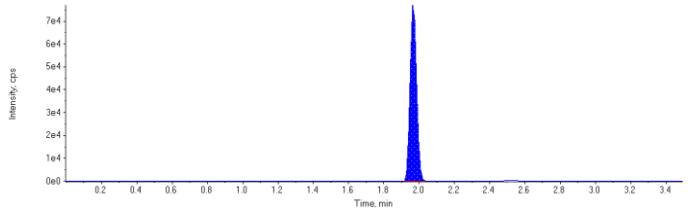
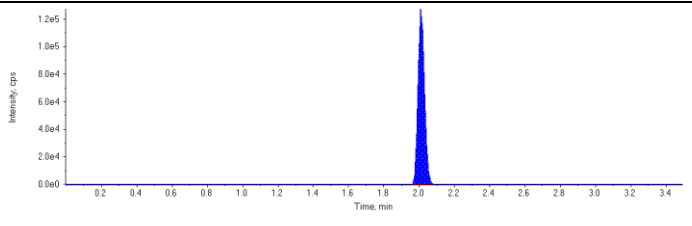
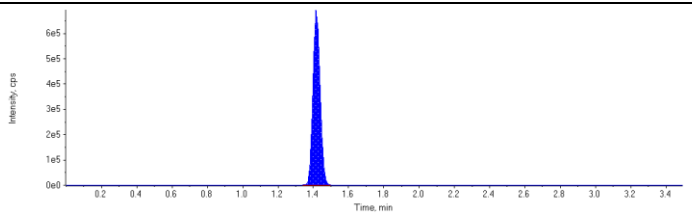
Sample Name	STD 2	Injection Vial	4
Sample ID	STD 2	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:06:08 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	458000.	1.69	1.00	-
MPFOA	409000.	1.87	1.00	-
MPFOS	199000.	1.97	1.00	-
MPFNA	326000.	2.01	1.00	-
13C6-PFHxA IS	1970000.	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	156000	1.09	4.00	3.96	99.0
PFHxS 1	179000	1.67	4.00	4.19	105.0
PFHpA 1	223000	1.69	4.00	4.00	100.0
PFOA 1	242000	1.87	4.00	3.92	98.0
PFOS 1	123000	1.97	4.00	4.00	100.0
PFNA 1	198000	2.01	4.00	4.36	109.0
18O2-PFHxS	153000	1.67	100.	97.5	97.5
13C4-PFHpA	458000	1.69	100.	101.	101.0
13C4-PFOA	409000	1.87	100.	100.	100.0
13C4-PFOS	199000	1.97	100.	98.3	98.3
13C5-PFNA	326000	2.01	100.	94.5	94.5
13C6-PFHxA	1970000	1.42	100.	99.8	99.8

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): 1.97(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

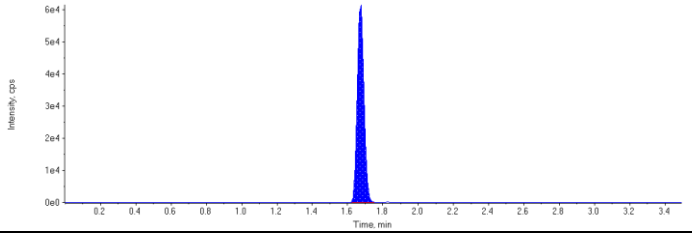
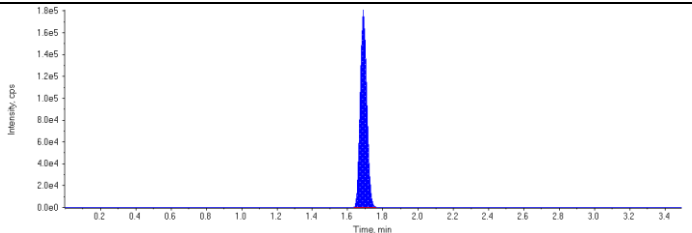
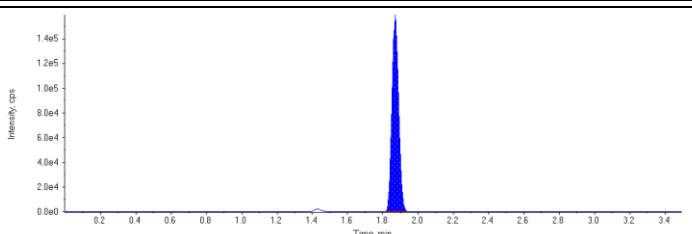
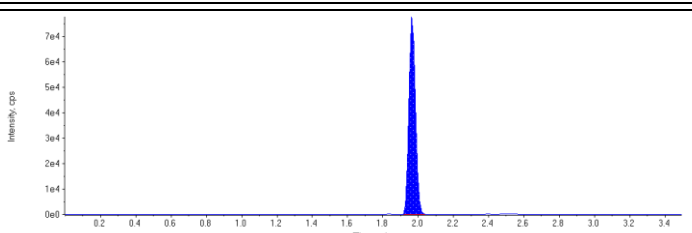
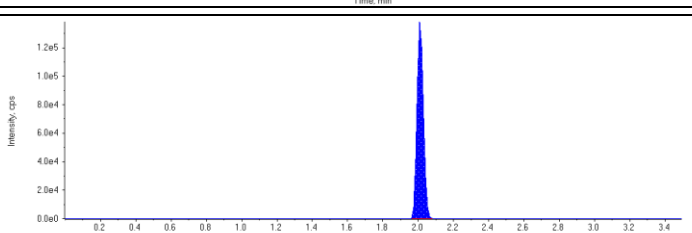
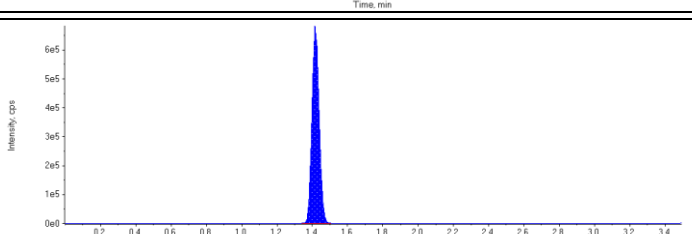
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 3.96 ng/L Area Ratio: 1.02 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 4.19 ng/L Area Ratio: 1.16 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 4.00 ng/L Area Ratio: 0.487 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 3.92 ng/L Area Ratio: 0.591 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 4.00 ng/L Area Ratio: 0.620 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 4.36 ng/L Area Ratio: 0.609 Sample Type: (Standard)	

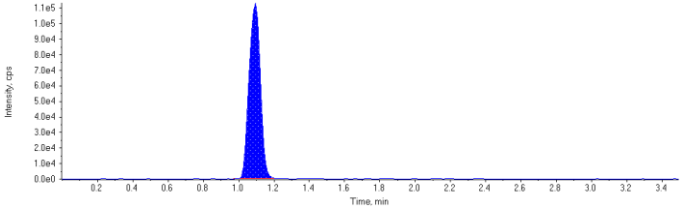
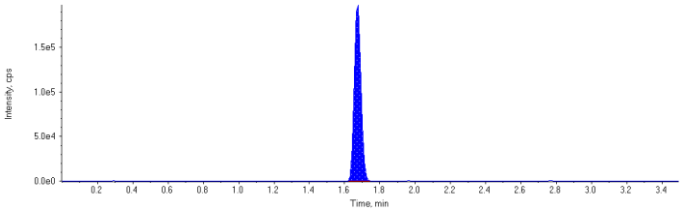
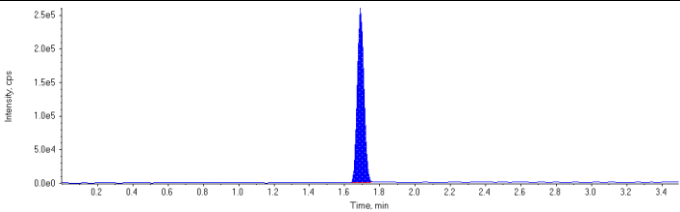
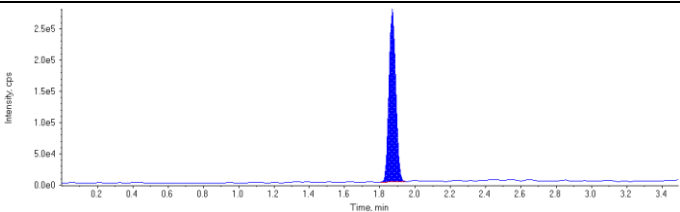
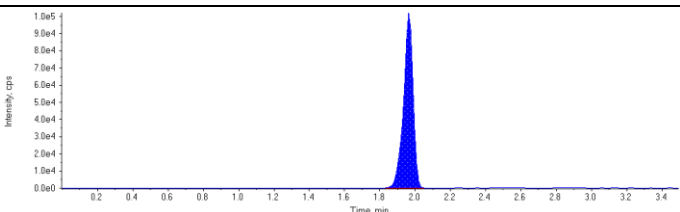
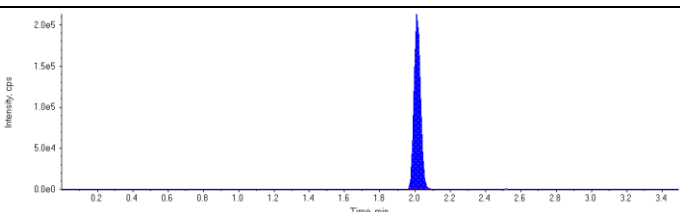
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 97.5 ng/L Area Ratio: 0.0781 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 101. ng/L Area Ratio: 0.233 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 100. ng/L Area Ratio: 0.208 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 98.3 ng/L Area Ratio: 0.101 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 94.5 ng/L Area Ratio: 0.166 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 99.8 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

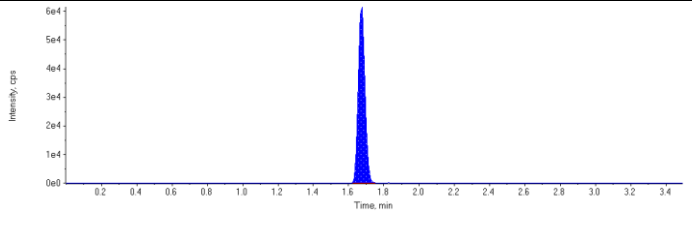
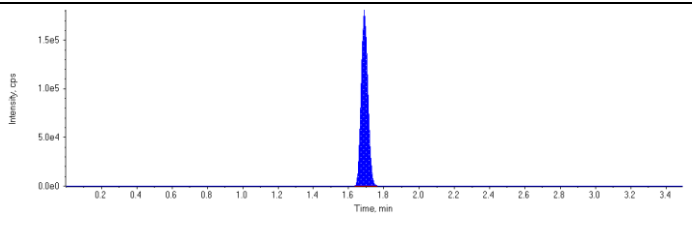
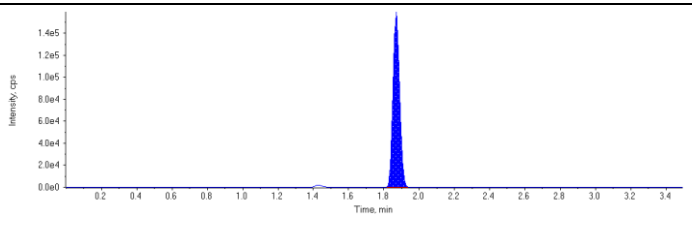
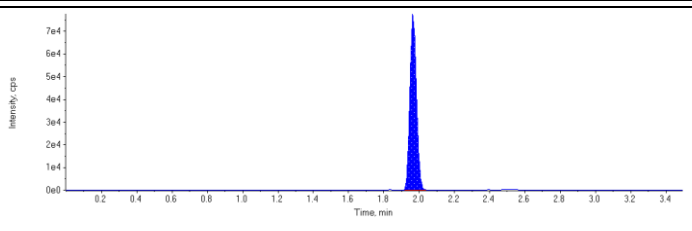
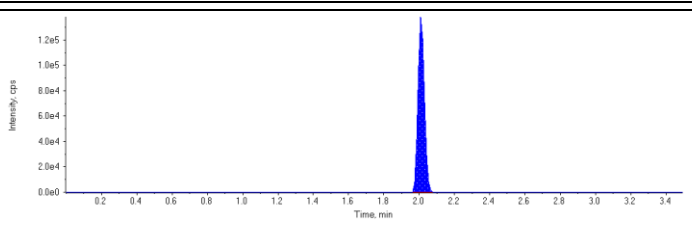
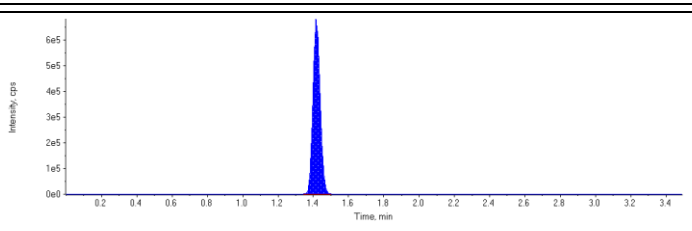
Sample Name	STD 3	Injection Vial	5
Sample ID	STD 3	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:11:18 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	164000.	1.67	1.00	-
MPFHpA	465000.	1.69	1.00	-
MPFOA	413000.	1.87	1.00	-
MPFOS	200000.	1.97	1.00	-
MPFNA	353000.	2.01	1.00	-
13C6-PFHxA IS	1950000.	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	501000	1.09	12.0	10.6	88.4
PFHxS 1	532000	1.67	12.0	11.2	93.2
PFHpA 1	667000	1.69	12.0	11.6	96.9
PFOA 1	725000	1.87	12.0	12.0	99.8
PFOS 1	384000	1.96	12.0	11.7	97.3
PFNA 1	542000	2.01	12.0	11.4	94.6
18O2-PFHxS	164000	1.67	100.	105.	105.0
13C4-PFHpA	465000	1.69	100.	103.	103.0
13C4-PFOA	413000	1.87	100.	102.	102.0
13C4-PFOS	200000	1.97	100.	99.8	99.8
13C5-PFNA	353000	2.01	100.	103.	103.0
13C6-PFHxA	1950000	1.42	100.	98.9	98.9

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): 1.97(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

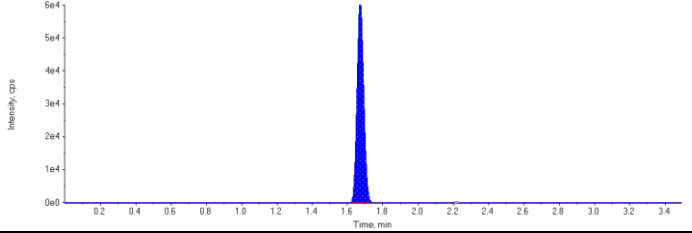
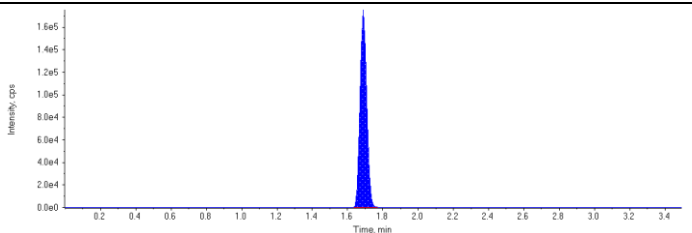
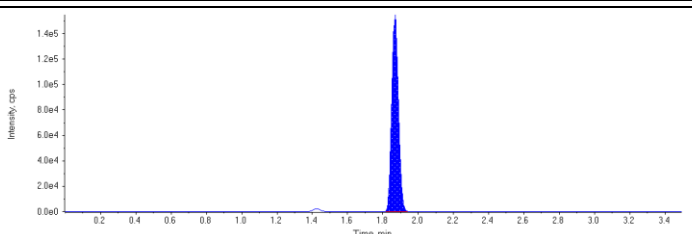
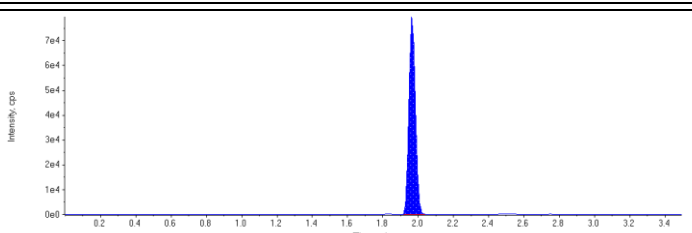
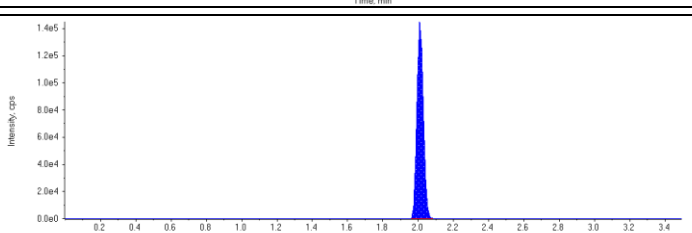
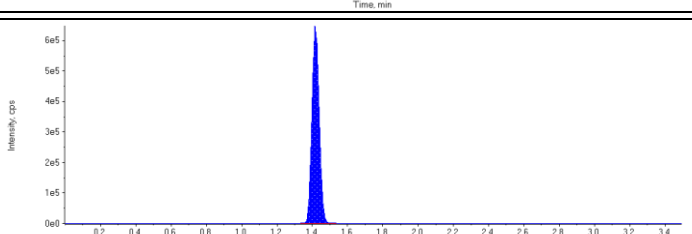
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 10.6 ng/L Area Ratio: 3.05 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 11.2 ng/L Area Ratio: 3.24 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 11.6 ng/L Area Ratio: 1.43 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 12.0 ng/L Area Ratio: 1.75 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 11.7 ng/L Area Ratio: 1.92 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 11.4 ng/L Area Ratio: 1.54 Sample Type: (Standard)	

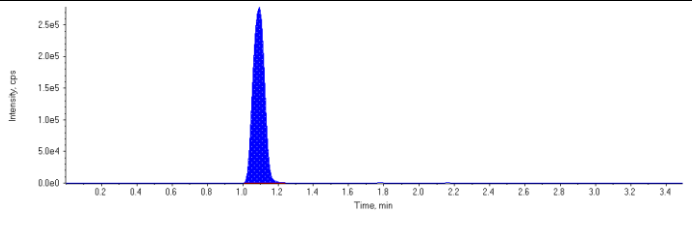
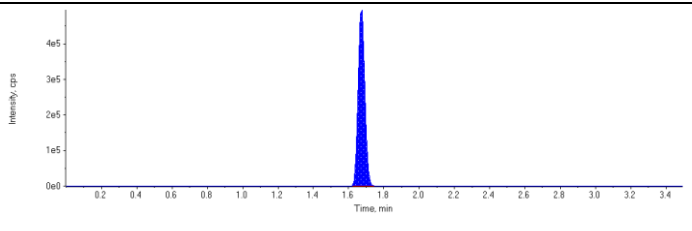
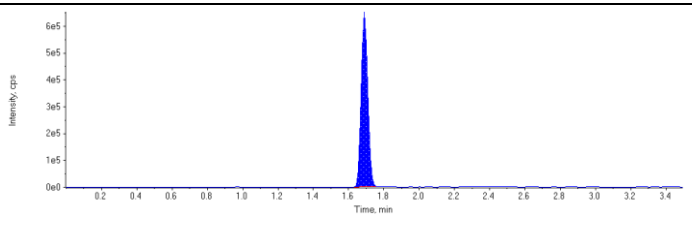
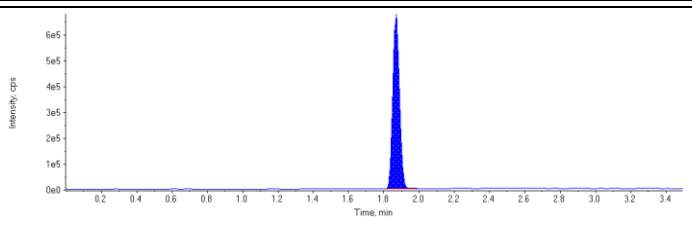
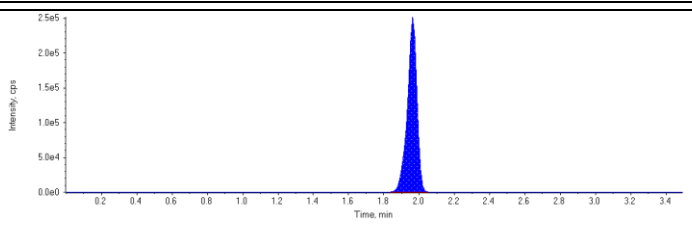
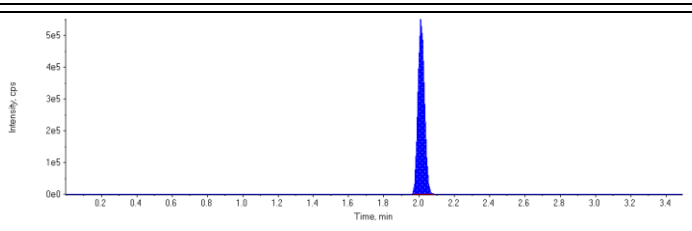
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 105. ng/L Area Ratio: 0.0842 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 103. ng/L Area Ratio: 0.238 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.212 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 99.8 ng/L Area Ratio: 0.103 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.181 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 98.9 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

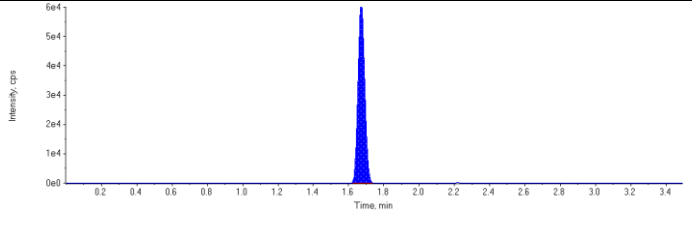
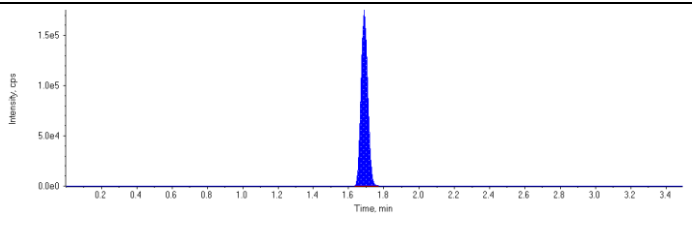
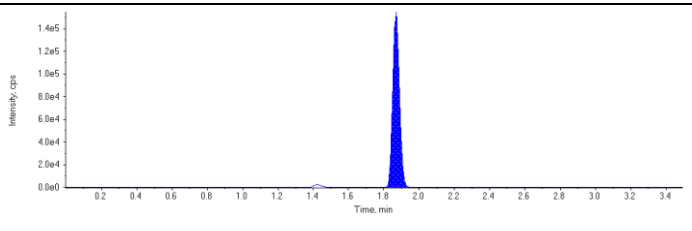
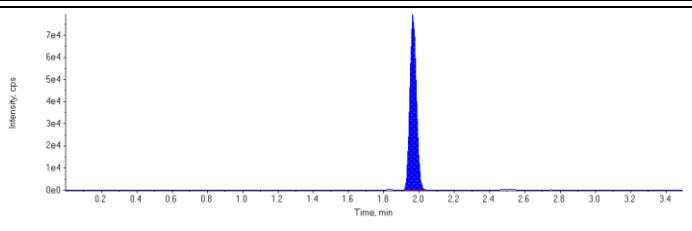
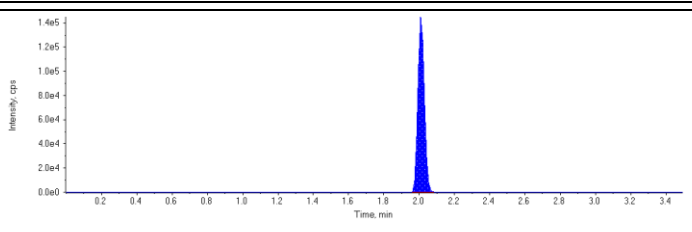
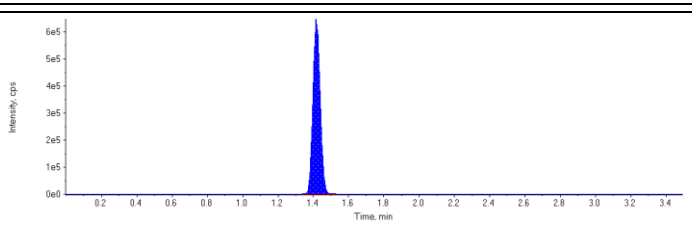
Sample Name	STD 4	Injection Vial	6
Sample ID	STD 4	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:16:23 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	163000.	1.67	1.00	-
MPFHpA	456000.	1.69	1.00	-
MPFOA	407000.	1.87	1.00	-
MPFOS	203000.	1.97	1.00	-
MPFNA	370000.	2.01	1.00	-
13C6-PFHxA IS	1870000.	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	1270000	1.09	30.0	26.1	87.0
PFHxS 1	1320000	1.67	30.0	27.4	91.4
PFHpA 1	1680000	1.69	30.0	29.7	99.0
PFOA 1	1760000	1.87	30.0	29.8	99.5
PFOS 1	942000	1.96	30.0	27.8	92.8
PFNA 1	1410000	2.01	30.0	28.6	95.2
18O2-PFHxS	163000	1.67	100.	109.	109.0
13C4-PFHpA	456000	1.69	100.	106.	106.0
13C4-PFOA	407000	1.87	100.	105.	105.0
13C4-PFOS	203000	1.97	100.	105.	105.0
13C5-PFNA	370000	2.01	100.	113.	113.0
13C6-PFHxA	1870000	1.42	100.	94.7	94.7

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): 1.97(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

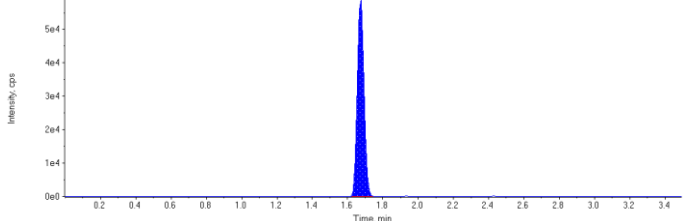
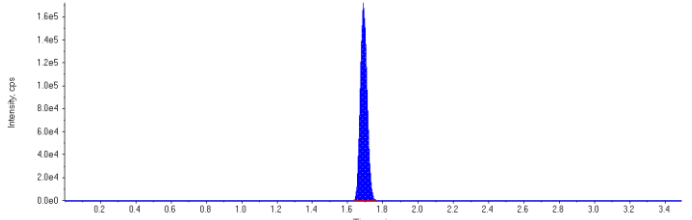
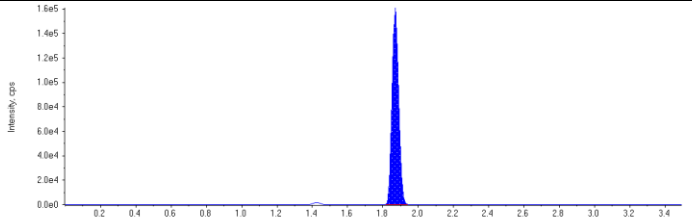
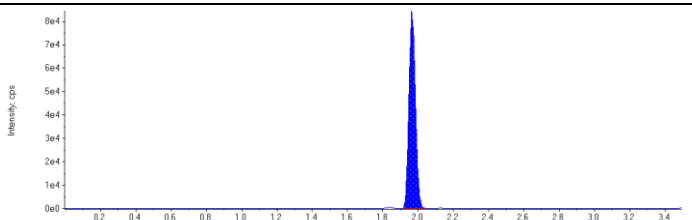
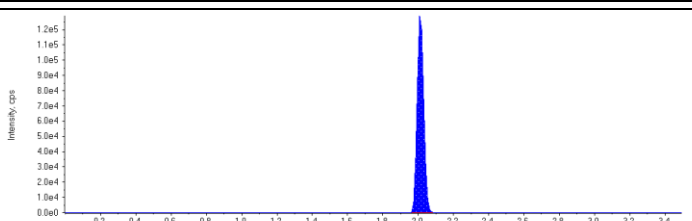
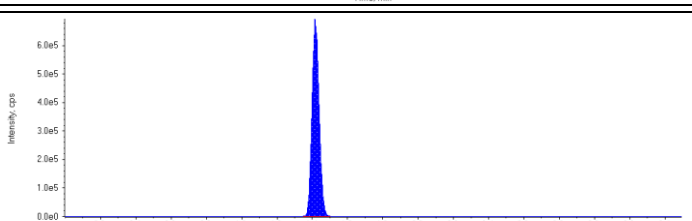
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 26.1 ng/L Area Ratio: 7.80 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 27.4 ng/L Area Ratio: 8.07 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 29.7 ng/L Area Ratio: 3.68 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 29.8 ng/L Area Ratio: 4.33 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 27.8 ng/L Area Ratio: 4.65 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 28.6 ng/L Area Ratio: 3.82 Sample Type: (Standard)	

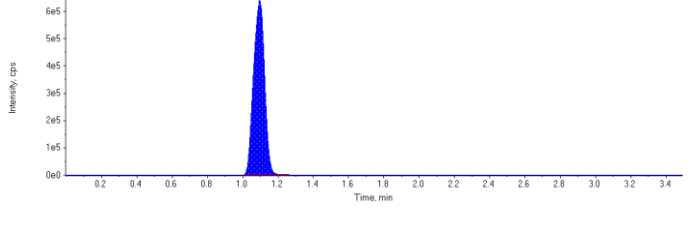
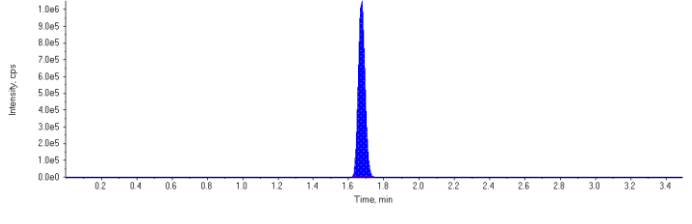
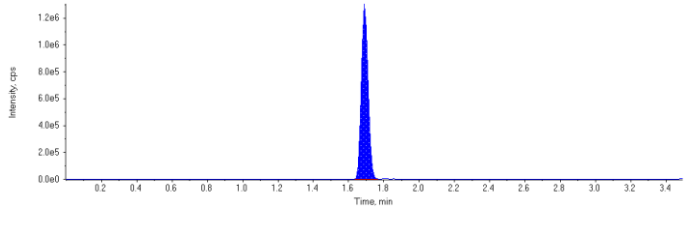
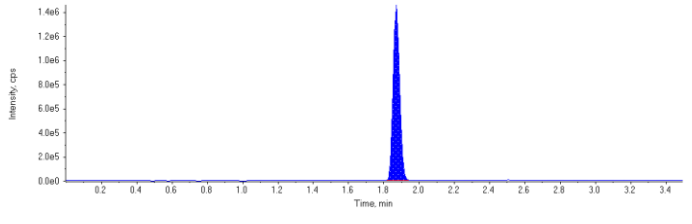
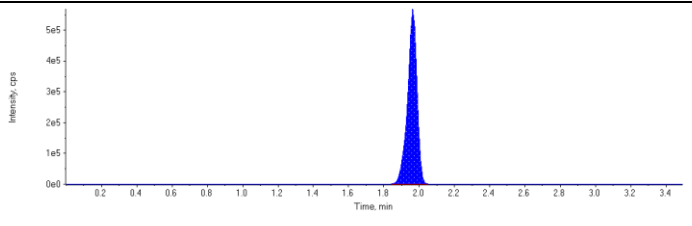
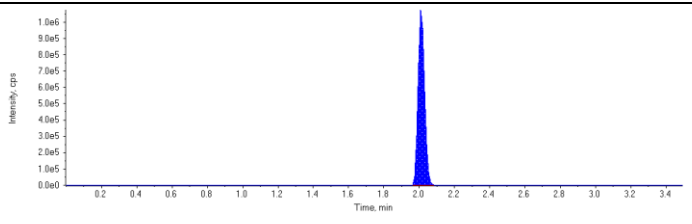
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 109. ng/L Area Ratio: 0.0875 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 106. ng/L Area Ratio: 0.244 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 105. ng/L Area Ratio: 0.218 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 105. ng/L Area Ratio: 0.109 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 113. ng/L Area Ratio: 0.198 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 94.7 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

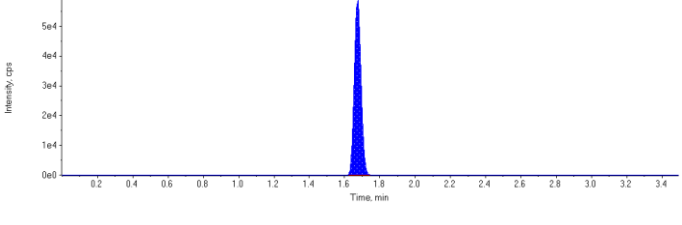
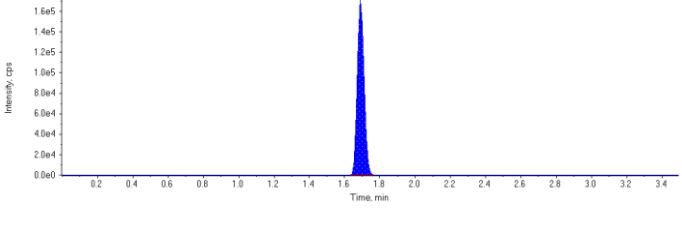
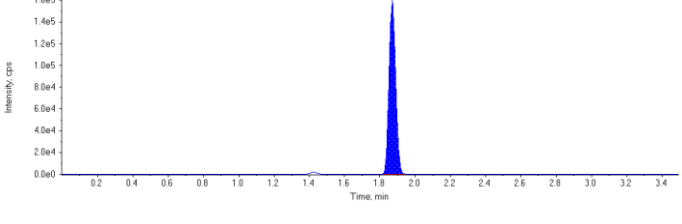
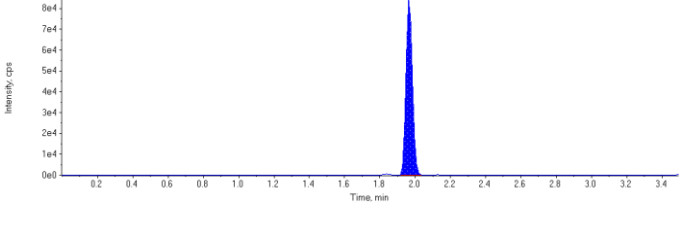
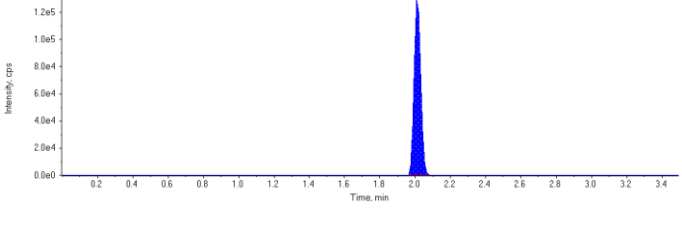
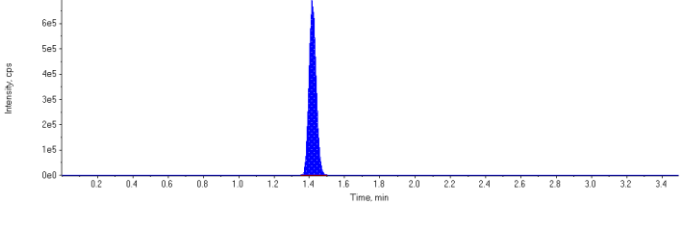
Sample Name	STD 5	Injection Vial	7
Sample ID	STD 5	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:21:28 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	158000.	1.67	1.00	-
MPFHpA	454000.	1.69	1.00	-
MPFOA	415000.	1.87	1.00	-
MPFOS	215000.	1.97	1.00	-
MPFNA	340000.	2.01	1.00	-
13C6-PFHxA IS	1950000.	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	2800000	1.10	60.0	58.7	97.8
PFHxS 1	2780000	1.67	60.0	59.6	99.3
PFHpA 1	3420000	1.69	60.0	60.7	101.0
PFOA 1	3710000	1.87	60.0	61.8	103.0
PFOS 1	2110000	1.96	60.0	58.5	97.5
PFNA 1	2770000	2.01	60.0	61.2	102.0
18O2-PFHxS	158000	1.67	100.	101.	101.0
13C4-PFHpA	454000	1.69	100.	101.	101.0
13C4-PFOA	415000	1.87	100.	103.	103.0
13C4-PFOS	215000	1.97	100.	107.	107.0
13C5-PFNA	340000	2.01	100.	99.7	99.7
13C6-PFHxA	1950000	1.42	100.	98.8	98.8

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): 1.97(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

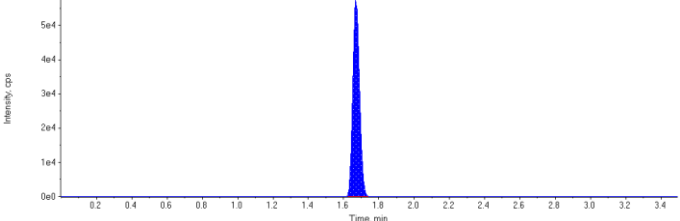
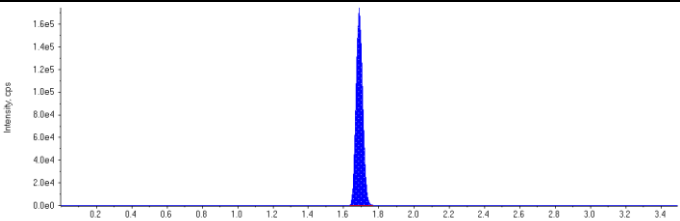
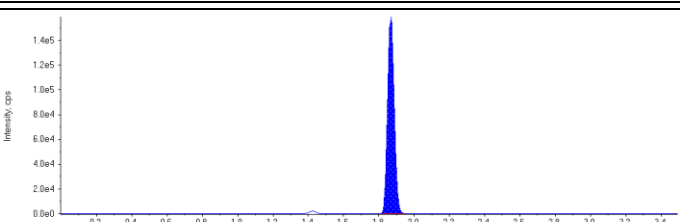
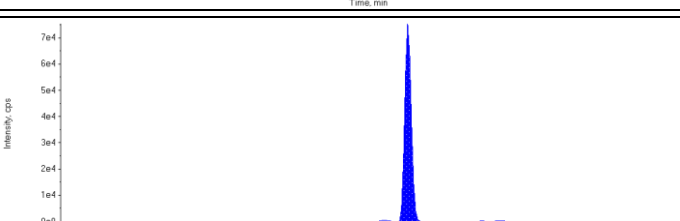
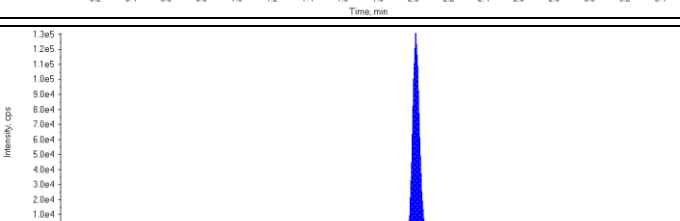
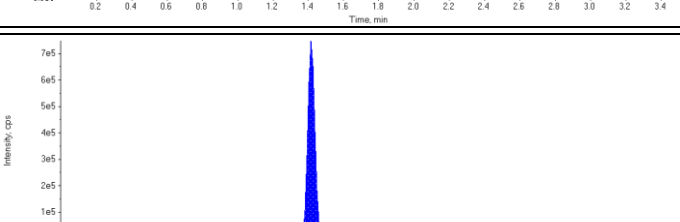
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 58.7 ng/L Area Ratio: 17.8 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 59.6 ng/L Area Ratio: 17.6 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 60.7 ng/L Area Ratio: 7.52 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 61.8 ng/L Area Ratio: 8.94 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 58.5 ng/L Area Ratio: 9.83 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 61.2 ng/L Area Ratio: 8.15 Sample Type: (Standard)	

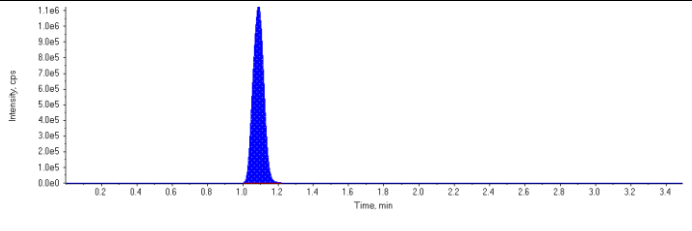
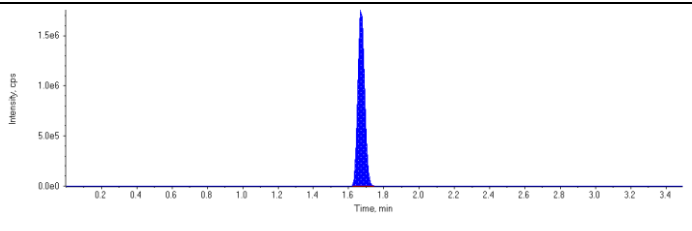
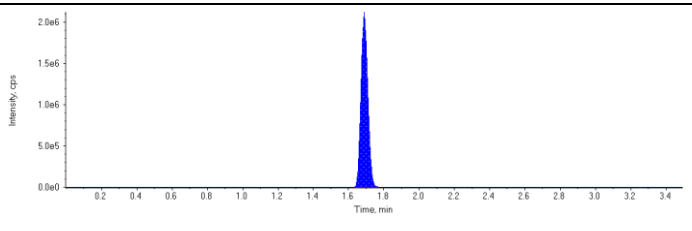
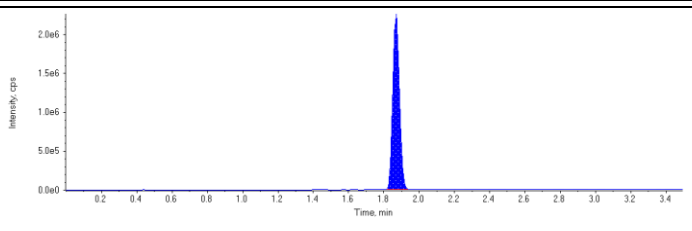
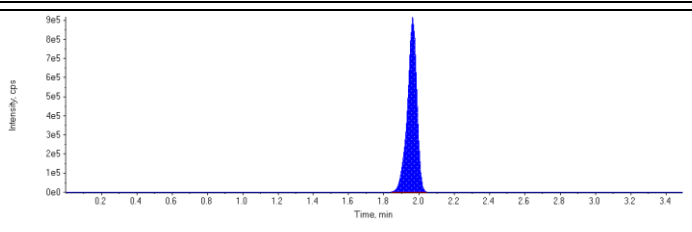
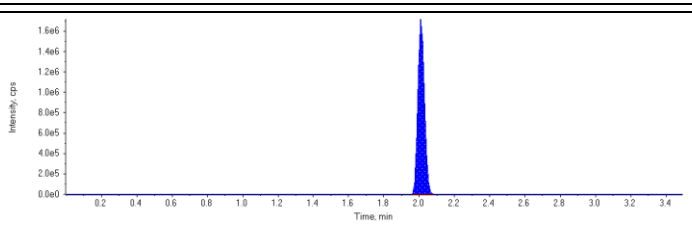
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0810 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 101. ng/L Area Ratio: 0.233 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 103. ng/L Area Ratio: 0.213 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 107. ng/L Area Ratio: 0.110 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 99.7 ng/L Area Ratio: 0.175 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 98.8 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

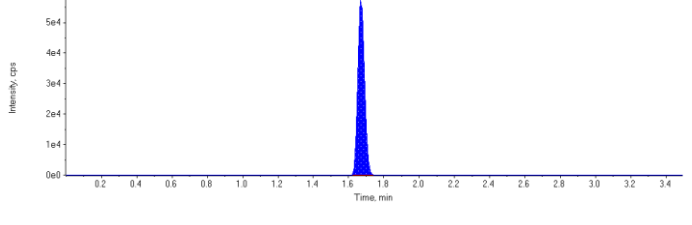
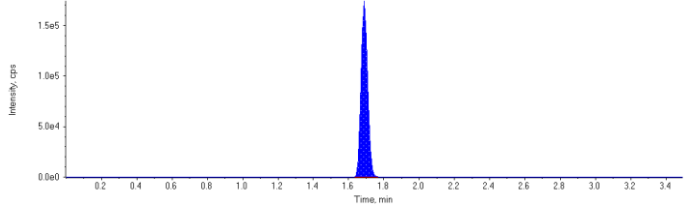
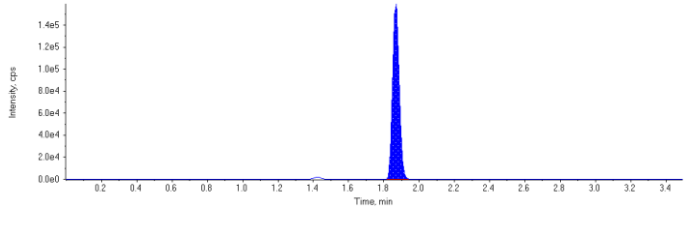
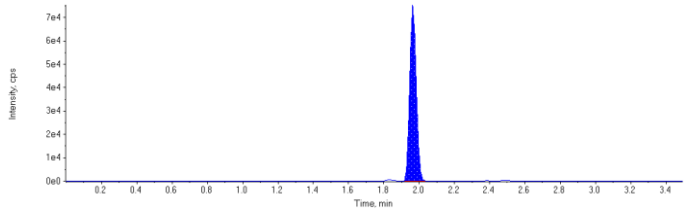
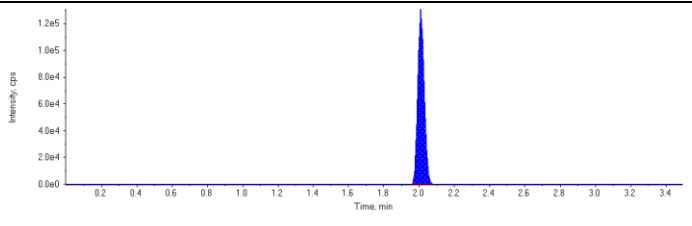
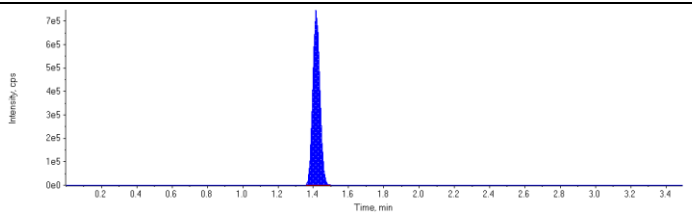
Sample Name	STD 6	Injection Vial	8
Sample ID	STD 6	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:26:34 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	450000.	1.69	1.00	-
MPFOA	416000.	1.87	1.00	-
MPFOS	193000.	1.96	1.00	-
MPFNA	334000.	2.01	1.00	-
13C6-PFHxA IS	2110000.	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	4940000	1.09	100.	106.	106.0
PFHxS 1	4690000	1.67	100.	103.	103.0
PFHpA 1	5570000	1.69	100.	99.9	99.9
PFOA 1	5930000	1.87	100.	98.5	98.5
PFOS 1	3370000	1.96	100.	104.	104.0
PFNA 1	4470000	2.01	100.	101.	101.0
18O2-PFHxS	153000	1.67	100.	90.5	90.5
13C4-PFHpA	450000	1.69	100.	92.4	92.4
13C4-PFOA	416000	1.87	100.	95.1	95.1
13C4-PFOS	193000	1.96	100.	88.7	88.7
13C5-PFNA	334000	2.01	100.	90.4	90.4
13C6-PFHxA	2110000	1.42	100.	107.	107.0

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

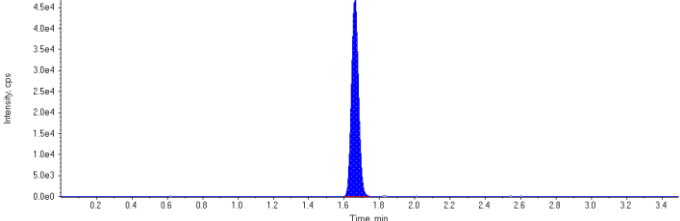
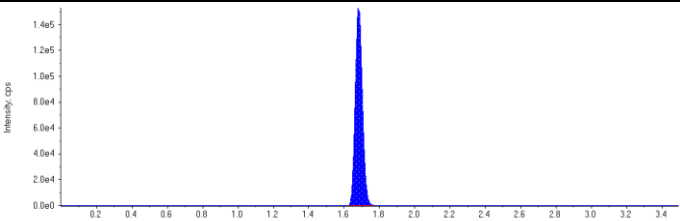
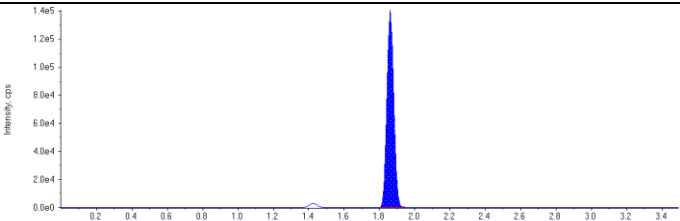
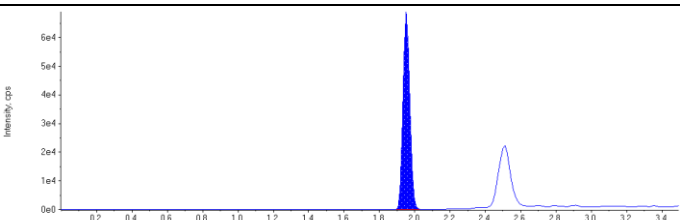
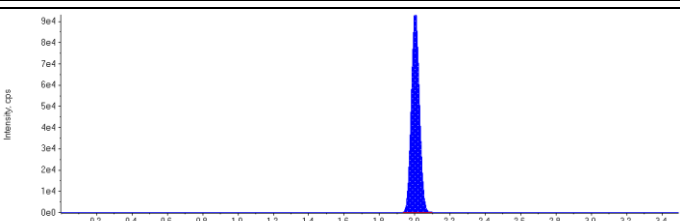
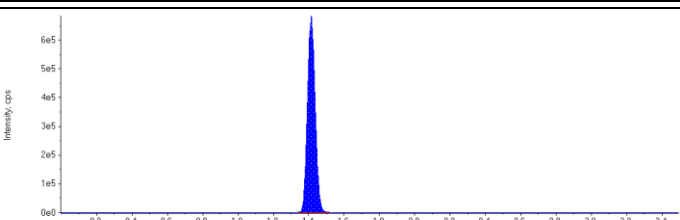
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 106. ng/L Area Ratio: 32.3 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 30.7 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 99.9 ng/L Area Ratio: 12.4 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 98.5 ng/L Area Ratio: 14.2 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 104. ng/L Area Ratio: 17.5 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 101. ng/L Area Ratio: 13.4 Sample Type: (Standard)	

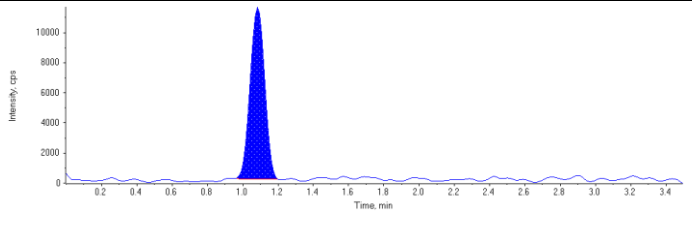
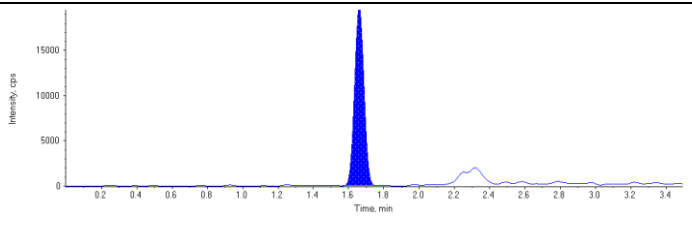
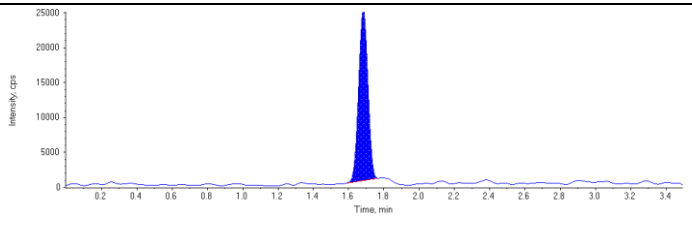
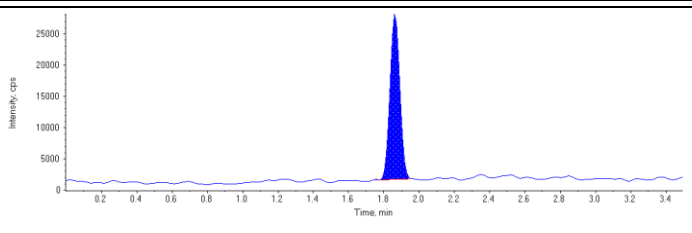
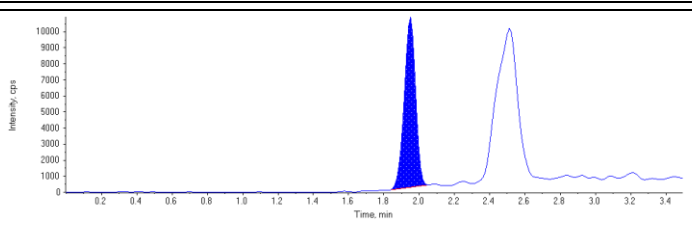
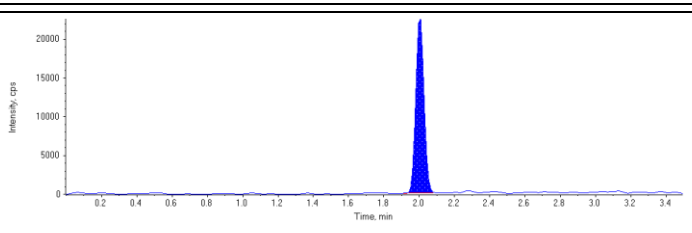
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 90.5 ng/L Area Ratio: 0.0725 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 92.4 ng/L Area Ratio: 0.213 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 95.1 ng/L Area Ratio: 0.197 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 88.7 ng/L Area Ratio: 0.0914 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 90.4 ng/L Area Ratio: 0.158 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 107. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

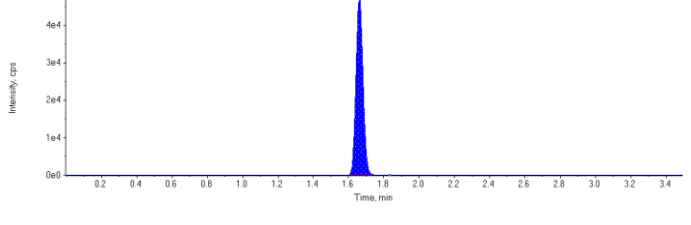
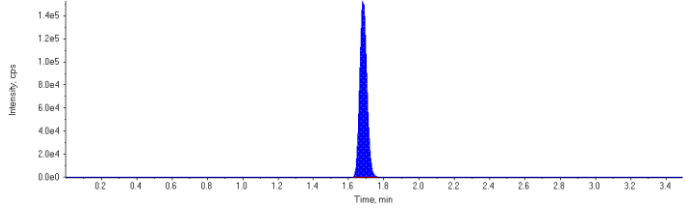
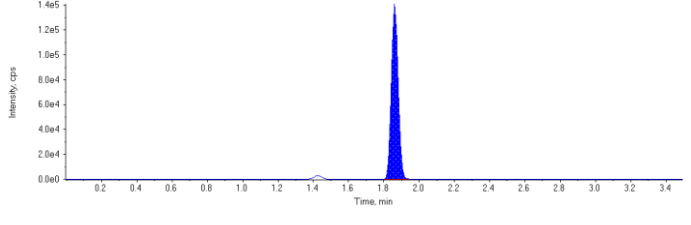
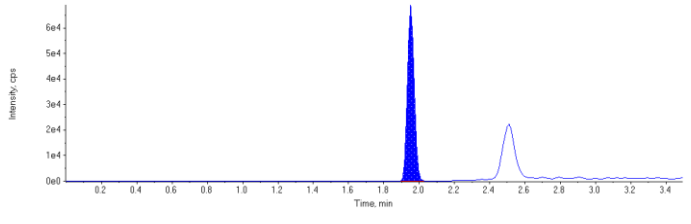
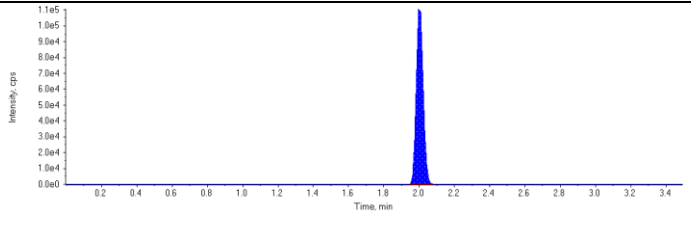
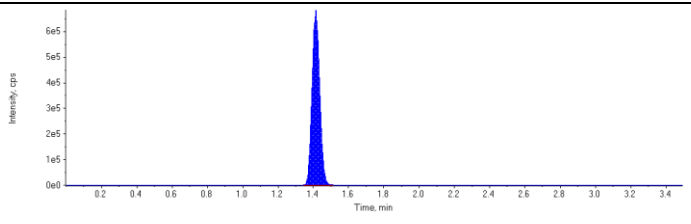
Sample Name	STD 1	Injection Vial	3
Sample ID	STD 1	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:23:01 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	131000.	1.66	1.00	-
MPFHpA	432000.	1.68	1.00	-
MPFOA	375000.	1.86	1.00	-
MPFOS	183000.	1.95	1.00	-
MPFNA	305000.	2.00	1.00	-
13C6-PFHxA IS	2080000.	1.41	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	65300	1.08	2.00	2.34	117.0
PFHxS 1	72500	1.66	2.00	2.18	109.0
PFHpA 1	88900	1.68	2.00	2.00	99.9
PFOA 1	102000	1.86	2.00	2.05	102.0
PFOS 1	47100	1.95	2.00	2.14	107.0
PFNA 1	73200	2.00	2.00	1.94	97.2
18O2-PFHxS	131000	1.66	100.	96.1	96.1
13C4-PFHpA	432000	1.68	100.	97.6	97.6
13C4-PFOA	375000	1.86	100.	97.4	97.4
13C4-PFOS	183000	1.95	100.	99.0	99.0
13C5-PFNA	304000	2.00	100.	91.8	91.8
13C6-PFHxA	2080000	1.41	100.	105.	105.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

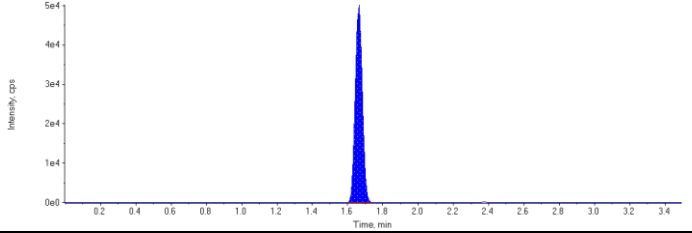
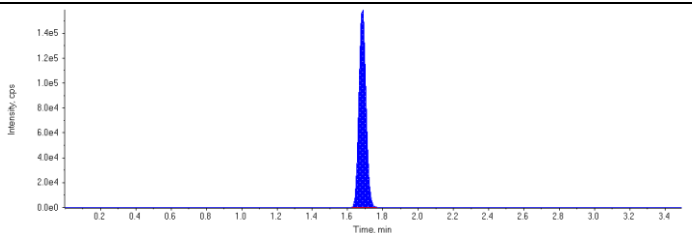
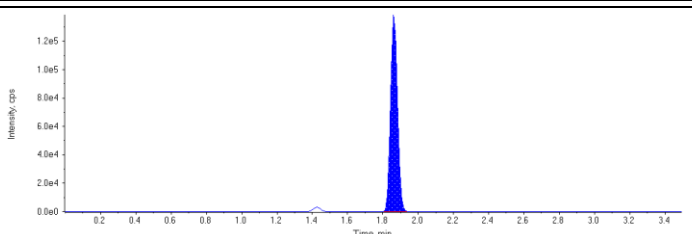
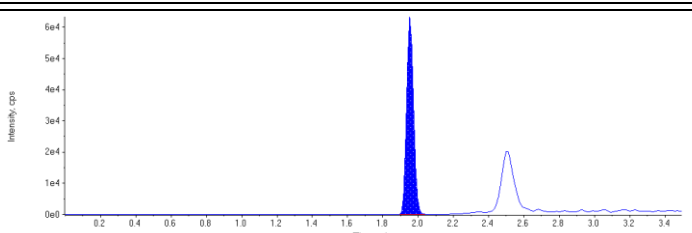
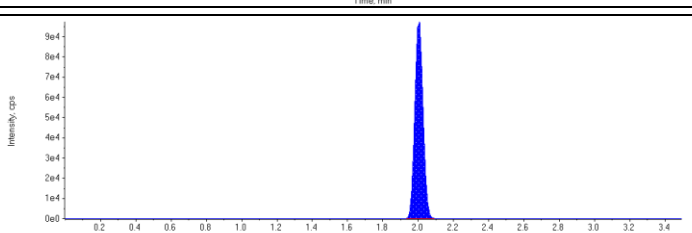
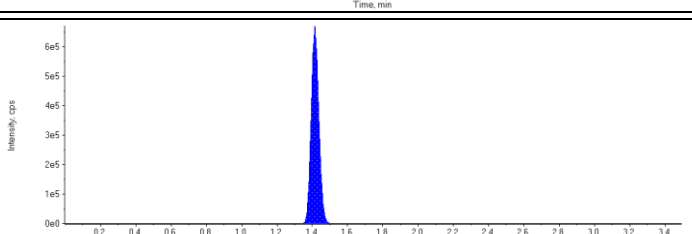
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 2.34 ng/L Area Ratio: 0.498 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 2.18 ng/L Area Ratio: 0.553 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 2.00 ng/L Area Ratio: 0.206 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 2.05 ng/L Area Ratio: 0.271 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 2.14 ng/L Area Ratio: 0.256 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 1.94 ng/L Area Ratio: 0.240 Sample Type: (Standard)	

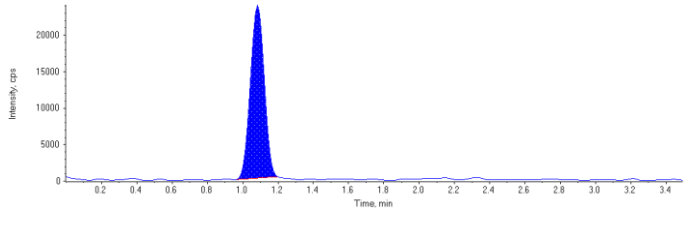
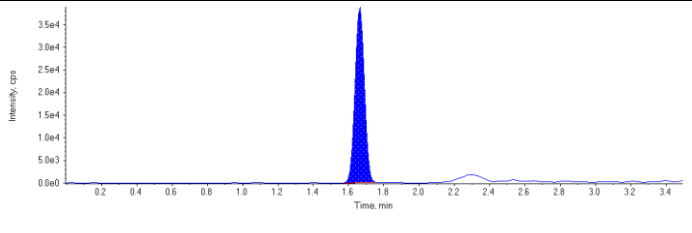
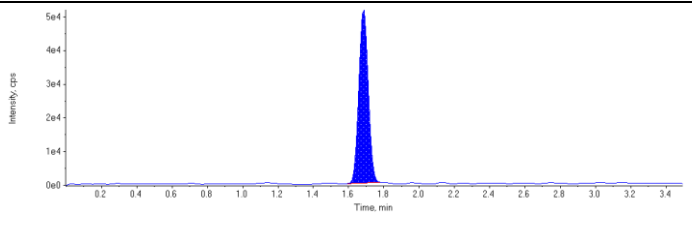
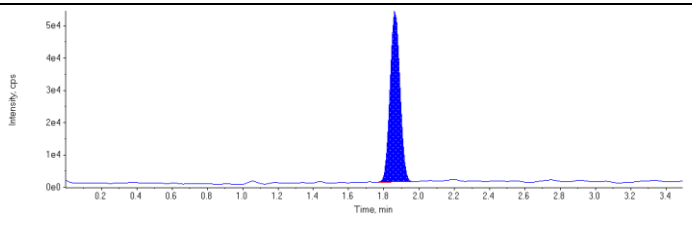
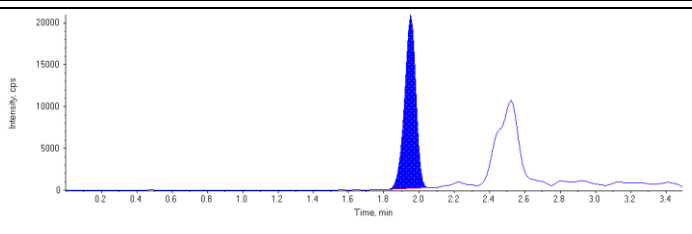
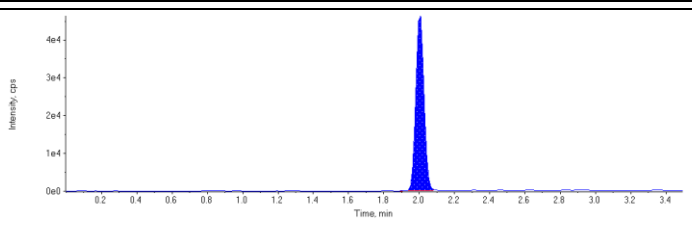
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 96.1 ng/L Area Ratio: 0.0631 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 97.6 ng/L Area Ratio: 0.208 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 97.4 ng/L Area Ratio: 0.181 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 99.0 ng/L Area Ratio: 0.0884 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 91.8 ng/L Area Ratio: 0.147 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 105. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

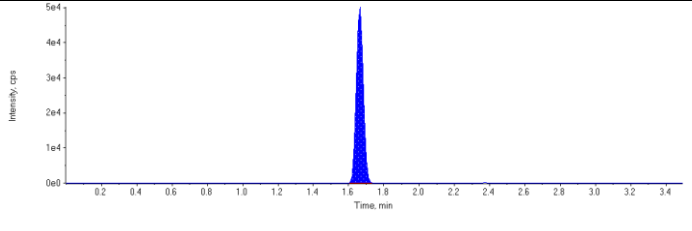
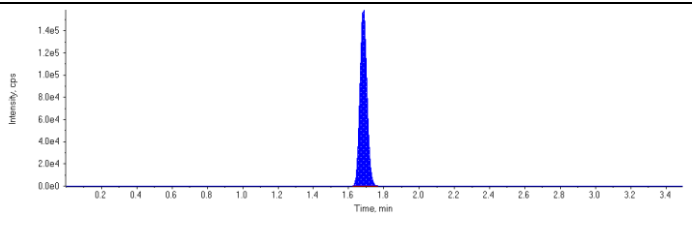
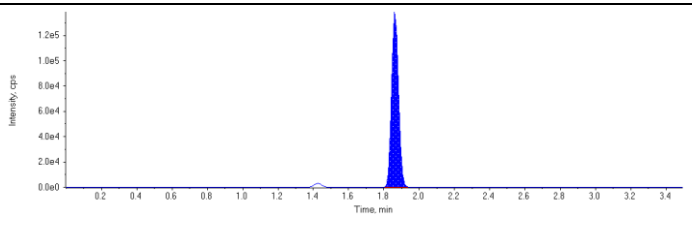
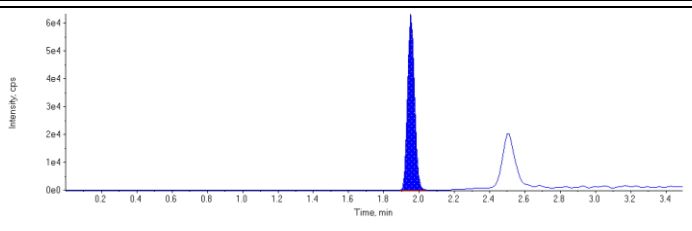
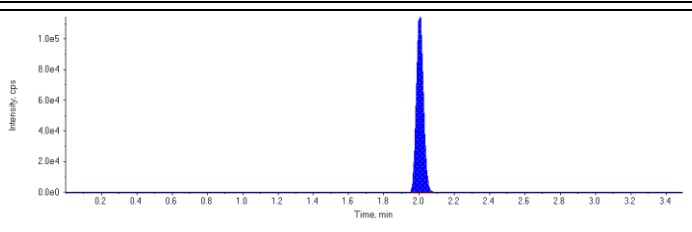
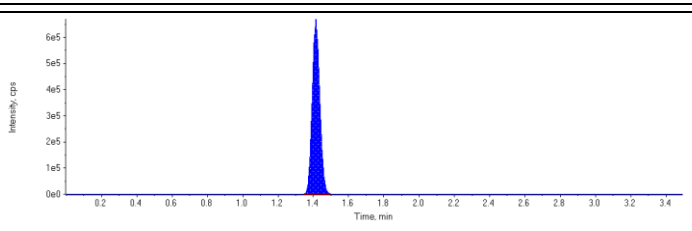
Sample Name	STD 2	Injection Vial	4
Sample ID	STD 2	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:28:07 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	139000.	1.66	1.00	-
MPFHpA	446000.	1.68	1.00	-
MPFOA	376000.	1.86	1.00	-
MPFOS	172000.	1.95	1.00	-
MPFNA	318000.	2.00	1.00	-
13C6-PFHxA IS	2010000.	1.41	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	129000	1.08	4.00	3.92	98.0
PFHxS 1	143000	1.66	4.00	3.86	96.4
PFHpA 1	191000	1.68	4.00	4.05	101.0
PFOA 1	205000	1.86	4.00	4.07	102.0
PFOS 1	91000	1.95	4.00	4.02	100.0
PFNA 1	149000	2.00	4.00	3.99	99.7
18O2-PFHxS	139000	1.66	100.	105.	105.0
13C4-PFHpA	446000	1.68	100.	104.	104.0
13C4-PFOA	376000	1.86	100.	101.	101.0
13C4-PFOS	172000	1.95	100.	96.4	96.4
13C5-PFNA	318000	2.00	100.	99.3	99.3
13C6-PFHxA	2010000	1.41	100.	101.	101.0

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

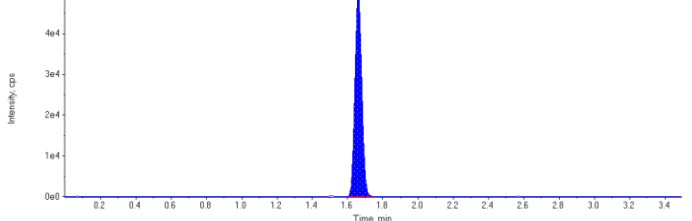
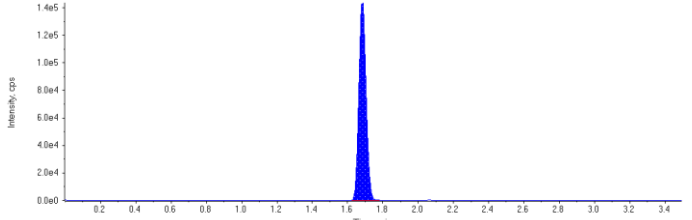
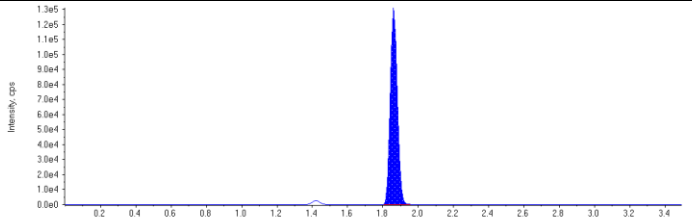
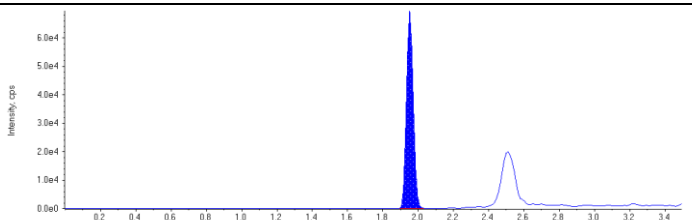
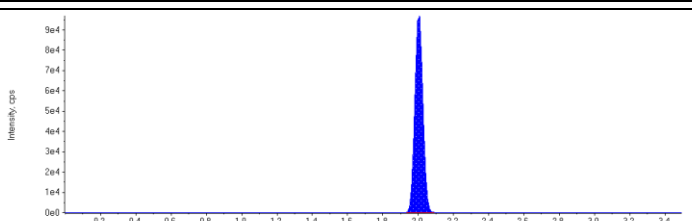
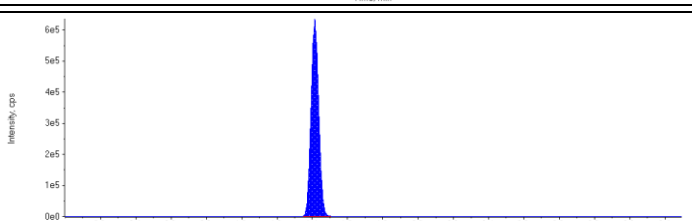
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 3.92 ng/L Area Ratio: 0.926 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 3.86 ng/L Area Ratio: 1.03 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 4.05 ng/L Area Ratio: 0.428 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 4.07 ng/L Area Ratio: 0.544 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 4.02 ng/L Area Ratio: 0.528 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 3.99 ng/L Area Ratio: 0.468 Sample Type: (Standard)	

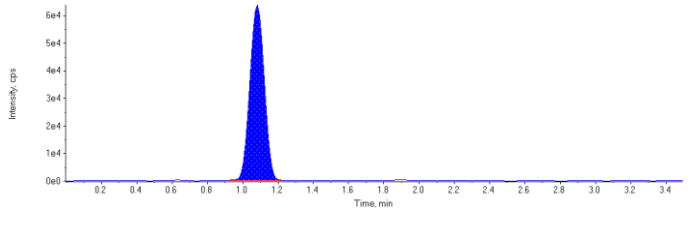
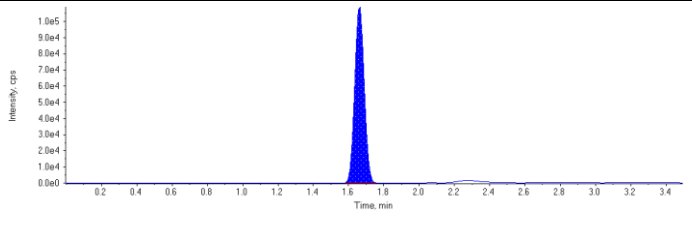
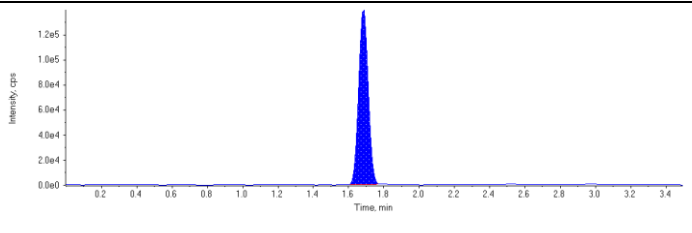
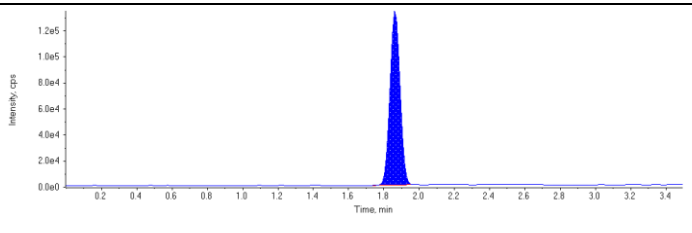
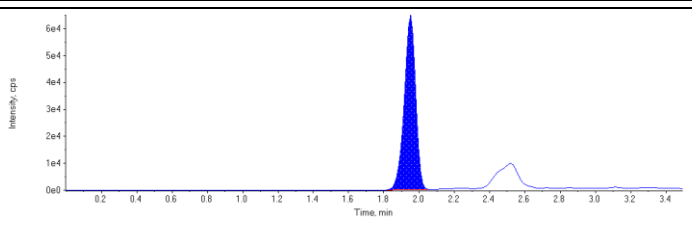
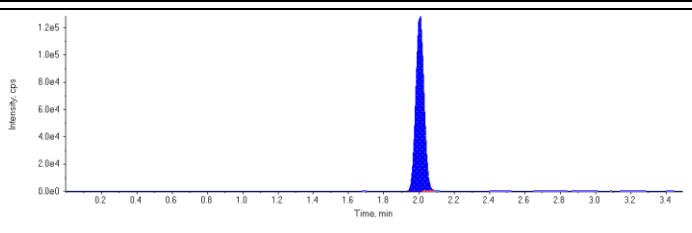
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 105. ng/L Area Ratio: 0.0693 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 104. ng/L Area Ratio: 0.223 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.187 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 96.4 ng/L Area Ratio: 0.0860 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 99.3 ng/L Area Ratio: 0.159 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 101. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

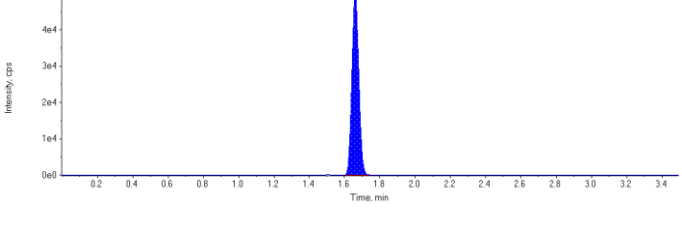
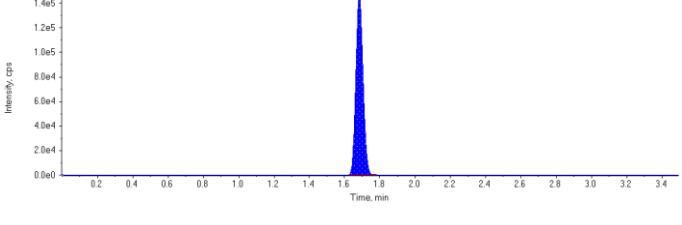
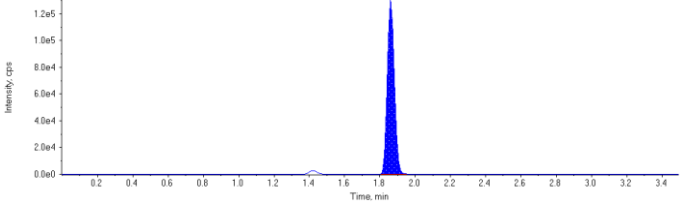
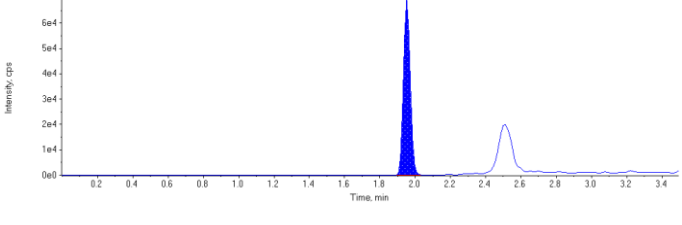
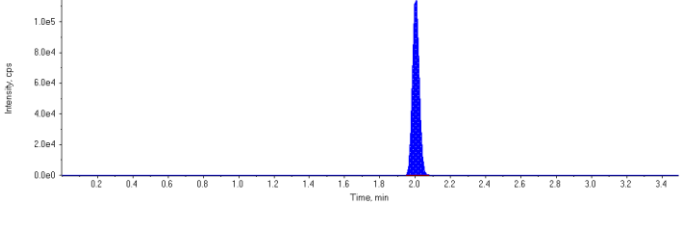
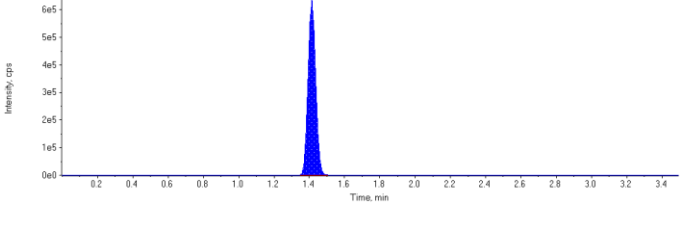
Sample Name	STD 3	Injection Vial	5
Sample ID	STD 3	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:33:12 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	135000.	1.66	1.00	-
MPFHpA	414000.	1.68	1.00	-
MPFOA	362000.	1.86	1.00	-
MPFOS	185000.	1.95	1.00	-
MPFNA	313000.	2.00	1.00	-
13C6-PFHxA IS	1910000.	1.41	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	359000	1.08	12.0	10.3	85.8
PFHxS 1	410000	1.66	12.0	10.9	90.8
PFHpA 1	523000	1.68	12.0	11.8	98.2
PFOA 1	529000	1.86	12.0	10.9	90.5
PFOS 1	287000	1.95	12.0	11.1	92.7
PFNA 1	416000	2.00	12.0	11.7	97.6
18O2-PFHxS	135000	1.66	100.	108.	108.0
13C4-PFHpA	414000	1.68	100.	101.	101.0
13C4-PFOA	362000	1.86	100.	102.	102.0
13C4-PFOS	185000	1.95	100.	108.	108.0
13C5-PFNA	313000	2.00	100.	102.	102.0
13C6-PFHxA	1910000	1.41	100.	96.9	96.9

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

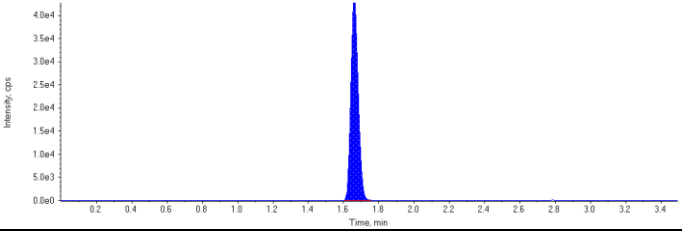
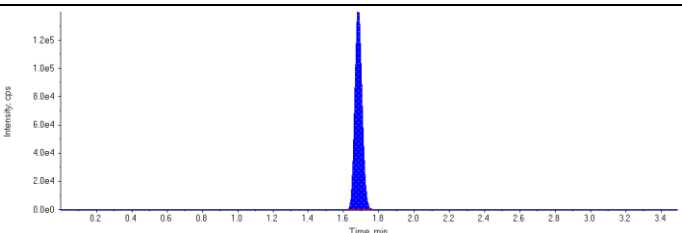
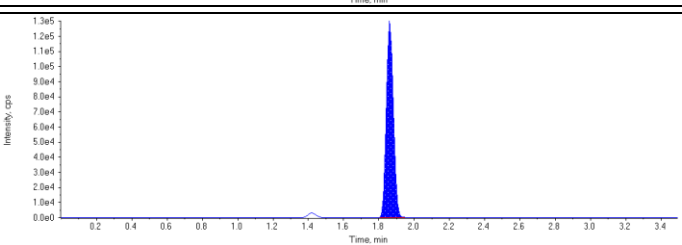
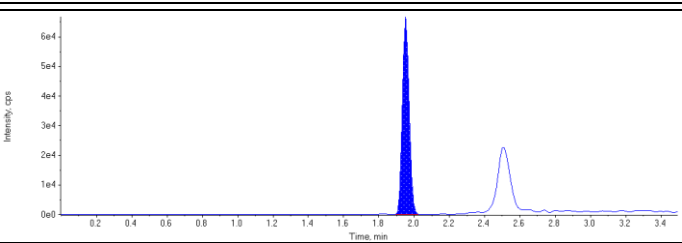
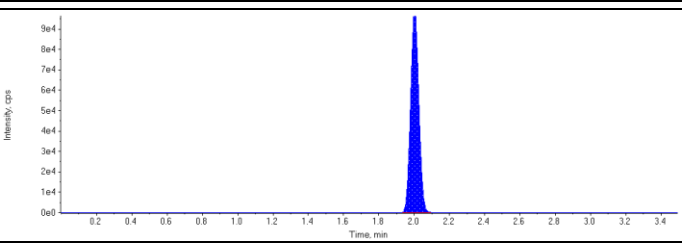
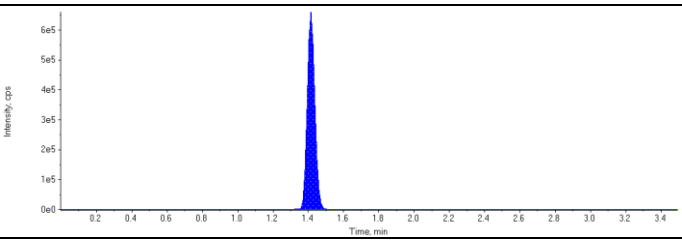
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 10.3 ng/L Area Ratio: 2.65 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 10.9 ng/L Area Ratio: 3.02 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 11.8 ng/L Area Ratio: 1.26 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 10.9 ng/L Area Ratio: 1.46 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 11.1 ng/L Area Ratio: 1.55 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 11.7 ng/L Area Ratio: 1.33 Sample Type: (Standard)	

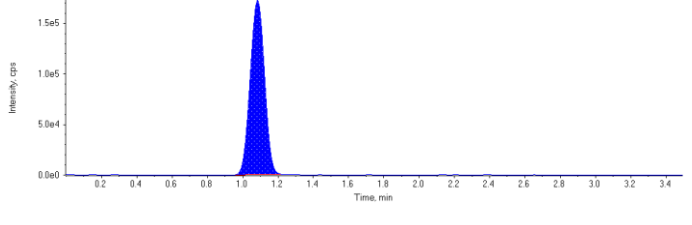
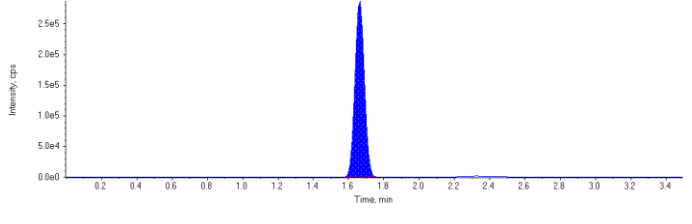
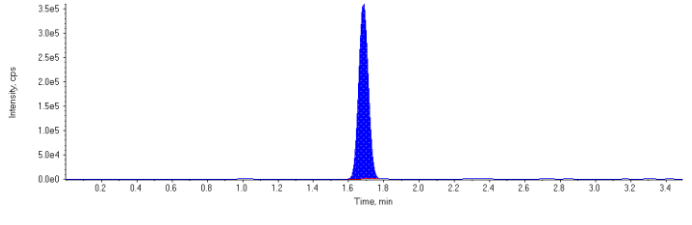
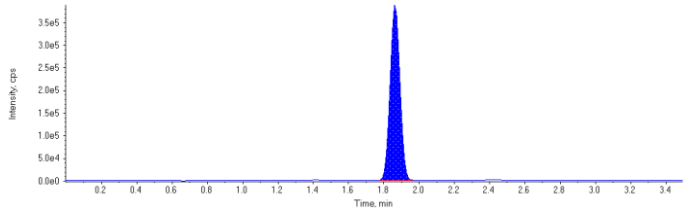
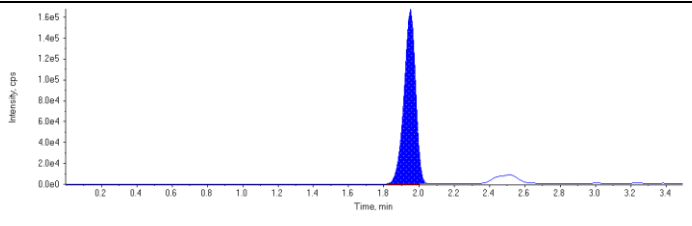
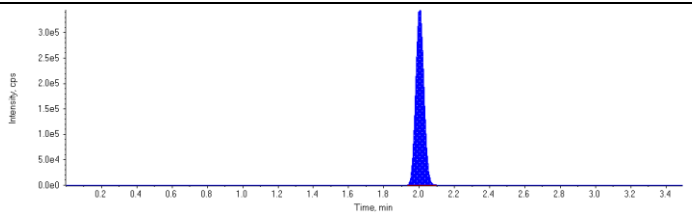
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 108. ng/L Area Ratio: 0.0707 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 101. ng/L Area Ratio: 0.216 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.189 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 108. ng/L Area Ratio: 0.0966 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.164 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 96.9 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

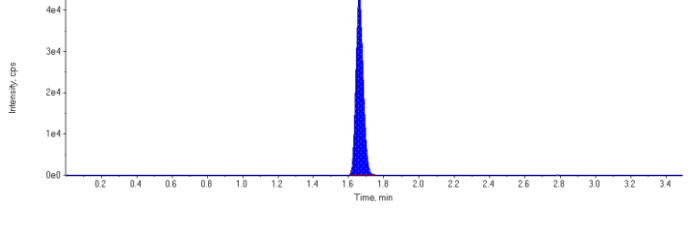
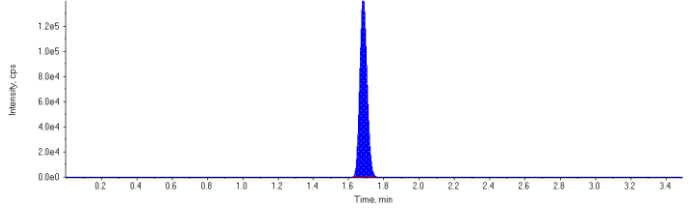
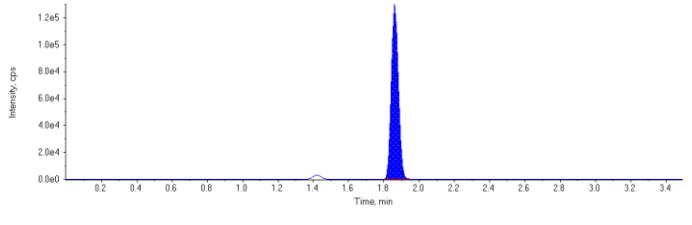
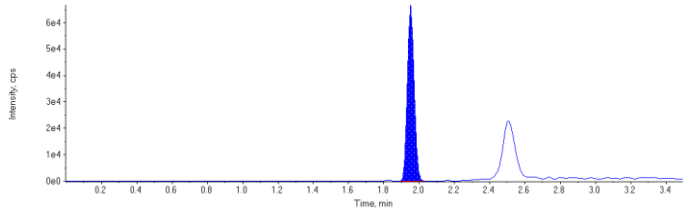
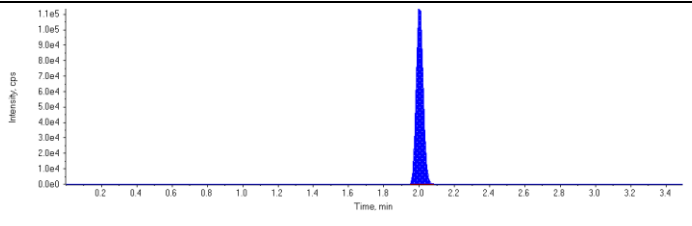
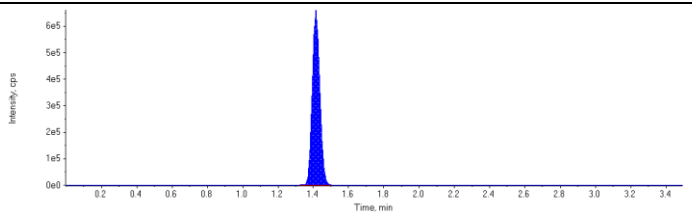
Sample Name	STD 4	Injection Vial	6
Sample ID	STD 4	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:38:18 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	126000.	1.66	1.00	-
MPFHpA	409000.	1.68	1.00	-
MPFOA	357000.	1.86	1.00	-
MPFOS	176000.	1.95	1.00	-
MPFNA	319000.	2.00	1.00	-
13C6-PFHxA IS	1970000.	1.41	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	972000	1.08	30.0	29.1	96.9
PFHxS 1	1060000	1.66	30.0	30.1	100.0
PFHpA 1	1360000	1.68	30.0	30.8	103.0
PFOA 1	1500000	1.86	30.0	31.3	104.0
PFOS 1	754000	1.95	30.0	30.0	99.9
PFNA 1	1140000	2.00	30.0	31.9	106.0
18O2-PFHxS	126000	1.66	100.	97.2	97.2
13C4-PFHpA	409000	1.68	100.	97.2	97.2
13C4-PFOA	357000	1.86	100.	97.9	97.9
13C4-PFOS	176000	1.95	100.	100.	100.0
13C5-PFNA	319000	2.00	100.	102.	102.0
13C6-PFHxA	1970000	1.41	100.	99.7	99.7

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

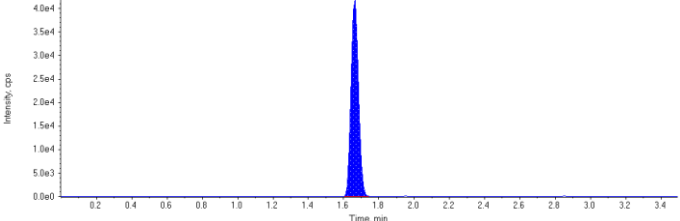
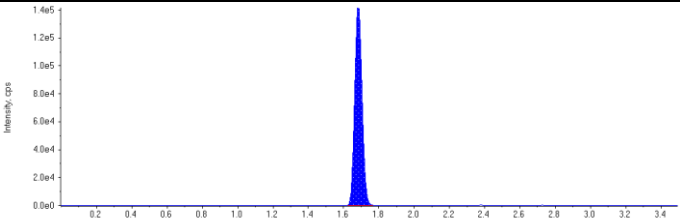
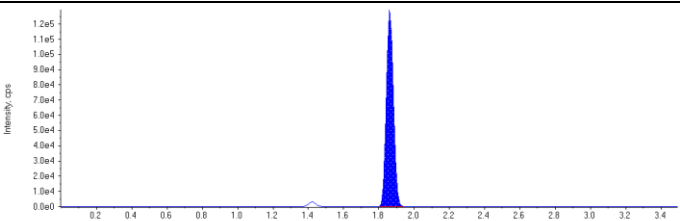
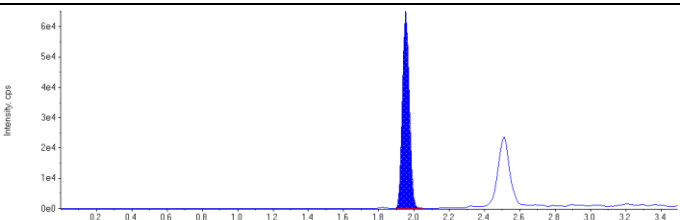
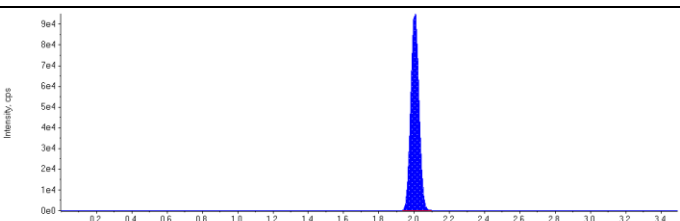
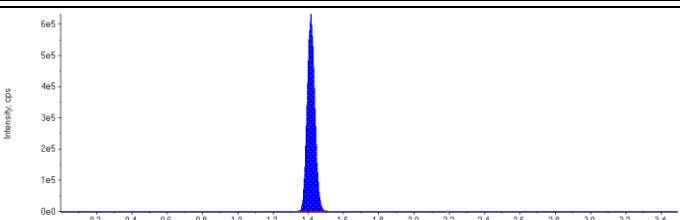
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 29.1 ng/L Area Ratio: 7.73 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 30.1 ng/L Area Ratio: 8.46 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 30.8 ng/L Area Ratio: 3.32 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 31.3 ng/L Area Ratio: 4.21 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 30.0 ng/L Area Ratio: 4.27 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 31.9 ng/L Area Ratio: 3.57 Sample Type: (Standard)	

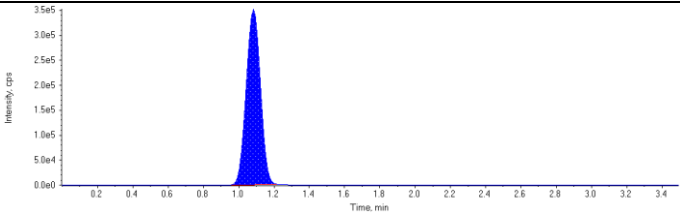
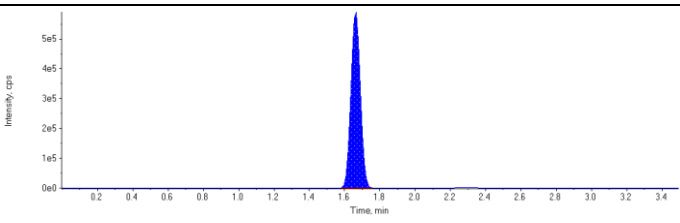
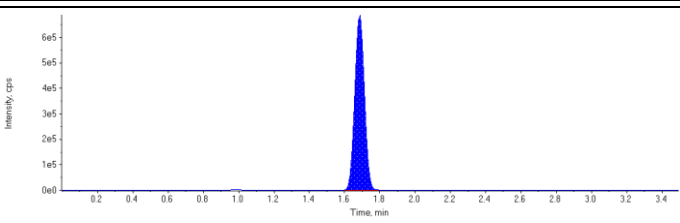
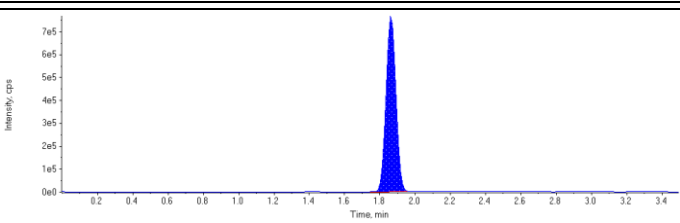
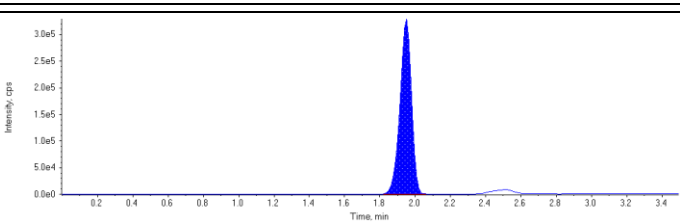
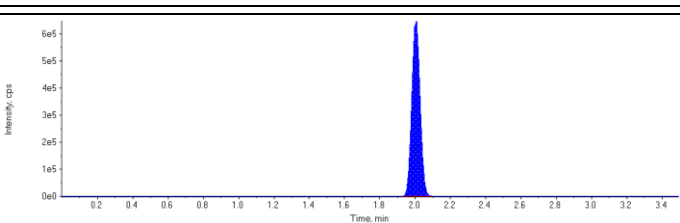
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 97.2 ng/L Area Ratio: 0.0638 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 97.2 ng/L Area Ratio: 0.208 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 97.9 ng/L Area Ratio: 0.181 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 100. ng/L Area Ratio: 0.0896 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.162 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 99.7 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

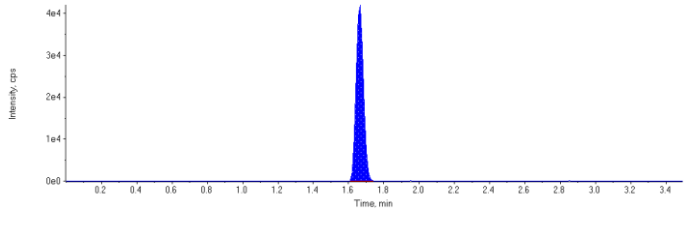
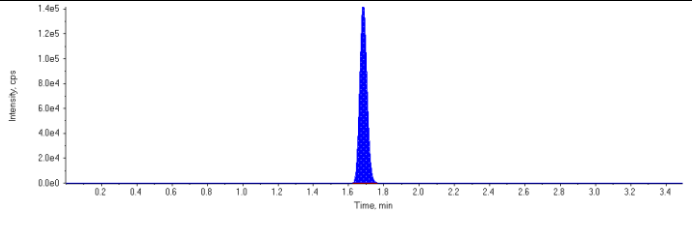
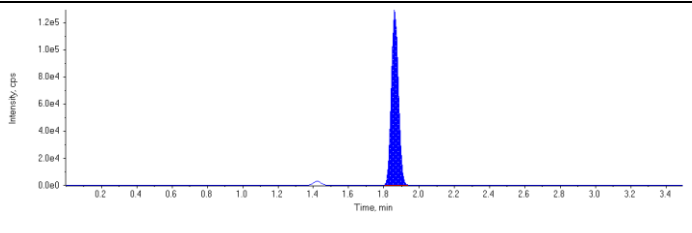
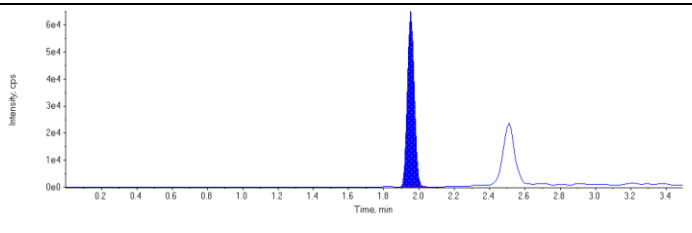
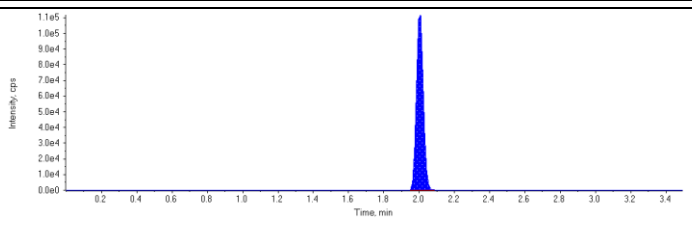
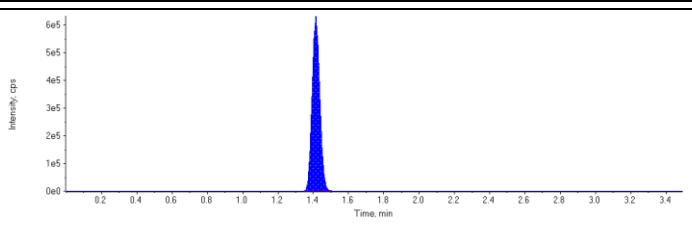
Sample Name	STD 5	Injection Vial	7
Sample ID	STD 5	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:43:23 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	122000.	1.66	1.00	-
MPFHpA	416000.	1.68	1.00	-
MPFOA	356000.	1.86	1.00	-
MPFOS	175000.	1.95	1.00	-
MPFNA	310000.	2.00	1.00	-
13C6-PFHxA IS	1920000.	1.41	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	1960000	1.08	60.0	59.7	99.6
PFHxS 1	2190000	1.66	60.0	63.4	106.0
PFHpA 1	2600000	1.69	60.0	57.9	96.5
PFOA 1	2980000	1.86	60.0	62.2	104.0
PFOS 1	1480000	1.95	60.0	59.1	98.4
PFNA 1	2120000	2.00	60.0	61.2	102.0
18O2-PFHxS	122000	1.66	100.	97.0	97.0
13C4-PFHpA	416000	1.68	100.	101.	101.0
13C4-PFOA	356000	1.86	100.	100.	100.0
13C4-PFOS	175000	1.95	100.	102.	102.0
13C5-PFNA	310000	2.00	100.	101.	101.0
13C6-PFHxA	1920000	1.41	100.	97.3	97.3

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

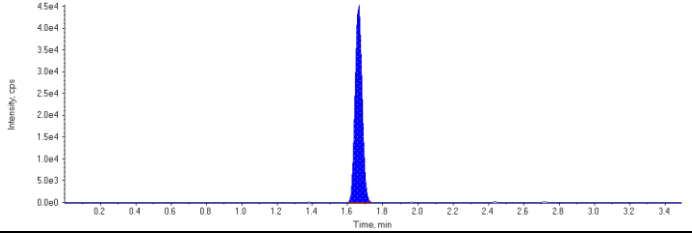
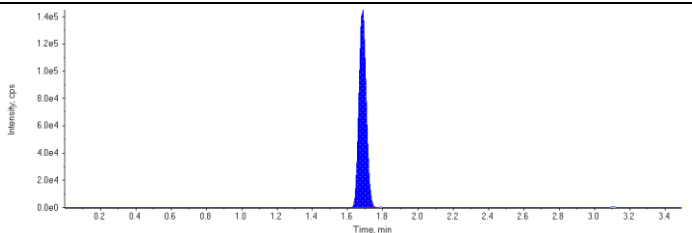
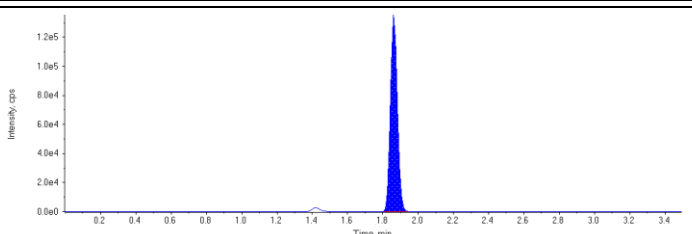
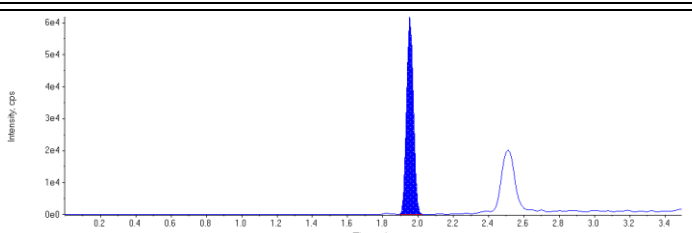
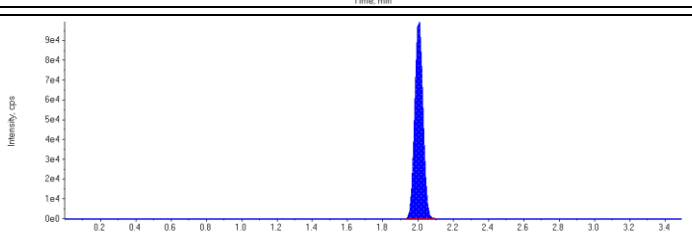
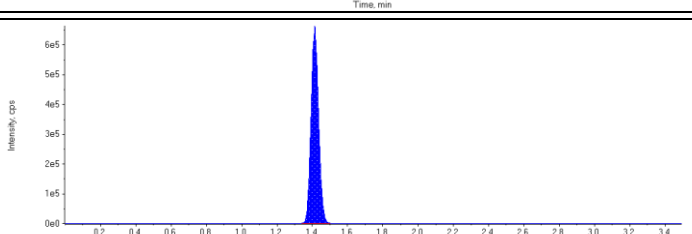
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 59.7 ng/L Area Ratio: 16.0 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 63.4 ng/L Area Ratio: 17.9 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 57.9 ng/L Area Ratio: 6.26 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 62.2 ng/L Area Ratio: 8.38 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 59.1 ng/L Area Ratio: 8.47 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 61.2 ng/L Area Ratio: 6.85 Sample Type: (Standard)	

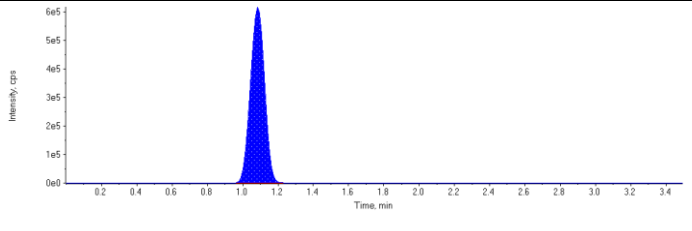
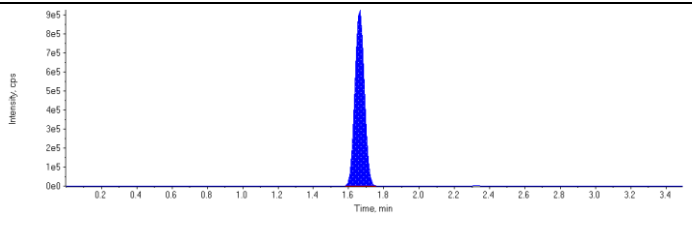
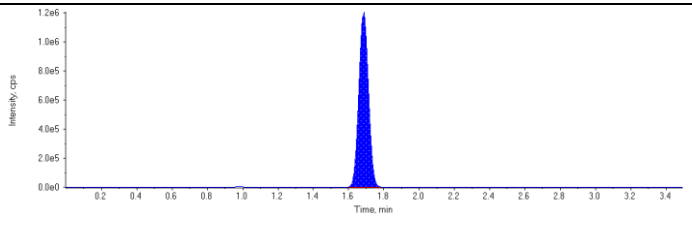
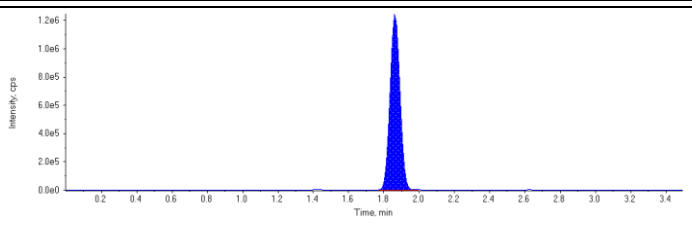
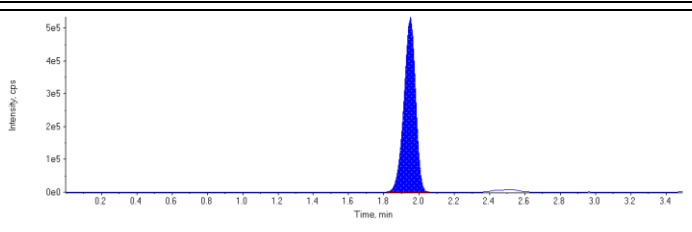
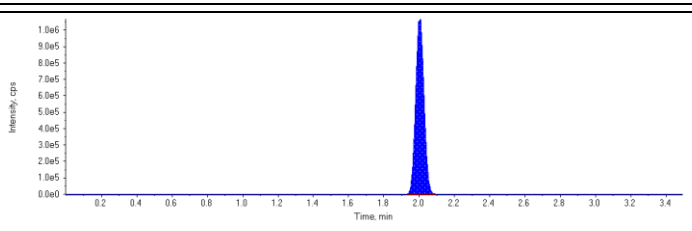
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 97.0 ng/L Area Ratio: 0.0637 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 101. ng/L Area Ratio: 0.216 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 100. ng/L Area Ratio: 0.185 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 0.0909 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 101. ng/L Area Ratio: 0.161 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 97.3 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

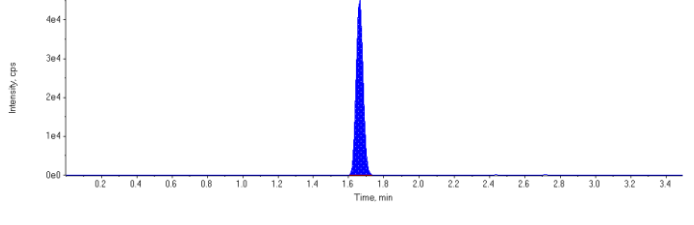
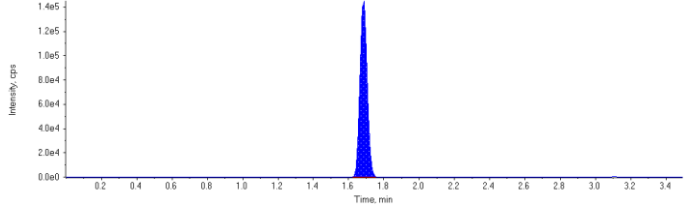
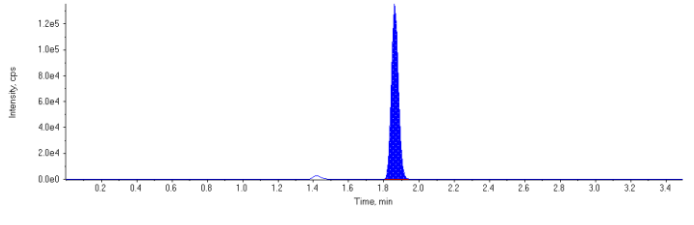
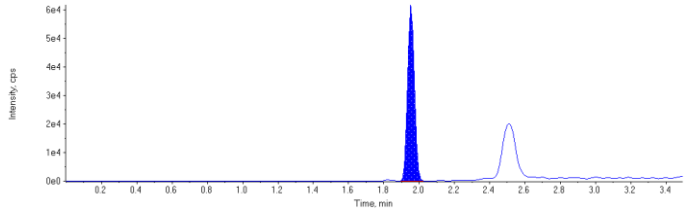
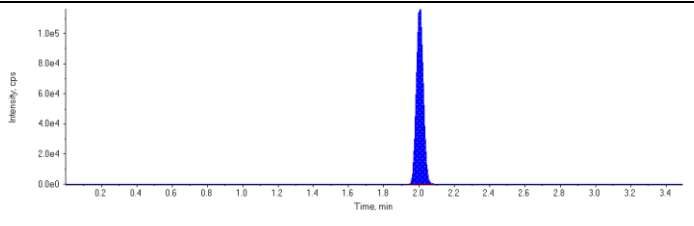
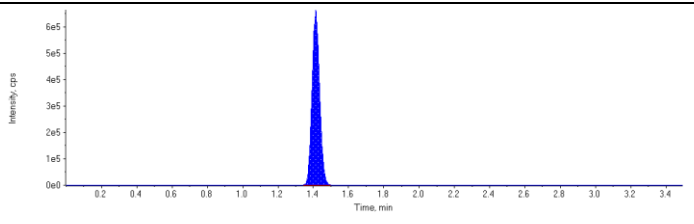
Sample Name	STD 6	Injection Vial	8
Sample ID	STD 6	Injection Volume (µL)	3
Sample Type	Standard	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:48:29 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	125000.	1.66	1.00	-
MPFHpA	414000.	1.68	1.00	-
MPFOA	369000.	1.86	1.00	-
MPFOS	165000.	1.95	1.00	-
MPFNA	326000.	2.00	1.00	-
13C6-PFHxA IS	1970000.	1.41	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	3450000	1.09	100.	103.	103.0
PFHxS 1	3440000	1.66	100.	97.5	97.5
PFHpA 1	4540000	1.69	100.	101.	101.0
PFOA 1	4860000	1.86	100.	97.6	97.6
PFOS 1	2420000	1.95	100.	102.	102.0
PFNA 1	3550000	2.00	100.	97.3	97.3
18O2-PFHxS	125000	1.66	100.	96.6	96.6
13C4-PFHpA	414000	1.68	100.	98.5	98.5
13C4-PFOA	369000	1.86	100.	101.	101.0
13C4-PFOS	165000	1.95	100.	94.2	94.2
13C5-PFNA	326000	2.00	100.	104.	104.0
13C6-PFHxA	1970000	1.41	100.	99.6	99.6

MPFHxS (Internal Standard) RT (Exp. RT): 1.66(1.68) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFHpA (Internal Standard) RT (Exp. RT): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Standard)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Standard)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

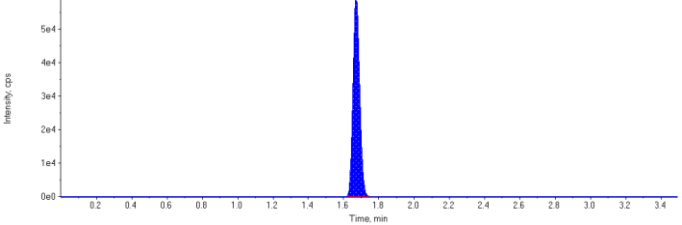
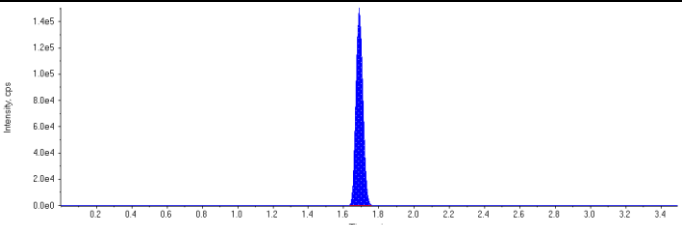
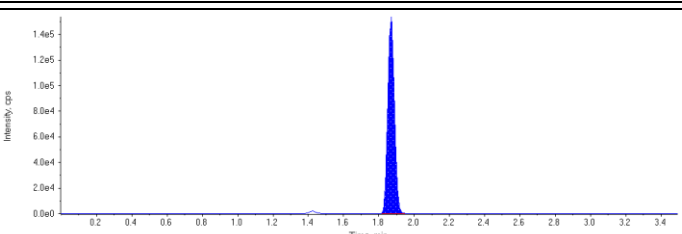
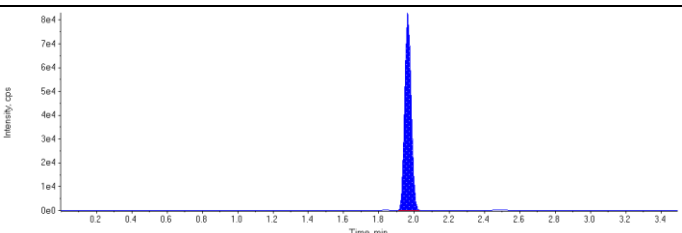
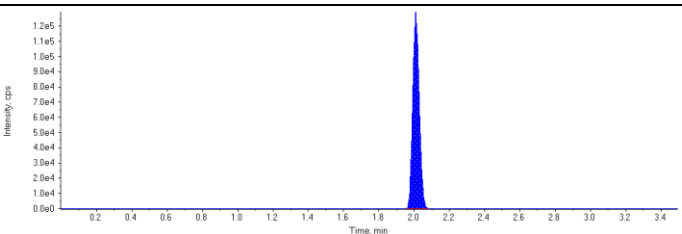
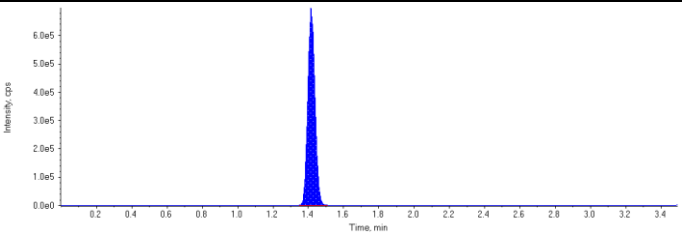
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.15) min Calculated Conc: 103. ng/L Area Ratio: 27.7 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 97.5 ng/L Area Ratio: 27.6 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 101. ng/L Area Ratio: 11.0 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 97.6 ng/L Area Ratio: 13.2 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 14.6 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 97.3 ng/L Area Ratio: 10.9 Sample Type: (Standard)	

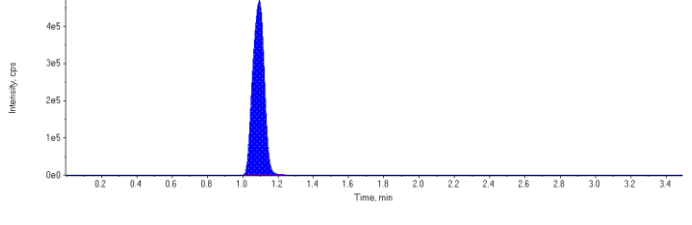
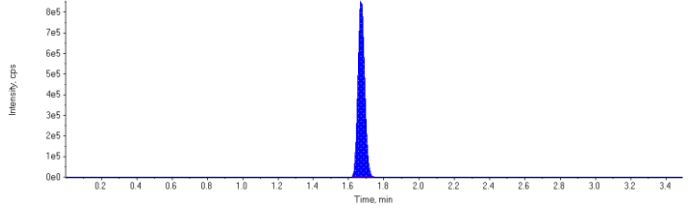
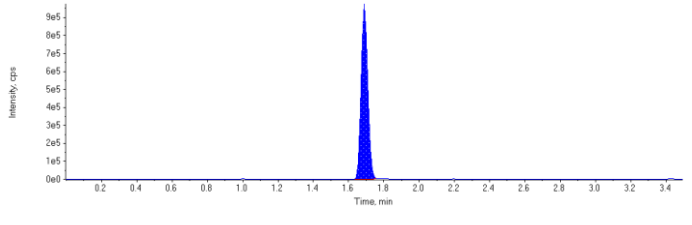
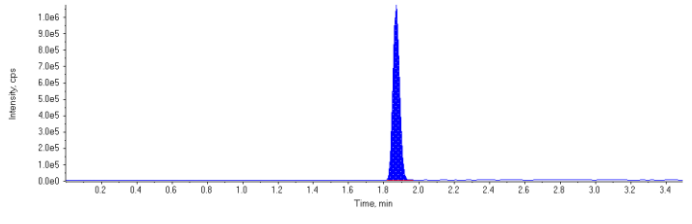
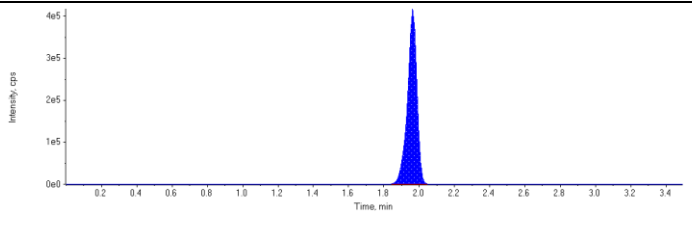
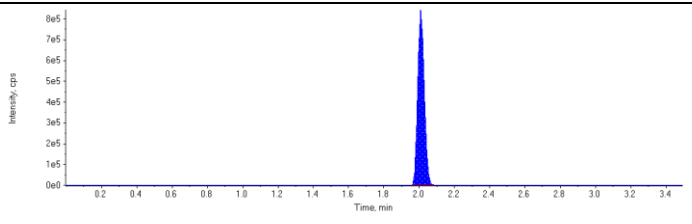
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 96.6 ng/L Area Ratio: 0.0635 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 98.5 ng/L Area Ratio: 0.210 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.188 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 94.2 ng/L Area Ratio: 0.0840 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 104. ng/L Area Ratio: 0.166 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 99.6 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

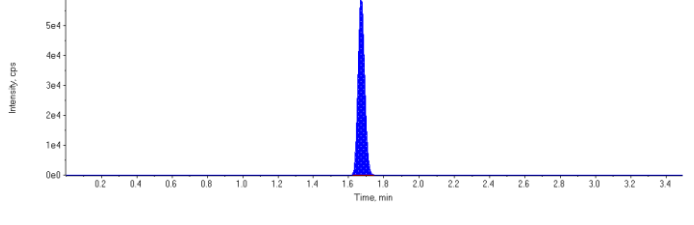
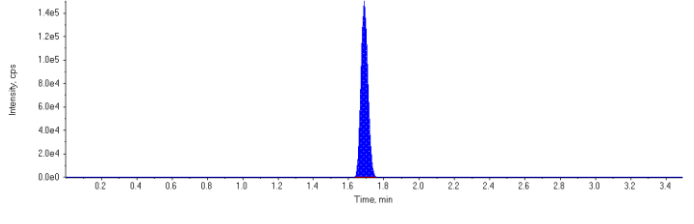
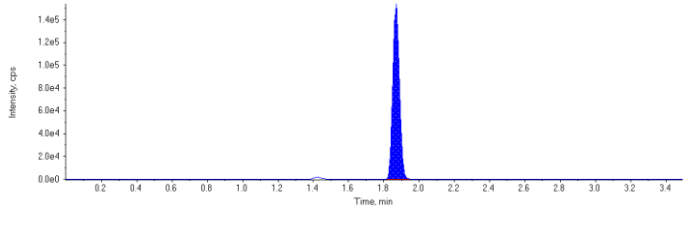
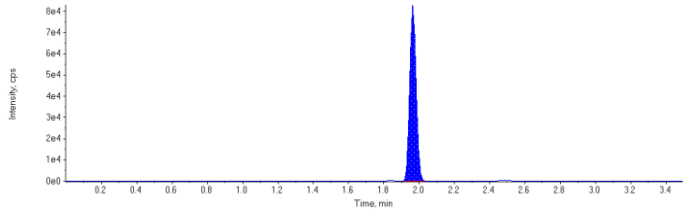
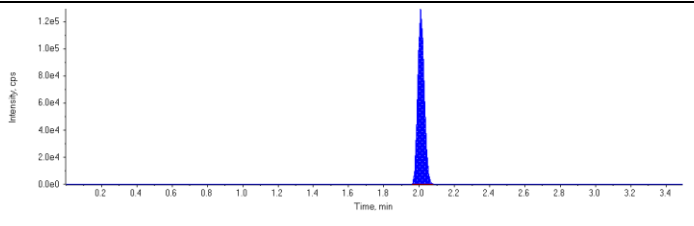
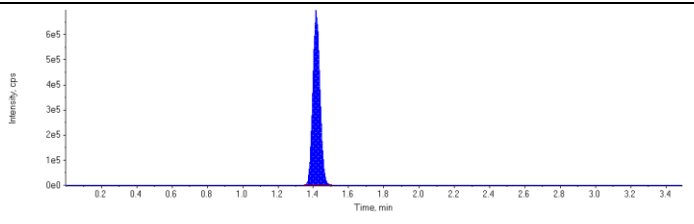
Sample Name	ICV	Injection Vial	9
Sample ID	ICV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:31:40 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	157000.	1.67	1.00	-
MPFHpA	404000.	1.69	1.00	-
MPFOA	400000.	1.87	1.00	-
MPFOS	209000.	1.96	1.00	-
MPFNA	331000.	2.01	1.00	-
13C6-PFHxA IS	1970000.	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	2140000	1.09	50.0	45.0	90.0
PFHxS 1	2280000	1.67	50.0	49.1	98.1
PFHpA 1	2520000	1.69	50.0	50.3	101.0
PFOA 1	2780000	1.87	50.0	47.9	95.8
PFOS 1	1540000	1.96	50.0	43.7	87.4
PFNA 1	2160000	2.01	50.0	49.0	98.1
18O2-PFHxS	157000	1.67	100.	99.7	99.7
13C4-PFHpA	404000	1.69	100.	88.8	88.8
13C4-PFOA	400000	1.87	100.	97.8	97.8
13C4-PFOS	209000	1.96	100.	103.	103.0
13C5-PFNA	331000	2.01	100.	95.8	95.8
13C6-PFHxA	1970000	1.42	100.	100.	100.0

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

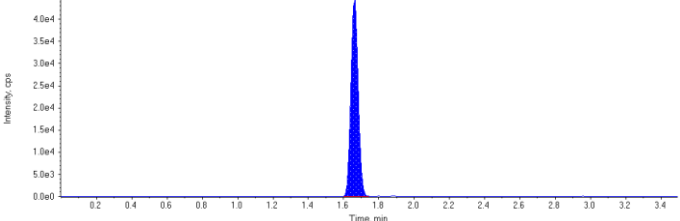
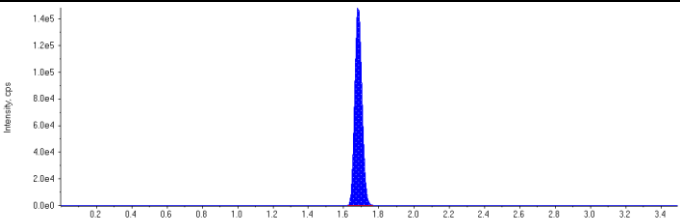
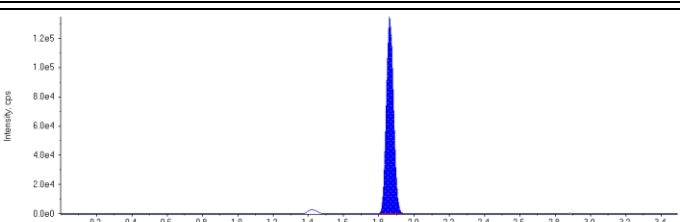
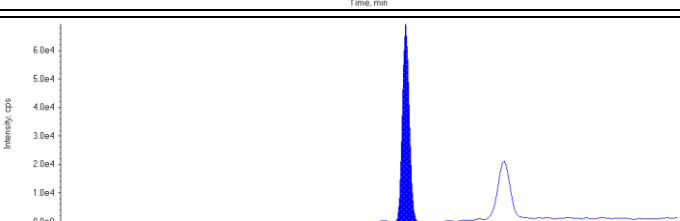
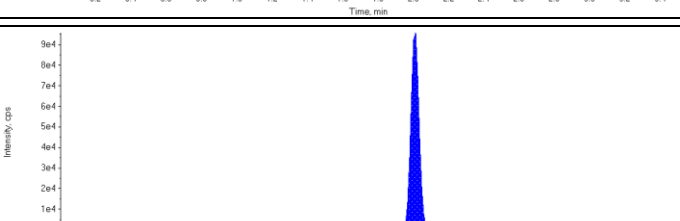
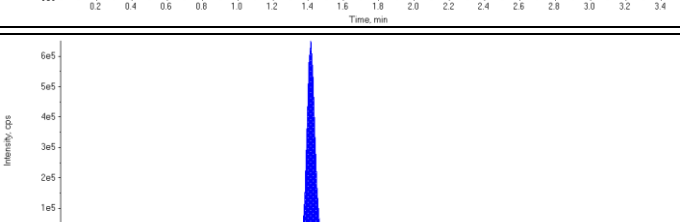
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 45.0 ng/L Area Ratio: 13.6 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 49.1 ng/L Area Ratio: 14.5 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 50.3 ng/L Area Ratio: 6.23 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 47.9 ng/L Area Ratio: 6.94 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 43.7 ng/L Area Ratio: 7.33 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 49.0 ng/L Area Ratio: 6.54 Sample Type: (Quality Control)	

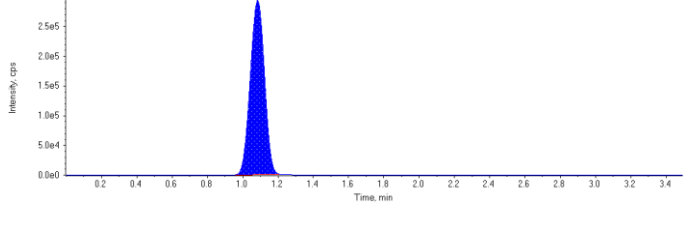
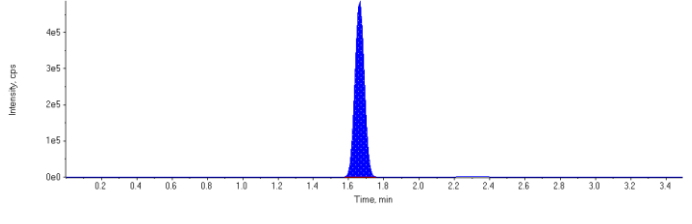
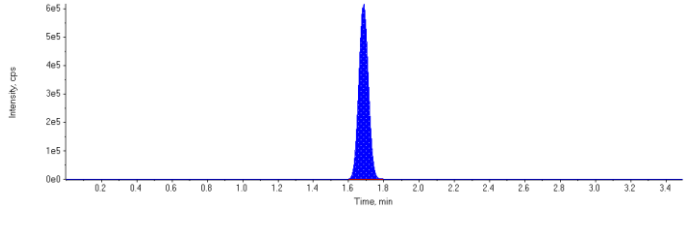
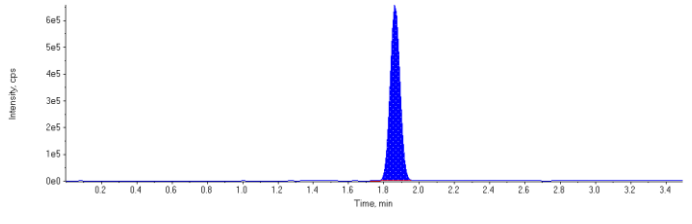
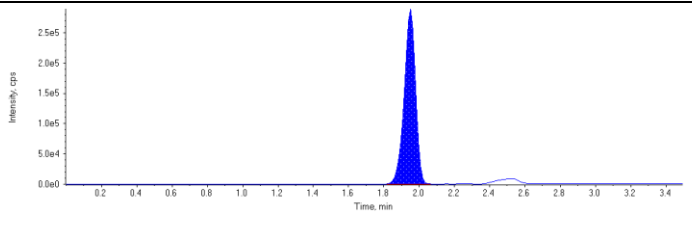
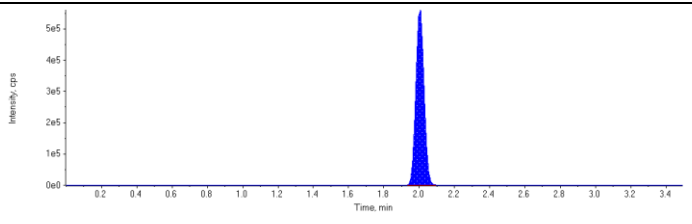
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 99.7 ng/L Area Ratio: 0.0799 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 88.8 ng/L Area Ratio: 0.205 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 97.8 ng/L Area Ratio: 0.203 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 103. ng/L Area Ratio: 0.106 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 95.8 ng/L Area Ratio: 0.168 Sample Type: (Quality Control)	
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: (Quality Control)	

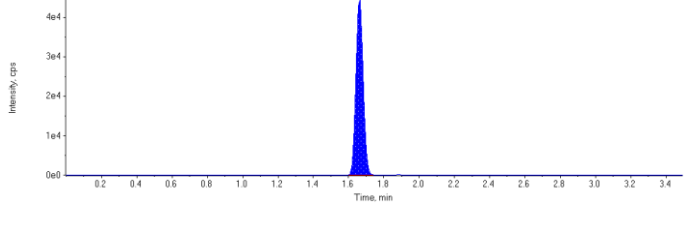
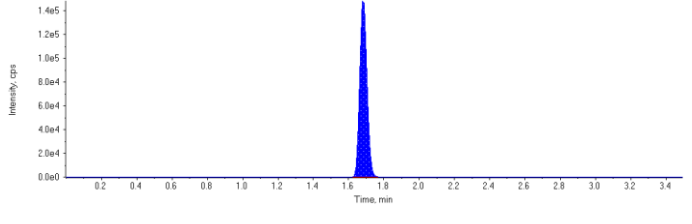
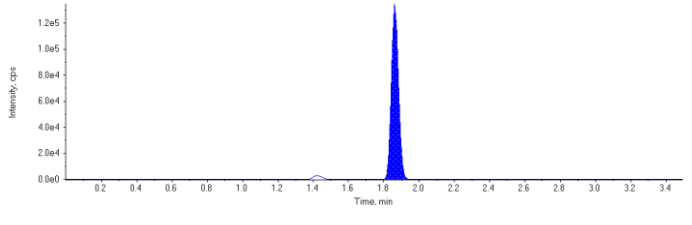
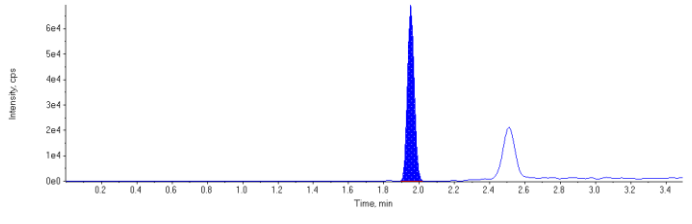
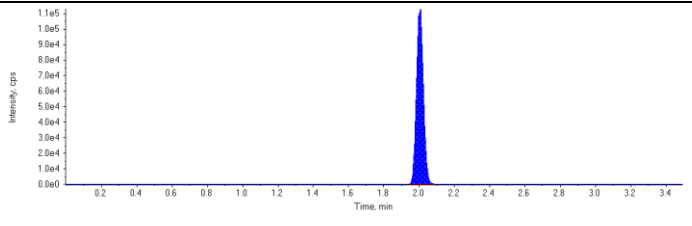
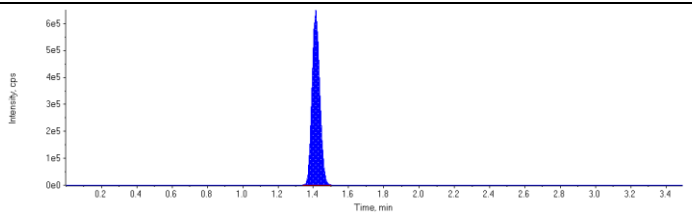
Sample Name	ICV	Injection Vial	9
Sample ID	ICV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:53:36 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	128000.	1.66	1.00	-
MPFHpA	430000.	1.68	1.00	-
MPFOA	374000.	1.86	1.00	-
MPFOS	184000.	1.95	1.00	-
MPFNA	312000.	2.00	1.00	-
13C6-PFHxA IS	1990000.	1.41	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	1640000	1.08	50.0	48.0	96.0
PFHxS 1	1810000	1.66	50.0	50.4	101.0
PFHpA 1	2320000	1.68	50.0	50.0	100.0
PFOA 1	2550000	1.86	50.0	50.6	101.0
PFOS 1	1280000	1.95	50.0	48.9	97.7
PFNA 1	1820000	2.00	50.0	52.3	105.0
18O2-PFHxS	128000	1.66	100.	97.8	97.8
13C4-PFHpA	430000	1.68	100.	101.	101.0
13C4-PFOA	374000	1.86	100.	102.	102.0
13C4-PFOS	184000	1.95	100.	104.	104.0
13C5-PFNA	312000	2.00	100.	98.3	98.3
13C6-PFHxA	1990000	1.41	100.	101.	101.0

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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): 1.08 (1.15) min Calculated Conc: 48.0 ng/L Area Ratio: 12.9 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 50.4 ng/L Area Ratio: 14.2 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 50.0 ng/L Area Ratio: 5.40 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 50.6 ng/L Area Ratio: 6.82 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 48.9 ng/L Area Ratio: 7.00 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 52.3 ng/L Area Ratio: 5.85 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 97.8 ng/L Area Ratio: 0.0643 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 101. ng/L Area Ratio: 0.217 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.188 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 104. ng/L Area Ratio: 0.0924 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 98.3 ng/L Area Ratio: 0.157 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 101. 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	157333		157333		454000		408000		202667		344667	
		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)
4390179~BLANK		120000	76	120000	76	374000	82	361000	88	167000	82	292000	85
STD 1		153000	97	153000	97	441000	97	388000	95	206000	102	345000	100
STD 2		153000	97	153000	97	458000	101	409000	100	199000	98	326000	95
STD 3		164000	104	164000	104	465000	102	413000	101	200000	99	353000	102
STD 4		163000	104	163000	104	456000	100	407000	100	203000	100	370000	107
STD 5		158000	100	158000	100	454000	100	415000	102	215000	106	340000	99
STD 6		153000	97	153000	97	450000	99	416000	102	193000	95	334000	97
ICV		157000	100	157000	100	404000	89	400000	98	209000	103	331000	96
CCV		155000	99	155000	99	431000	95	384000	94	200000	99	332000	96
4390179~MTRX SPK		108000	69	108000	69	303000	67	268000	66	120000	59	208000	60
4390179~MTRX SPK:D1		115000	73	115000	73	335000	74	316000	77	143000	71	243000	71
4390179~SPIKE		107000	68	107000	68	316000	70	310000	76	152000	75	244000	71
4390179~BVX757-01		82300	52	82300	52	258000	57	238000	58	107000	53	170000	49
4390179~BVX758-01		161000	102	161000	102	471000	104	432000	106	179000	88	304000	88
4390179~BVX759-01		92600	59	92600	59	285000	63	270000	66	124000	61	206000	60
4390179~BVX760-01		101000	64	101000	64	268000	59	257000	63	107000	53	182000	53
4390179~BVX761-01		90900	58	90900	58	285000	63	253000	62	121000	60	189000	55
4390179~BVX762-01		76300	48	76300	48	243000	54	225000	55	86400	43	180000	52
4390179~BVX763-01		72100	46	72100	46	197000	43	187000	46	85300	42	142000	41
4390179~BVX764-01		63700	40	63700	40	182000	40	171000	42	69200	34	128000	37
4390179~BVX765-01		83100	53	83100	53	248000	55	229000	56	113000	56	177000	51
4390179~BVX766-01		112000	71	112000	71	308000	68	278000	68	120000	59	196000	57
CCV		130000	83	130000	83	430000	95	375000	92	192000	95	324000	94
4390179~BVX767-01		72200	46	72200	46	189000	42	193000	47	92700	46	151000	44
4390179~BVX768-01		82200	52	82200	52	266000	59	241000	59	98600	49	167000	48
4390179~BWH243-01		76900	49	76900	49	248000	55	221000	54	109000	54	178000	52
4390179~BWH244-01		107000	68	107000	68	272000	60	255000	63	116000	57	193000	56
4390179~BWH245-01		94100	60	94100	60	280000	62	261000	64	122000	60	201000	58
4390179~BWH246-01		98400	63	98400	63	273000	60	246000	60	104000	51	187000	54
4390179~BWH247-01		101000	64	101000	64	309000	68	301000	74	137000	68	225000	65
4390179~BWH248-01		82000	52	82000	52	245000	54	232000	57	96600	48	161000	47
4390179~BWN123-01		86400	55	86400	55	237000	52	218000	53	106000	52	186000	54
4390179~BWN124-01		138000	88	138000	88	422000	93	384000	94	171000	84	312000	91
CCV		143000	91	143000	91	433000	95	395000	97	180000	89	319000	93

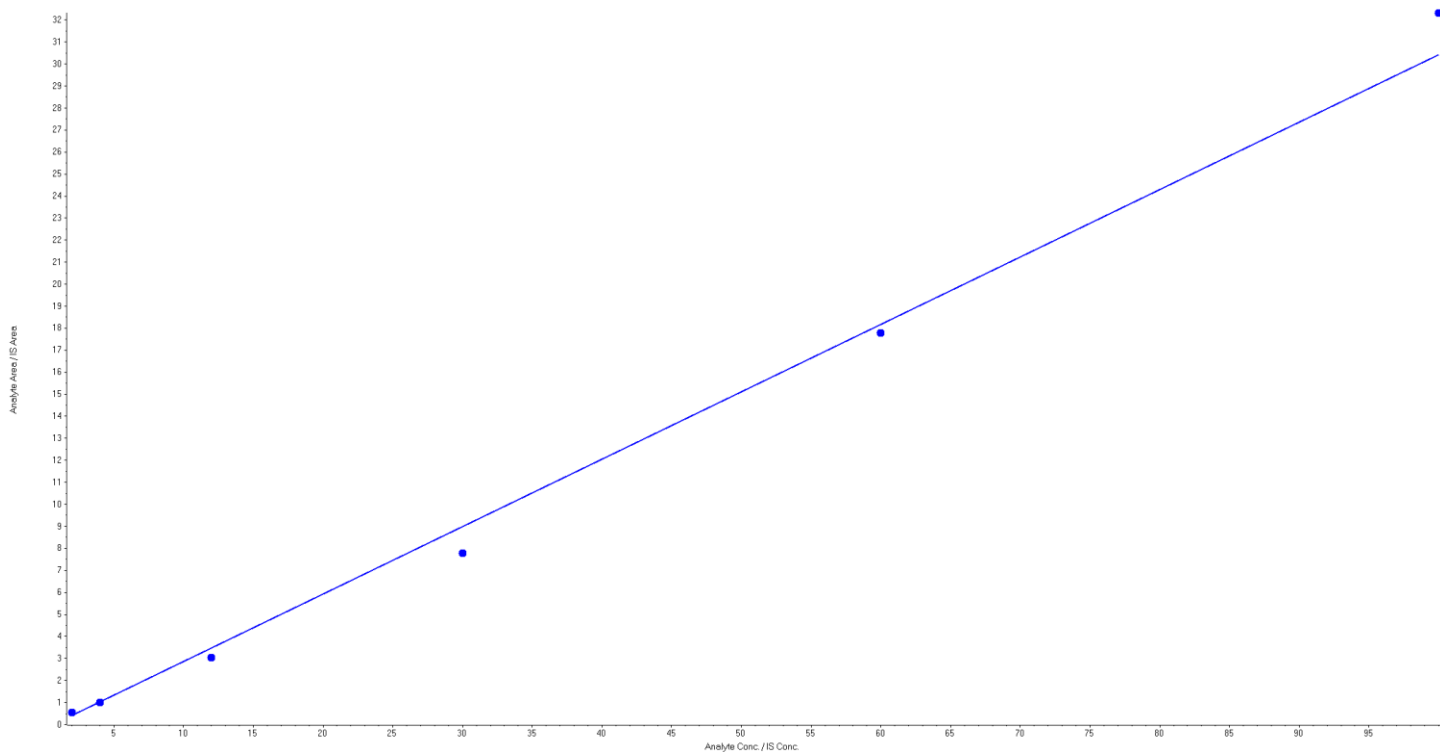
Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	129667		129667		421833		365833		176000		315167	
		IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)
4396598~BLANK		112000	86	112000	86	387000	92	367000	100	160000	91	295000	94
STD 1		131000	101	131000	101	432000	102	375000	103	183000	104	305000	97
STD 2		139000	107	139000	107	446000	106	376000	103	172000	98	318000	101
STD 3		135000	104	135000	104	414000	98	362000	99	185000	105	313000	99
STD 4		126000	97	126000	97	409000	97	357000	98	176000	100	319000	101
STD 5		122000	94	122000	94	416000	99	356000	97	175000	99	310000	98
STD 6		125000	96	125000	96	414000	98	369000	101	165000	94	326000	103
ICV		128000	99	128000	99	430000	102	374000	102	184000	105	312000	99
CCV		150000	116	150000	116	435000	103	383000	105	178000	101	315000	100
4396598~MTRX SPK		130000	100	130000	100	369000	87	345000	94	151000	86	279000	89
4396598~MTRX SPK:D1		133000	103	133000	103	364000	86	325000	89	152000	86	275000	87
4396598~SPIKE		123000	95	123000	95	348000	82	326000	89	162000	92	295000	94
4396598~BWH243-01		117000	90	117000	90	379000	90	339000	93	153000	87	288000	91
4396598~BWH244-01(10X)		127000	98	127000	98	399000	95	361000	99	179000	102	300000	95
4396598~BWH245-01		132000	102	132000	102	409000	97	355000	97	176000	100	291000	92
4396598~BWH246-01		130000	100	130000	100	392000	93	365000	100	140000	80	274000	87
4396598~BWH247-01		121000	93	121000	93	374000	89	331000	90	148000	84	268000	85
4396598~BWH248-01		152000	117	152000	117	444000	105	388000	106	171000	97	281000	89
4396598~BWN123-01		123000	95	123000	95	364000	86	294000	80	157000	89	242000	77
4396598~BWN124-01		129000	99	129000	99	324000	77	301000	82	158000	90	254000	81
4396598~BWR509-01		133000	103	133000	103	351000	83	340000	93	160000	91	262000	83
4396598~BWR510-01		129000	99	129000	99	395000	94	330000	90	156000	89	275000	87
CCV		141000	109	141000	109	419000	99	361000	99	187000	106	308000	98
4396598~BWR511-01		130000	100	130000	100	364000	86	316000	86	165000	94	278000	88
4396598~BWR512-01		137000	106	137000	106	344000	82	316000	86	161000	91	257000	82
4396598~BWR513-01		118000	91	118000	91	345000	82	322000	88	171000	97	260000	82
4396598~BWR514-01		127000	98	127000	98	354000	84	315000	86	162000	92	254000	81
4396598~BWR515-01		121000	93	121000	93	352000	83	301000	82	175000	99	249000	79
4396598~BXE985-01		130000	100	130000	100	332000	79	303000	83	151000	86	271000	86
4396598~BXE986-01		118000	91	118000	91	369000	87	323000	88	154000	88	266000	84
4396598~BWH244-01		130000	100	130000	100	358000	85	308000	84	164000	93	263000	83
CCV		132000	102	132000	102	424000	101	374000	102	187000	106	287000	91

Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.306 x + -0.197$ ($r = 0.9965$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.43	121.5
4	1	3.96	99.0
12	1	10.61	88.4
30	1	26.11	87.0
60	1	58.71	97.8
100	1	106.19	106.2

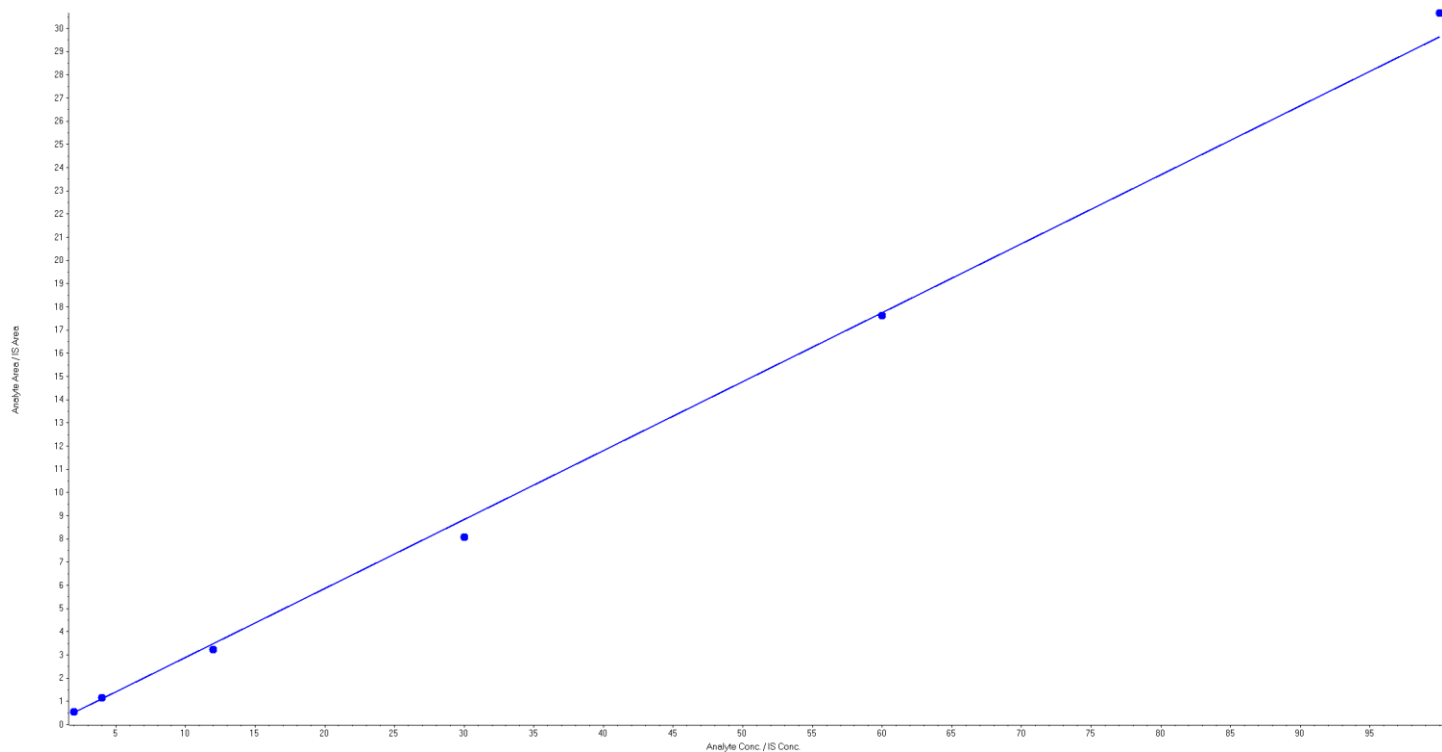


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.297 x + -0.0803$ ($r = 0.9987$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.16	107.9
4	1	4.19	104.8
12	1	11.18	93.2
30	1	27.42	91.4
60	1	59.61	99.3
100	1	103.45	103.4

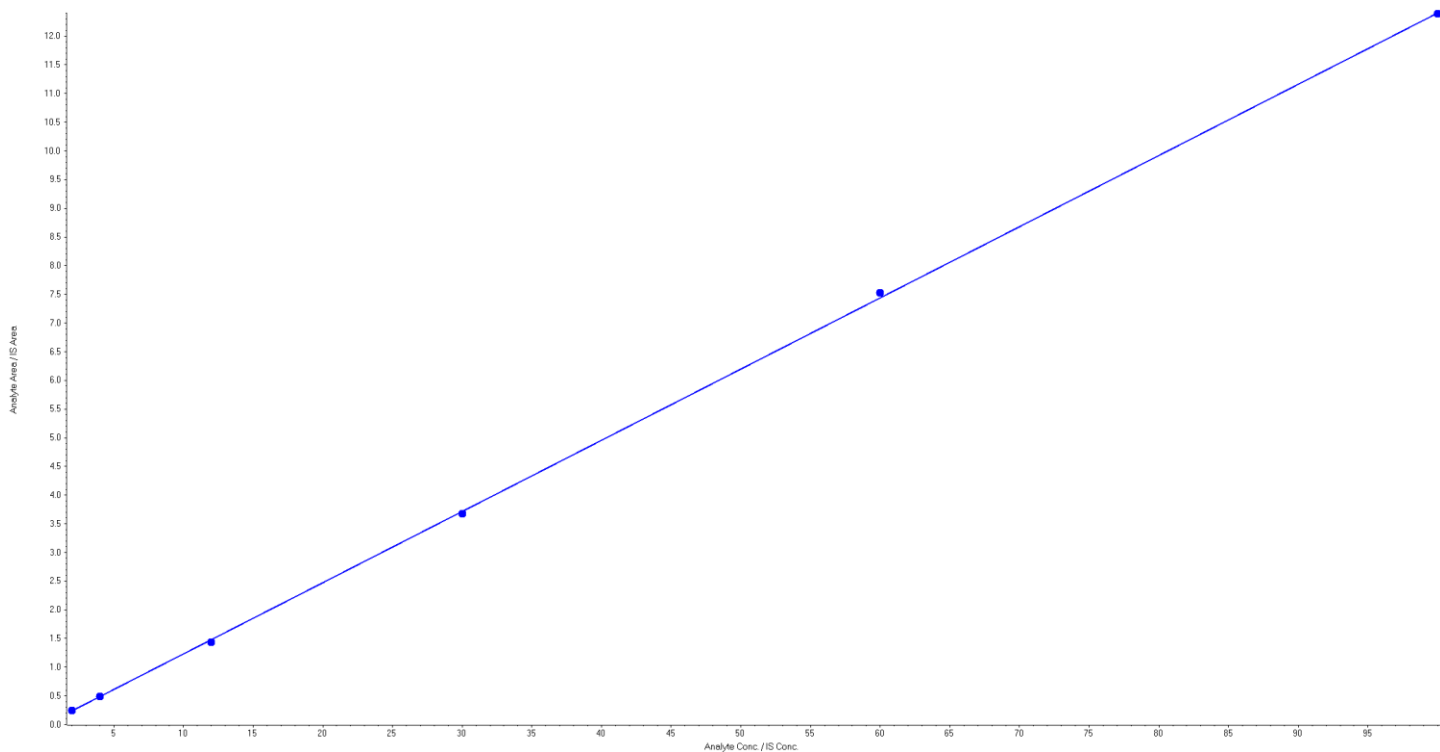


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.124 x + -0.0099$ ($r = 0.9999$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.06	103.0
4	1	4.00	100.0
12	1	11.63	96.9
30	1	29.69	99.0
60	1	60.69	101.1
100	1	99.93	99.9

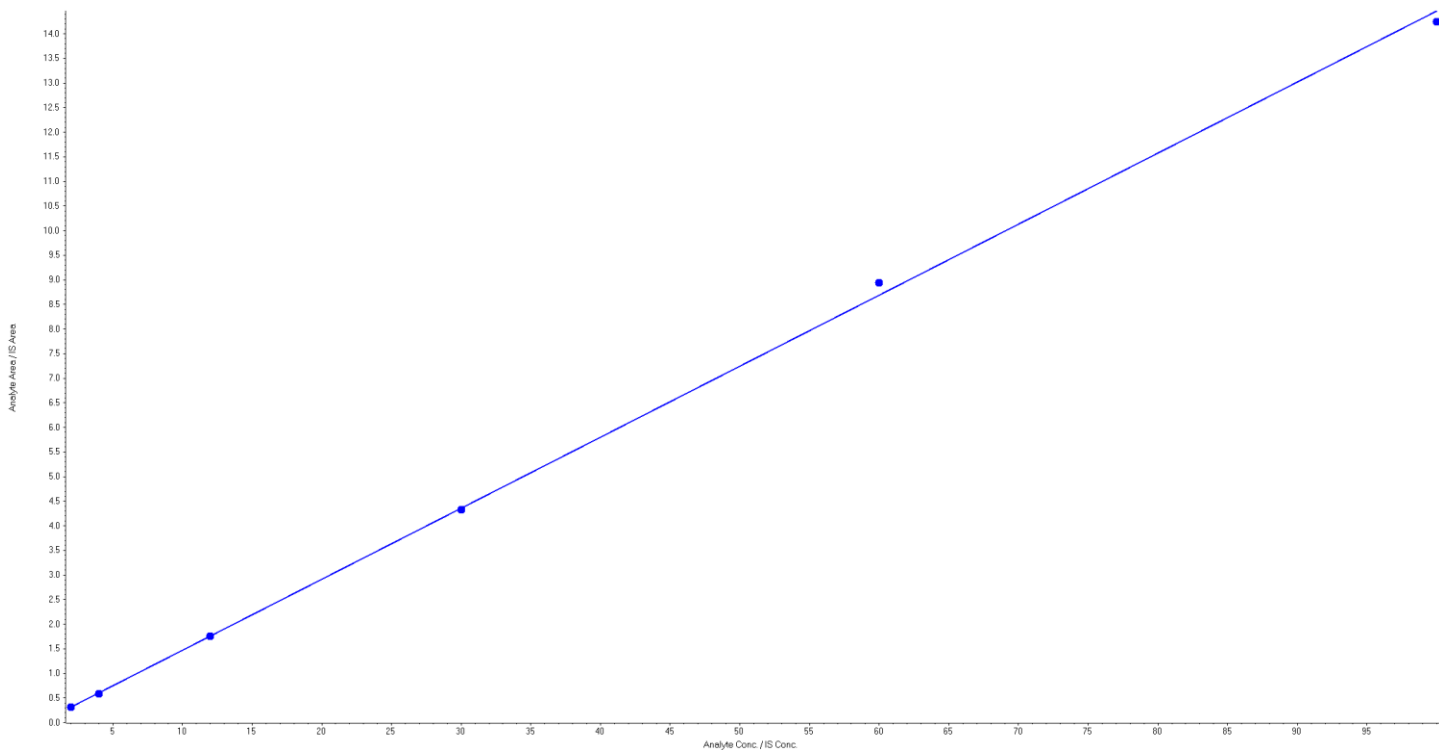


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.144 x + 0.0249$ ($r = 0.9998$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.03	101.3
4	1	3.92	98.0
12	1	11.97	99.8
30	1	29.84	99.5
60	1	61.75	102.9
100	1	98.49	98.5

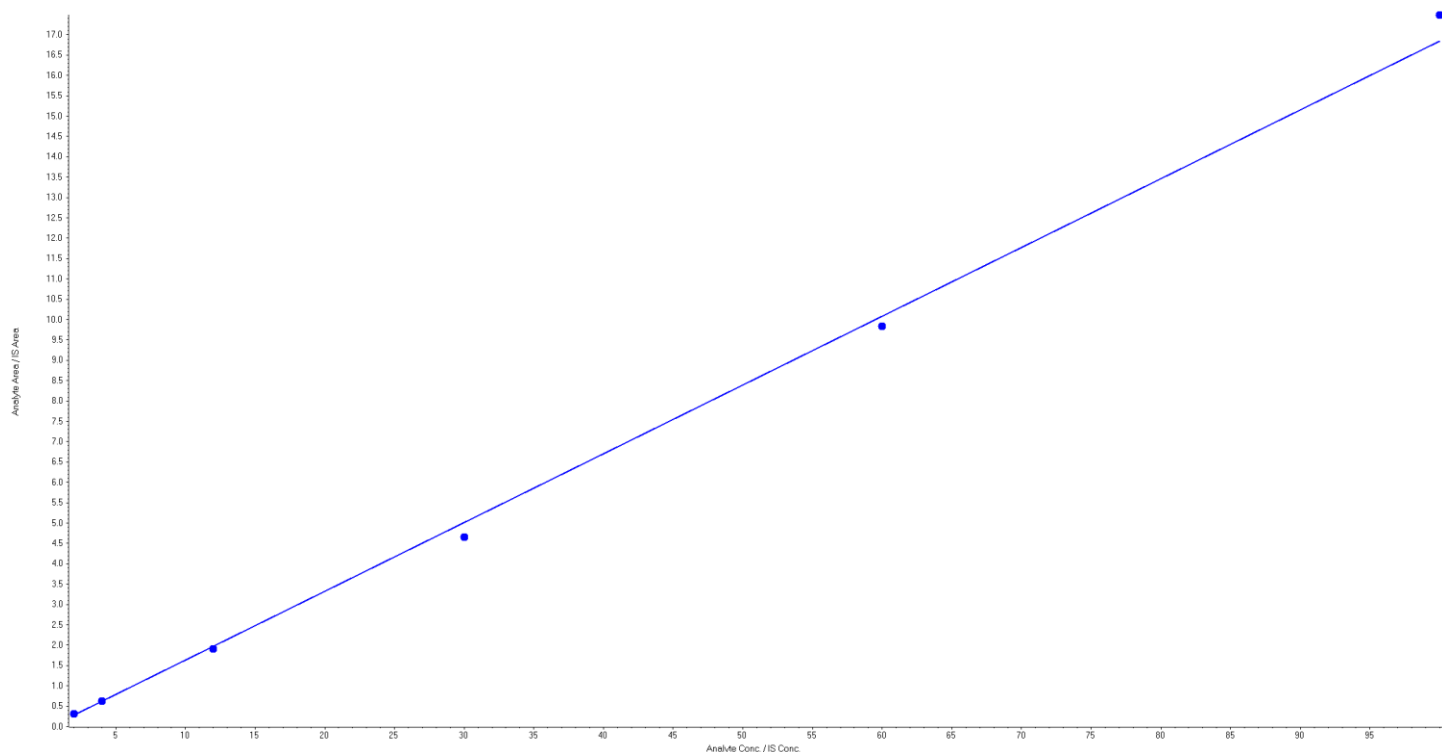


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.169x + -0.0565$ ($r = 0.9989$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.17	108.5
4	1	4.00	100.1
12	1	11.67	97.3
30	1	27.84	92.8
60	1	58.53	97.5
100	1	103.79	103.8

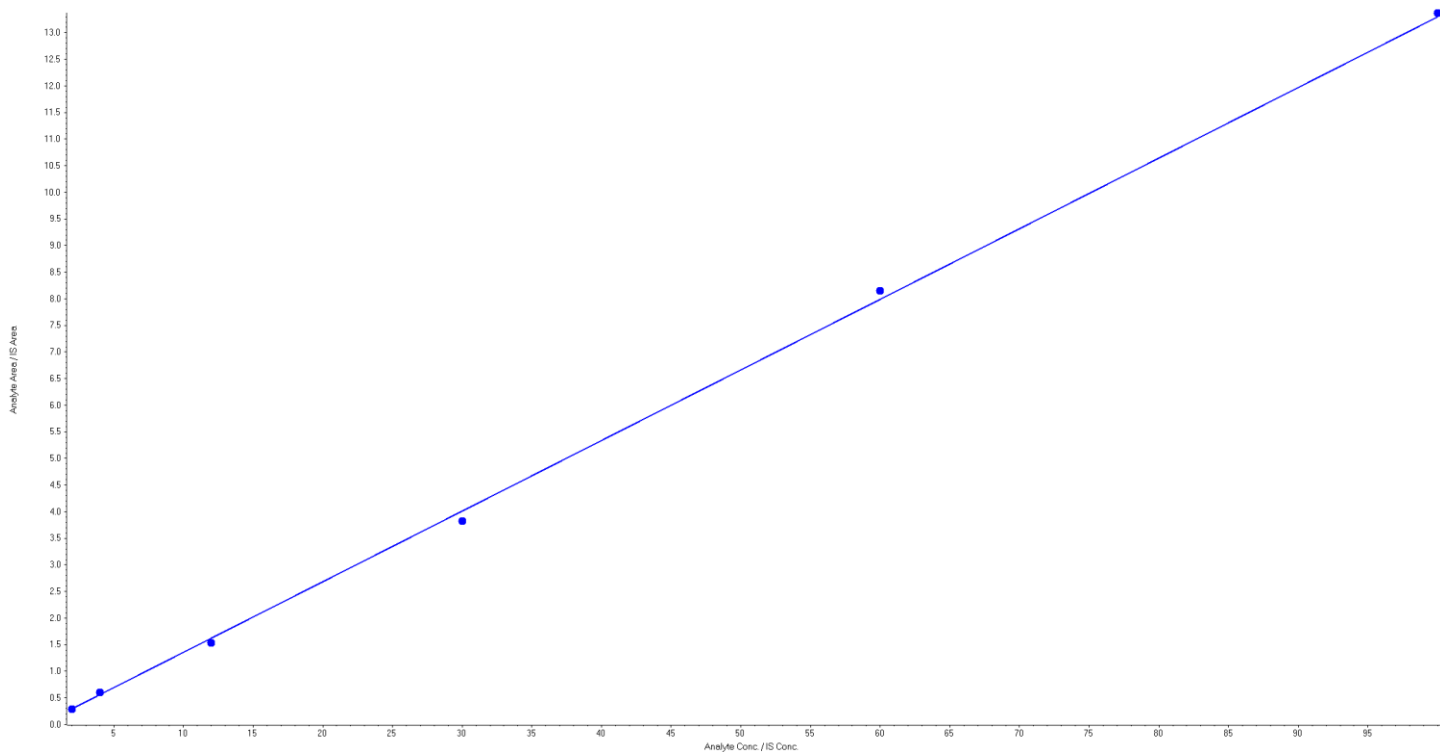


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.133 x + 0.0302$ ($r = 0.9995$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	1.97	98.5
4	1	4.36	109.1
12	1	11.36	94.6
30	1	28.56	95.2
60	1	61.21	102.0
100	1	100.54	100.5

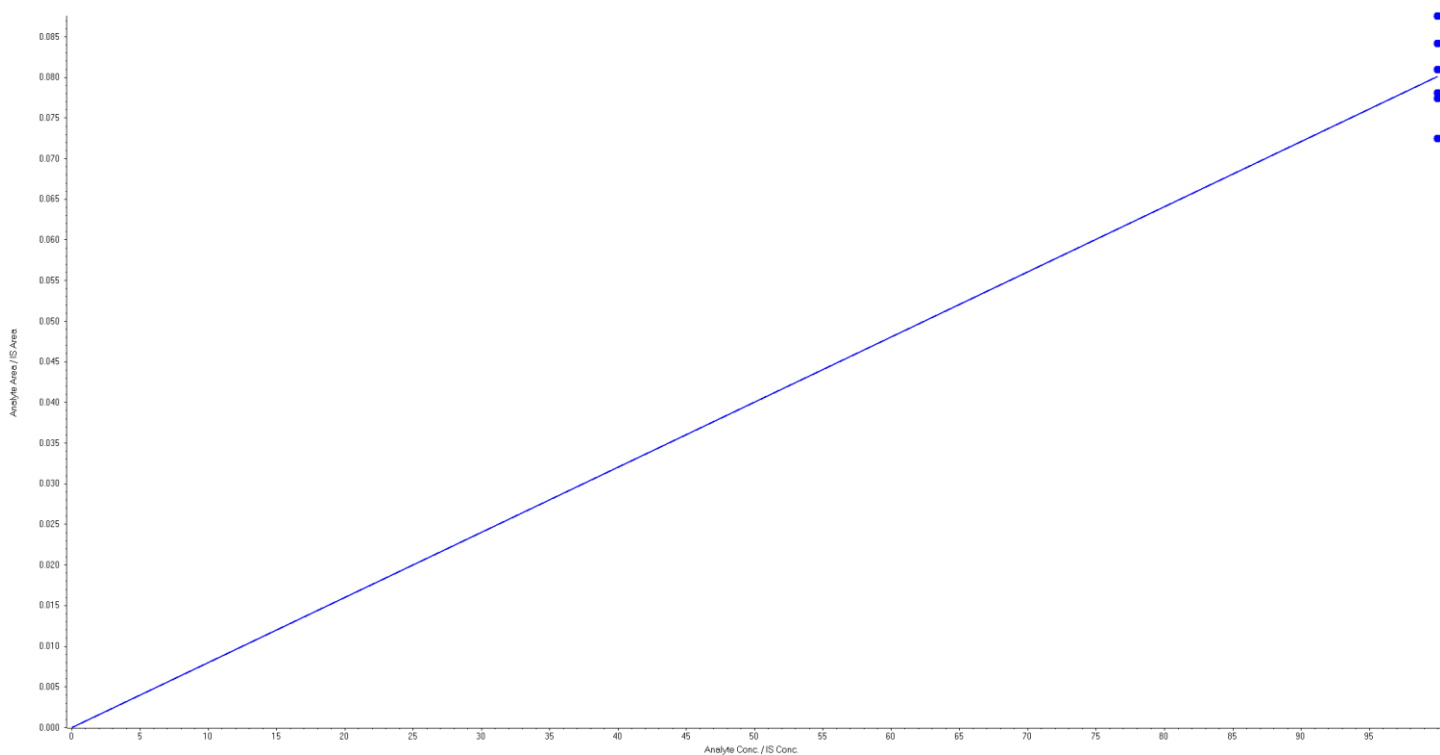


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000801 x$ ($r = 0.9982$)

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

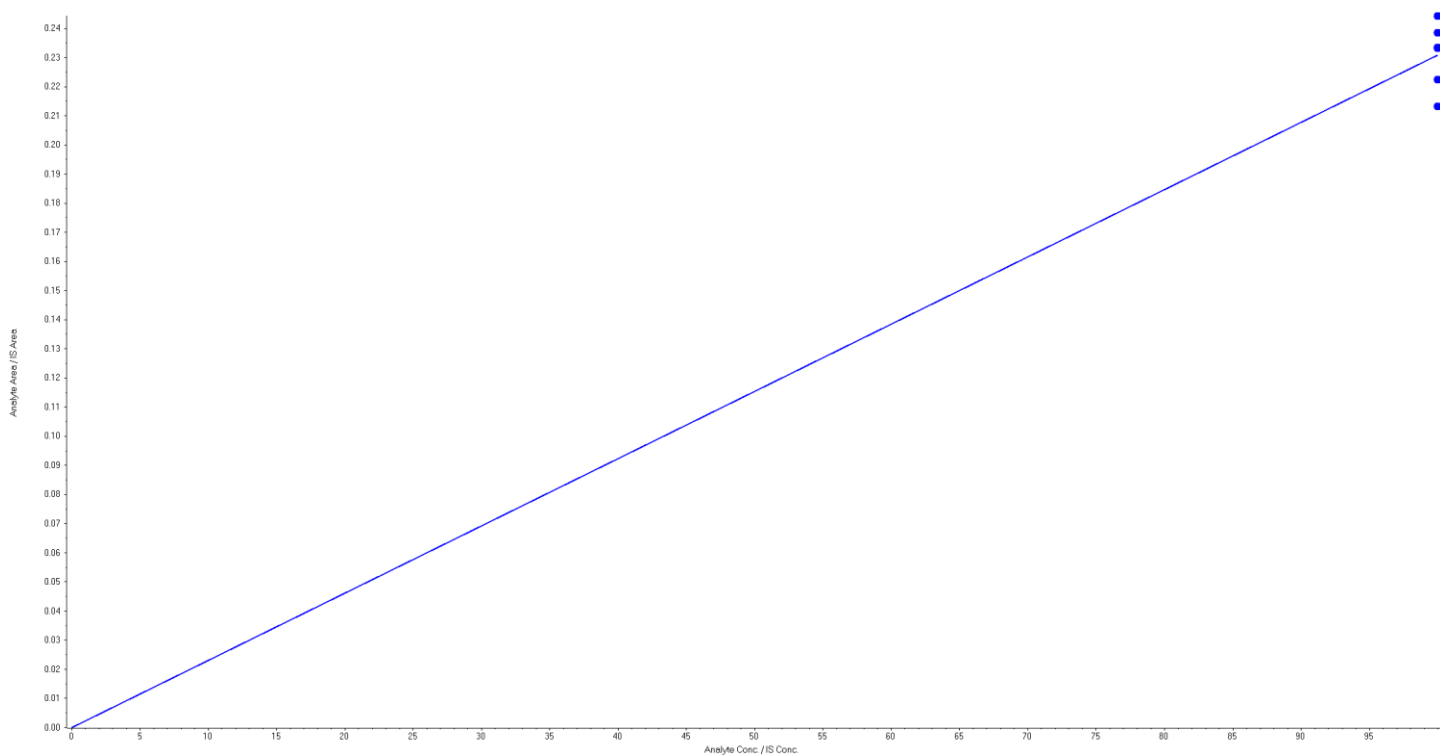


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00231 x$ ($r = 0.9990$)

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

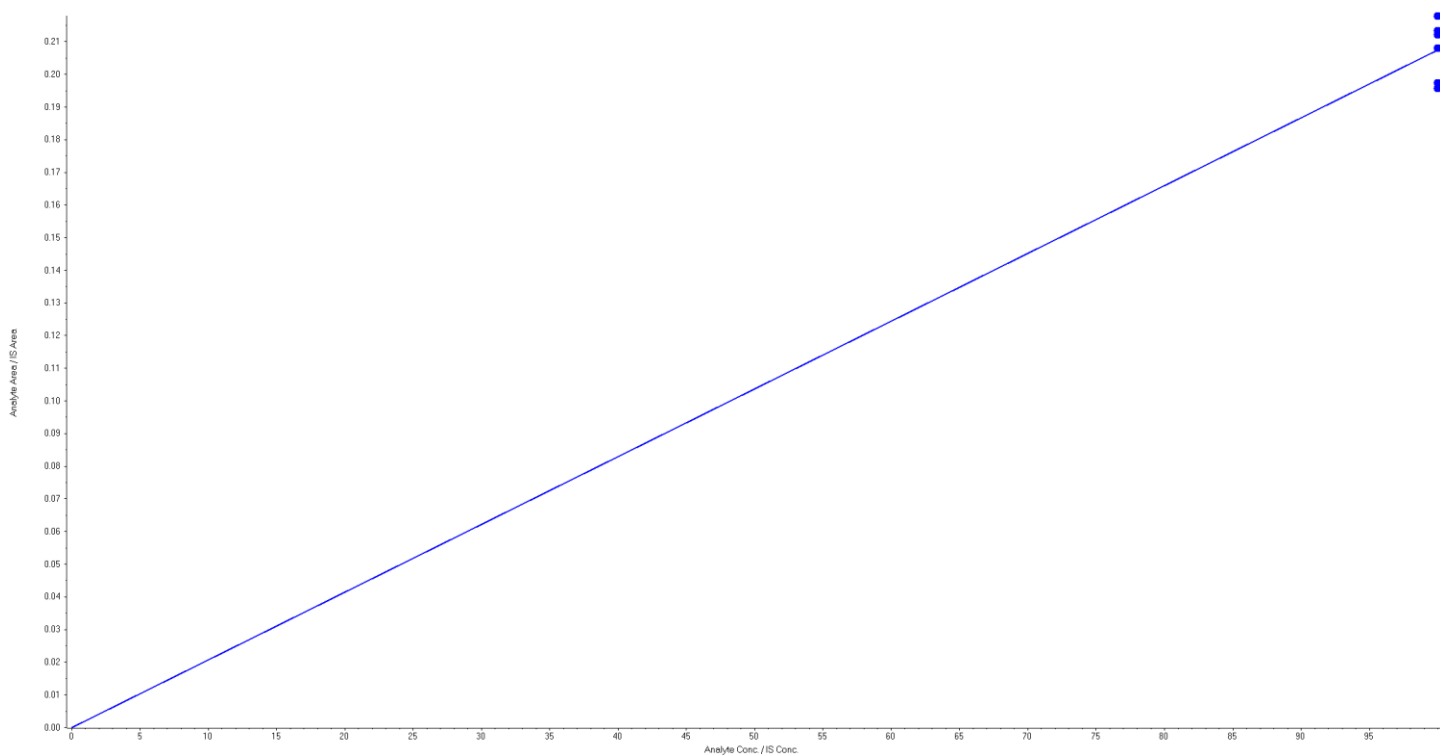


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00207 x$ ($r = 0.9992$)

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

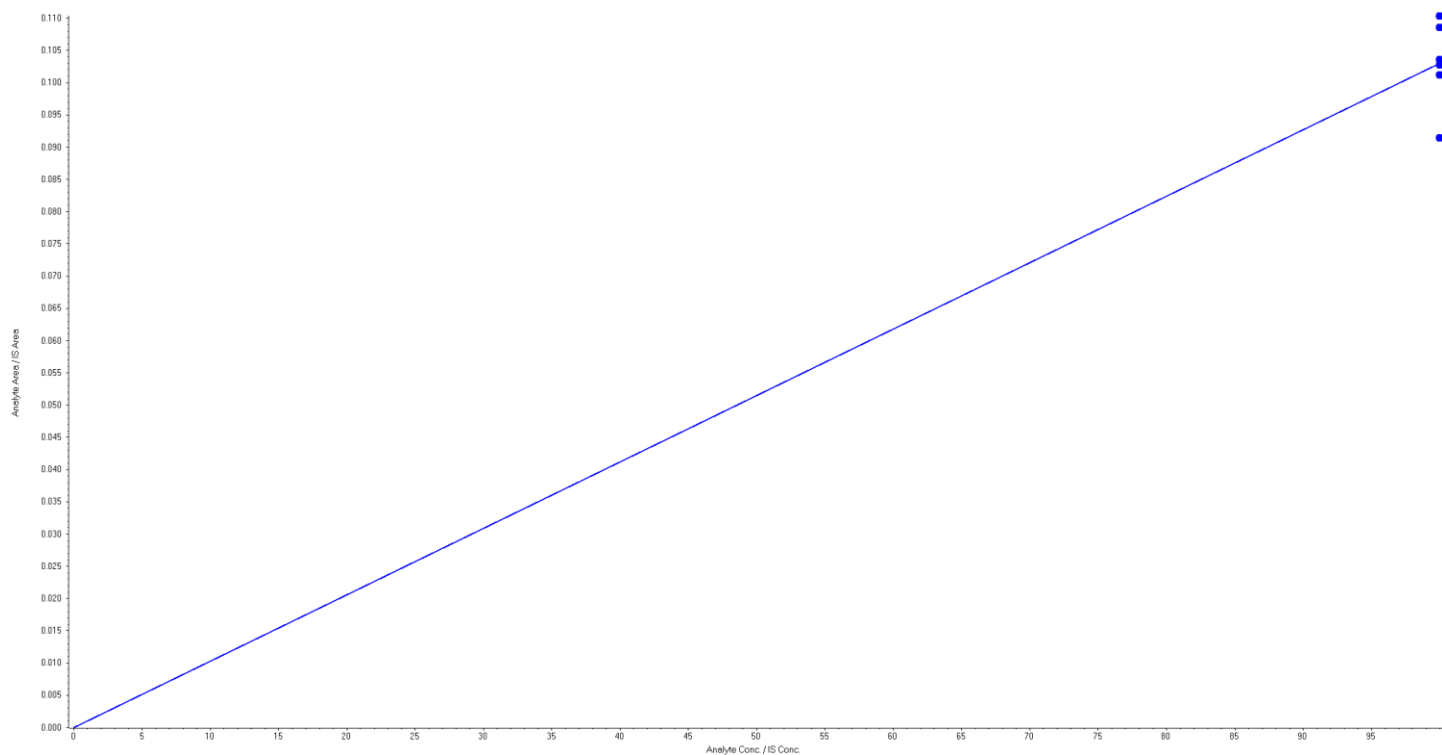


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00103 x$ ($r = 0.9983$)

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

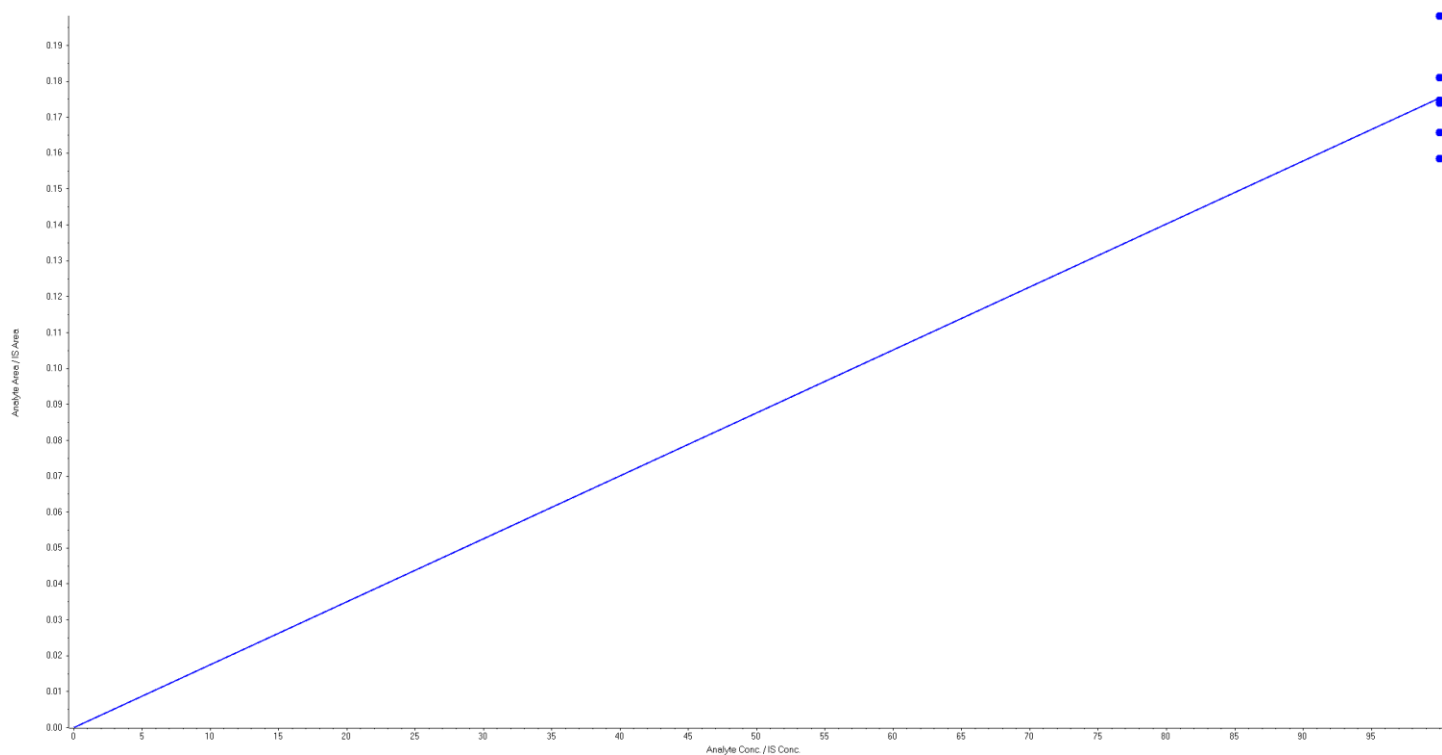


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160223\WS#4390179.wiff	Result Table	PFC_Water_160223_4390179_ULow.rdb
Acquisition Date	2016/02/23 1:55:57 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00175 x$ ($r = 0.9975$)

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

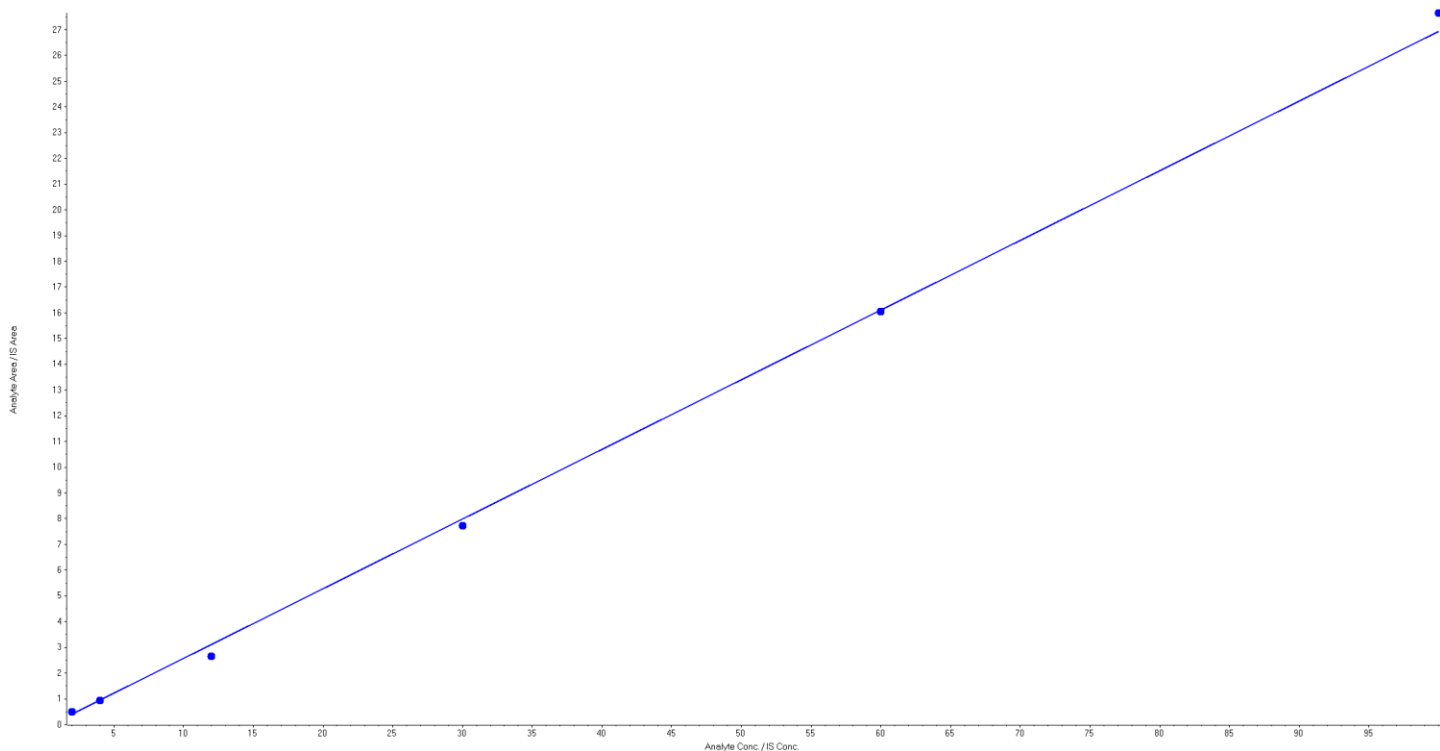


Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.271 x + -0.136$ ($r = 0.9988$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.34	117.0
4	1	3.92	98.0
12	1	10.30	85.8
30	1	29.06	96.9
60	1	59.75	99.6
100	1	102.63	102.6

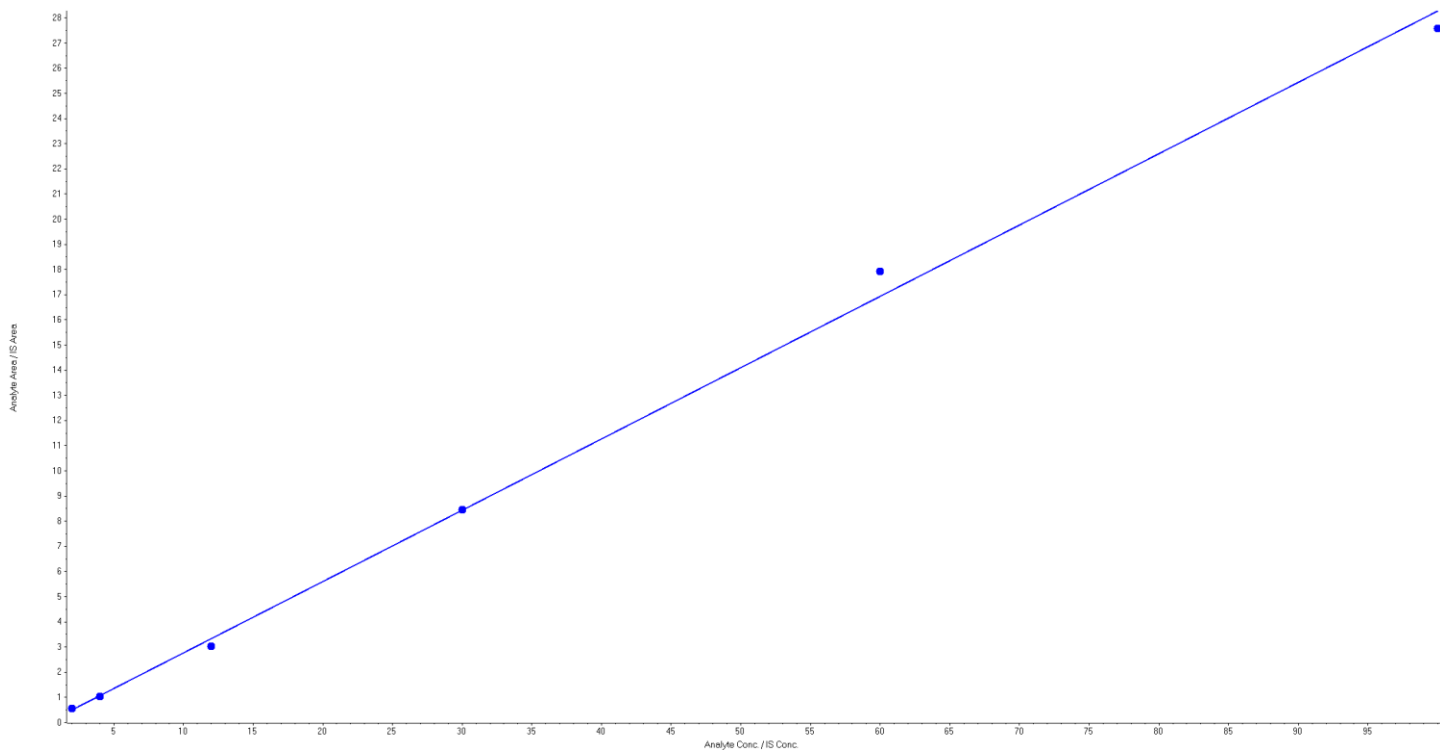


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.283 x + -0.0658$ ($r = 0.9989$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.18	109.2
4	1	3.86	96.4
12	1	10.90	90.8
30	1	30.08	100.3
60	1	63.45	105.7
100	1	97.53	97.5

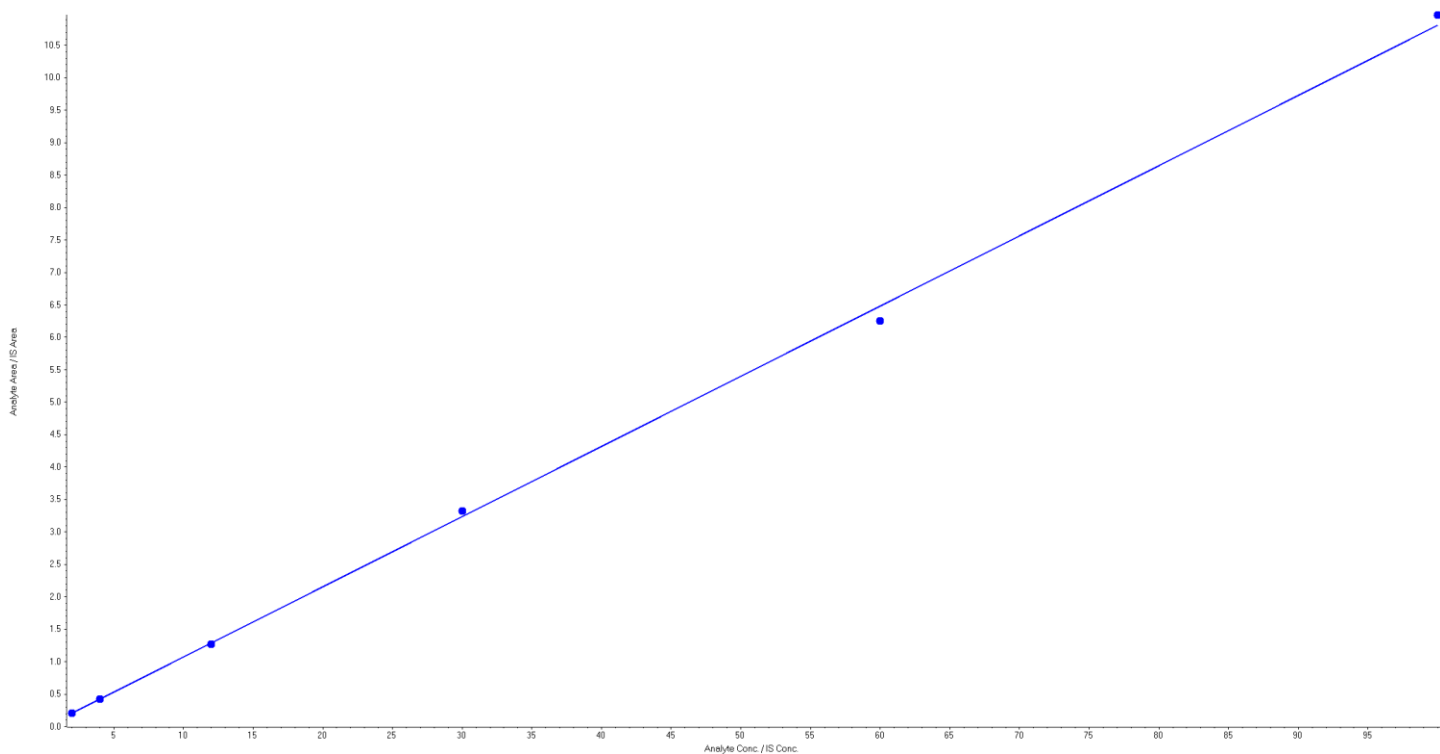


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.108 x + -0.0106$ ($r = 0.9996$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.00	99.9
4	1	4.05	101.3
12	1	11.78	98.2
30	1	30.80	102.7
60	1	57.91	96.5
100	1	101.46	101.5

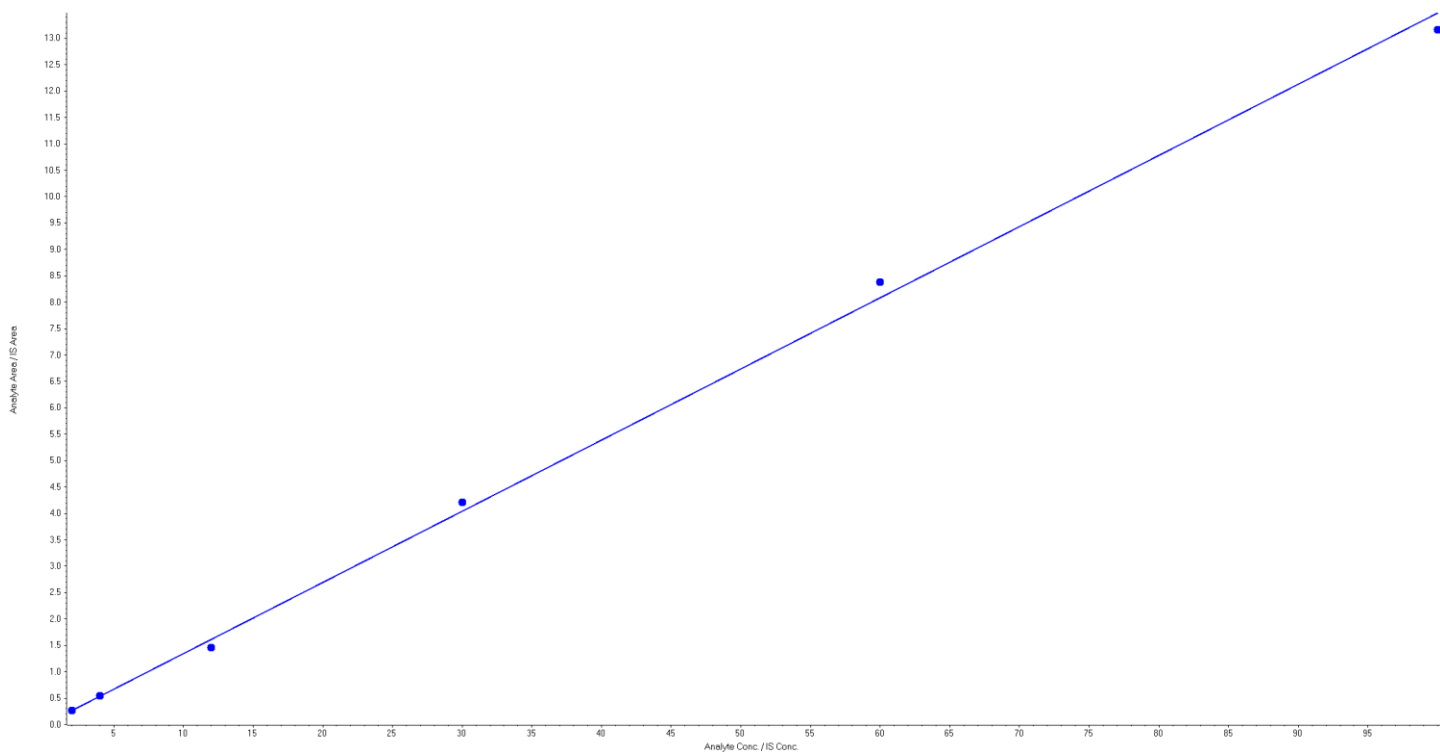


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.135x + -0.00478$ ($r = 0.9991$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.05	102.4
4	1	4.07	101.7
12	1	10.86	90.5
30	1	31.25	104.2
60	1	62.16	103.6
100	1	97.61	97.6

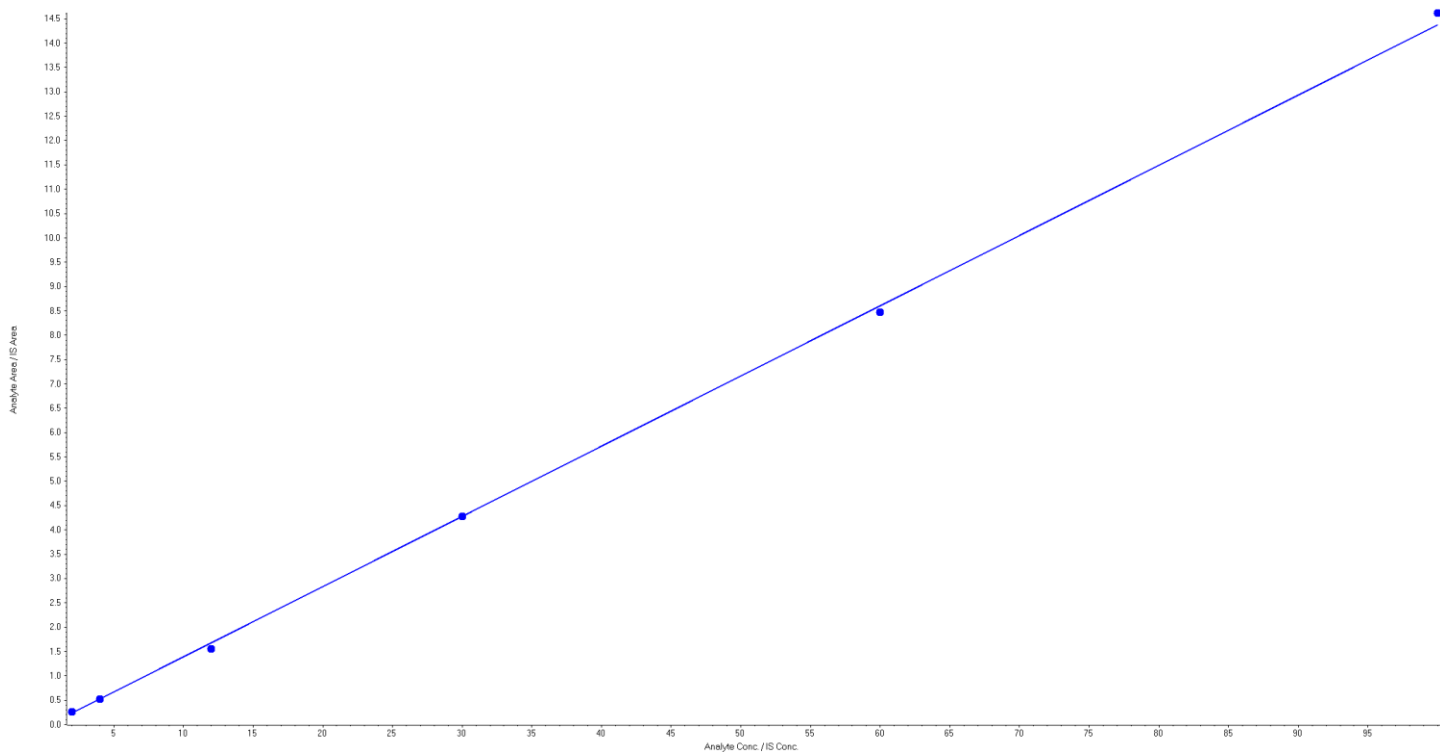


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.144 x + -0.0518$ ($r = 0.9997$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.14	106.8
4	1	4.02	100.4
12	1	11.13	92.7
30	1	29.98	99.9
60	1	59.06	98.4
100	1	101.68	101.7

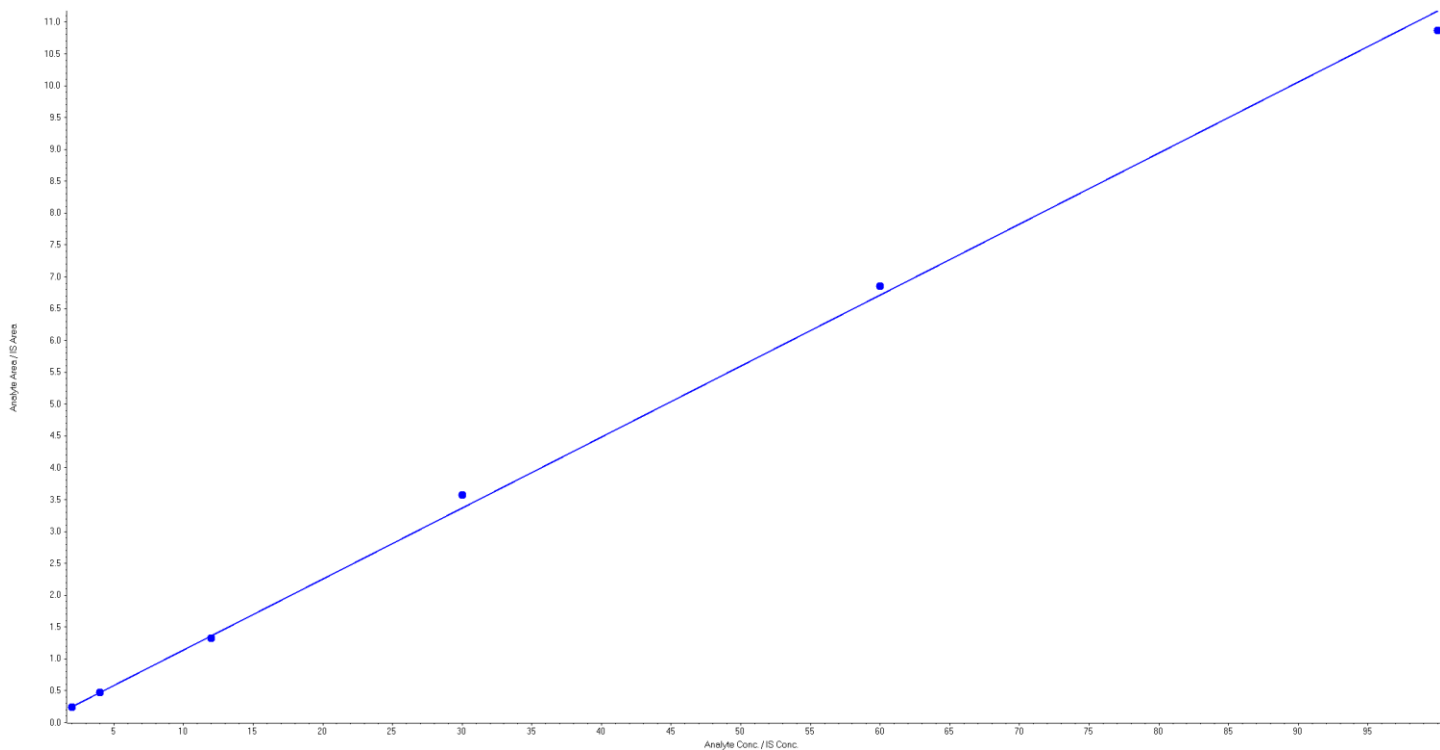


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.111 x + 0.0232$ ($r = 0.9993$)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	1.94	97.2
4	1	3.99	99.7
12	1	11.71	97.6
30	1	31.85	106.2
60	1	61.25	102.1
100	1	97.25	97.3

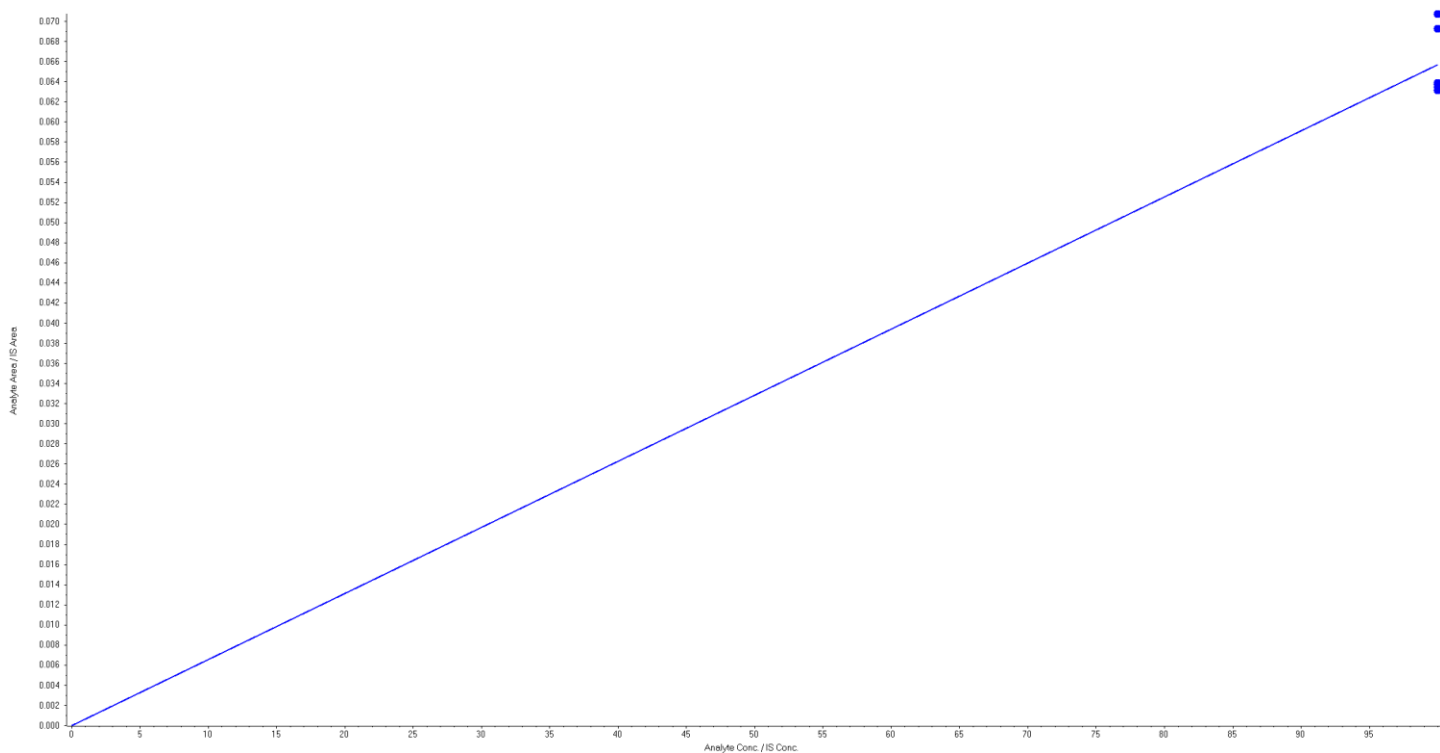


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000657 x$ ($r = 0.9989$)

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

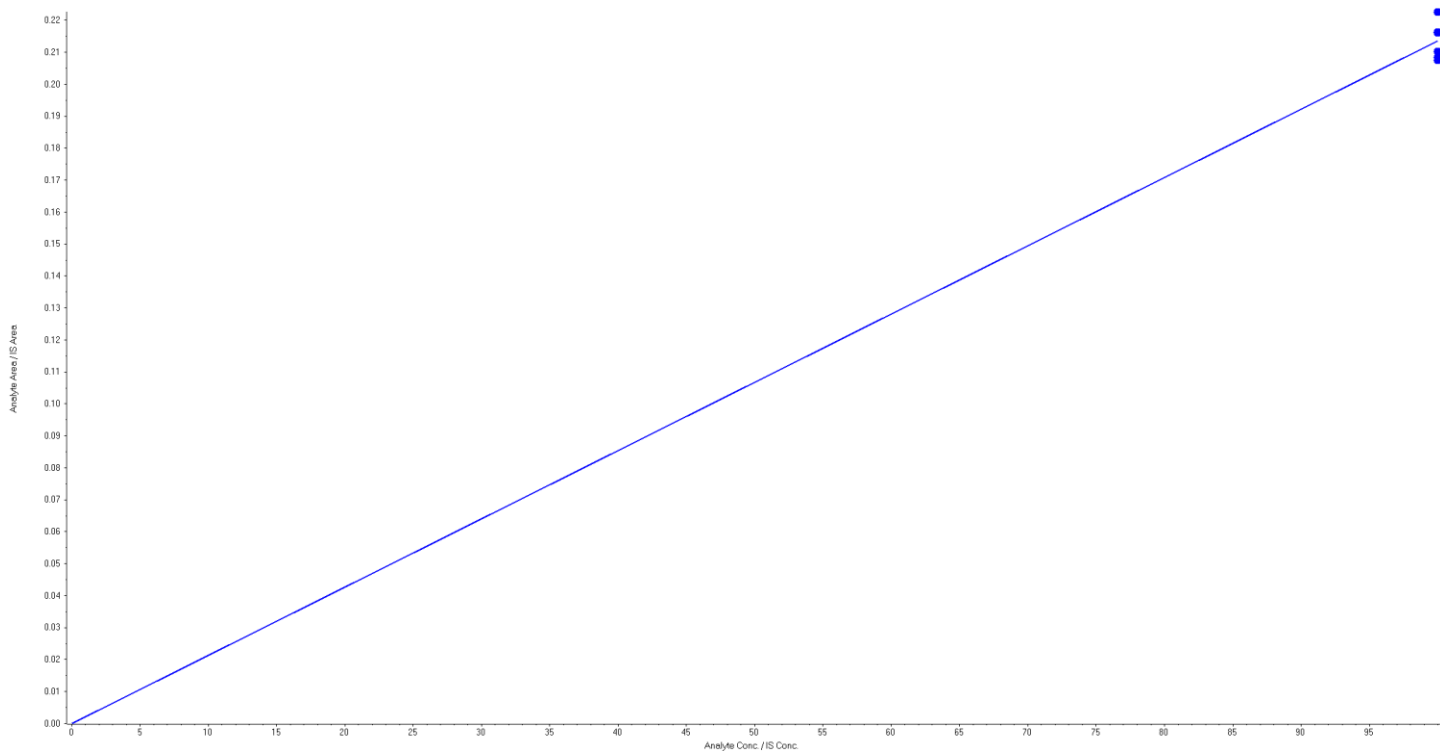


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00214 x$ ($r = 0.9997$)

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

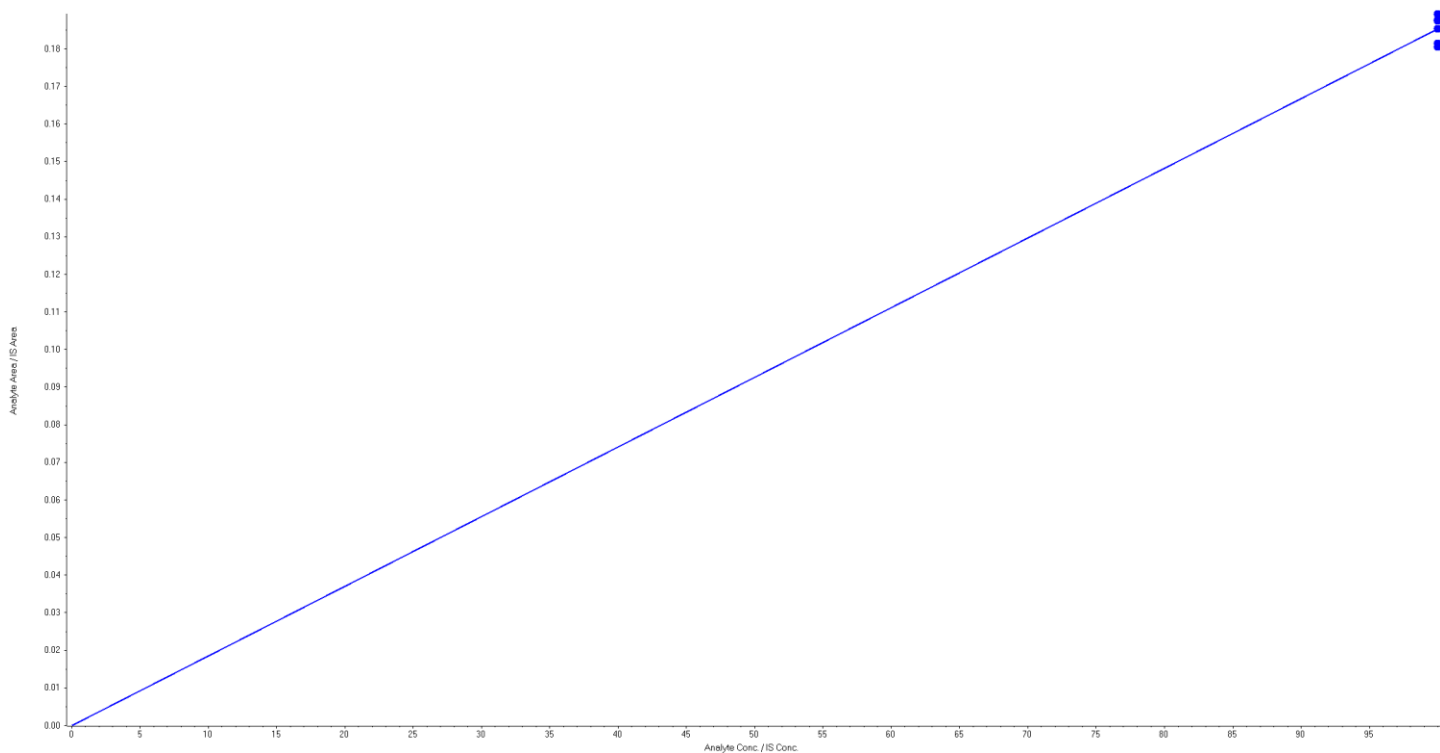


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.00185 x$ ($r = 0.9998$)

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

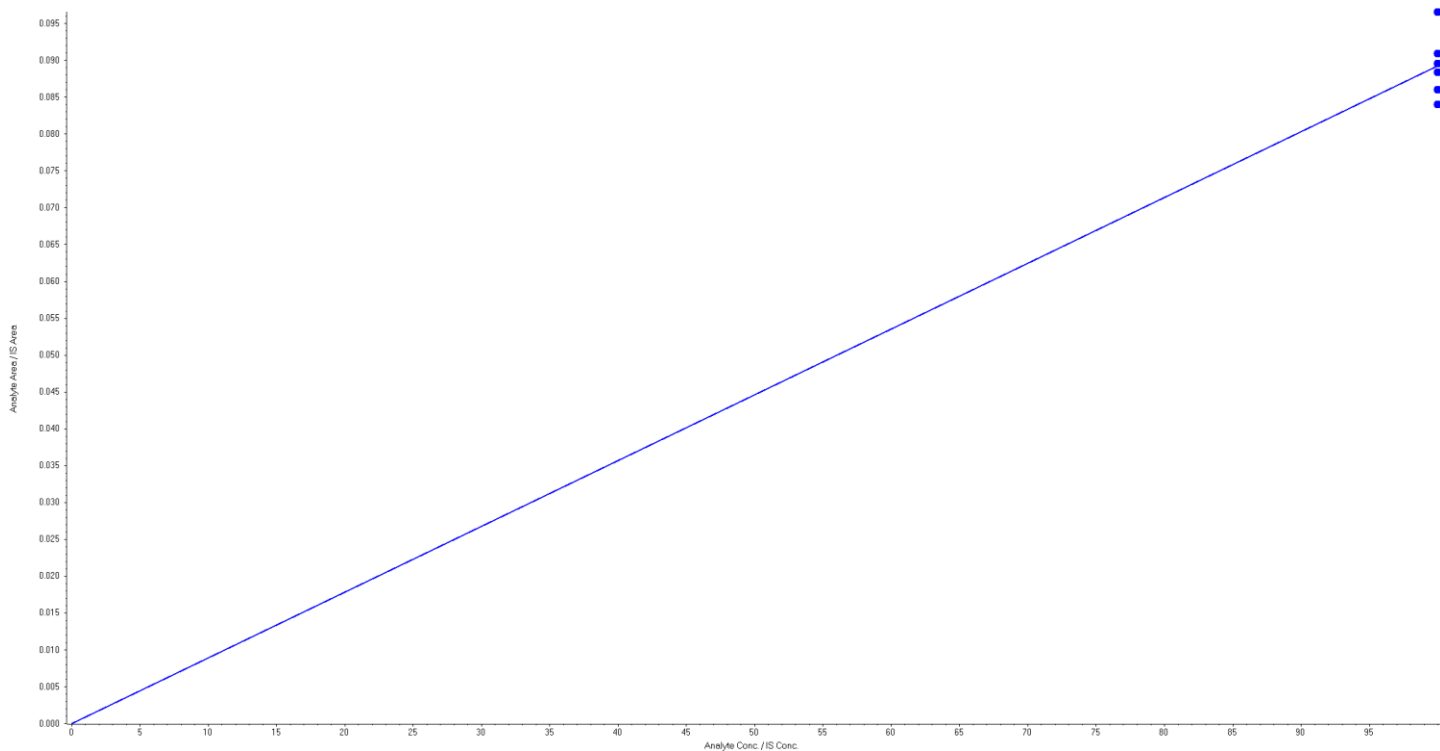


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.000893 x$ ($r = 0.9990$)

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

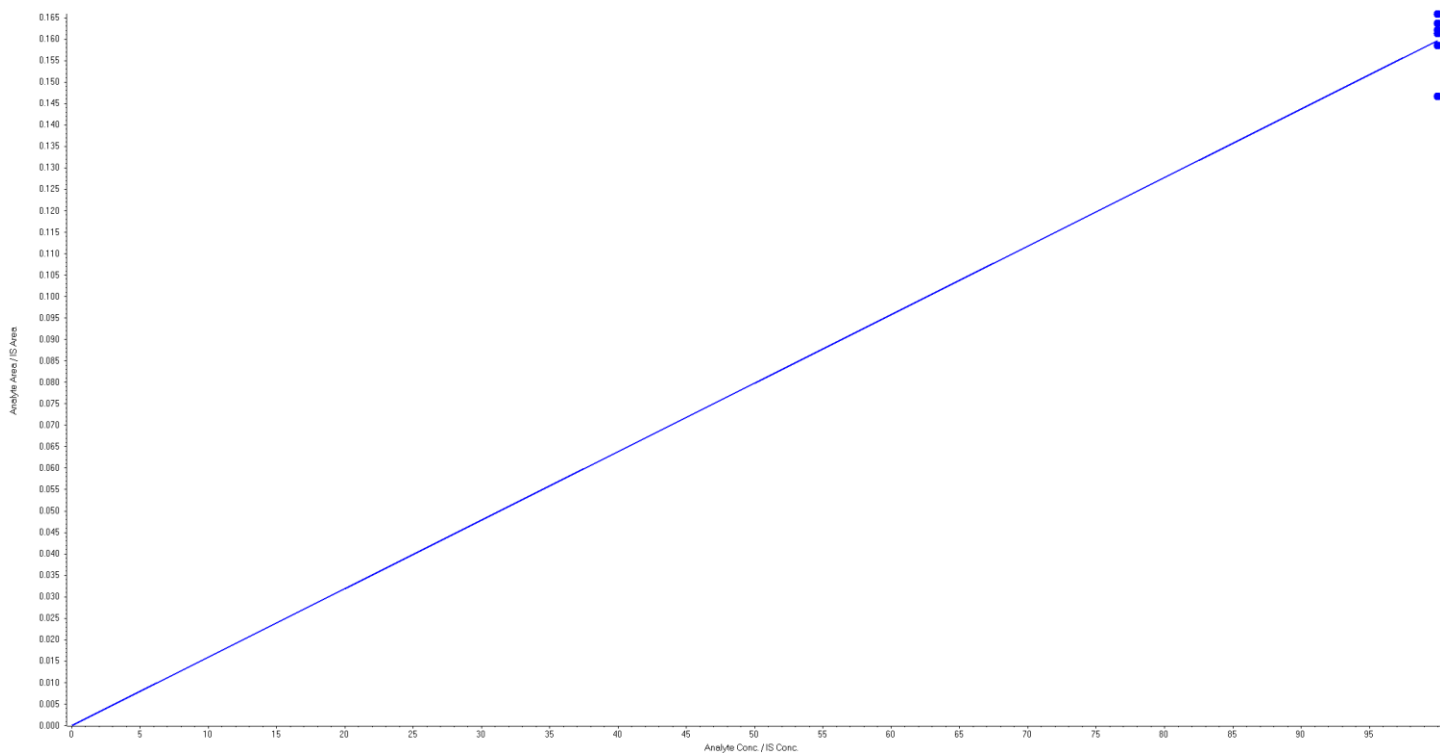


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160229\WS#4396598.wiff	Result Table	PFC_Water_160229_4396598_ULow.rdb
Acquisition Date	2016/02/29 3:17:55 PM	Project	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	Instrument Name	LCMS03

Regression Equation: $y = 0.0016 x$ ($r = 0.9992$)

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





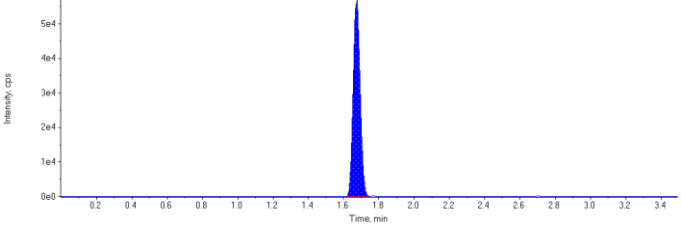
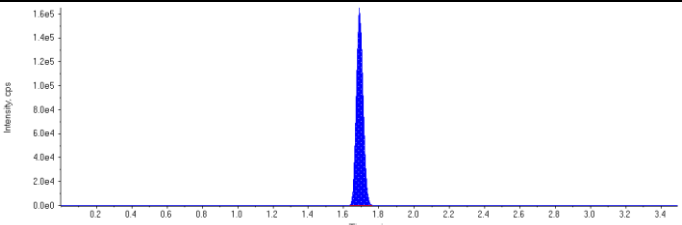
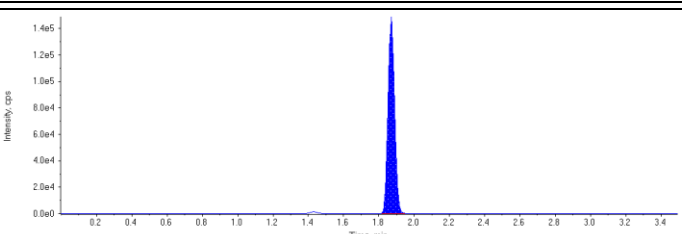
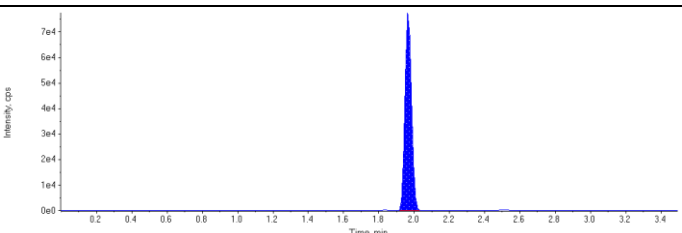
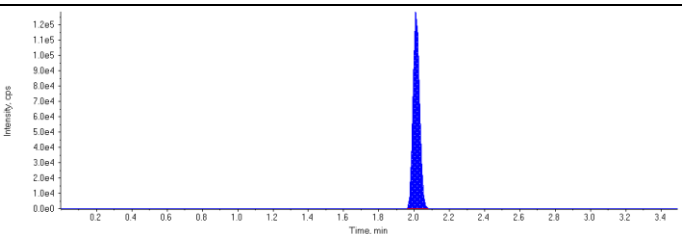
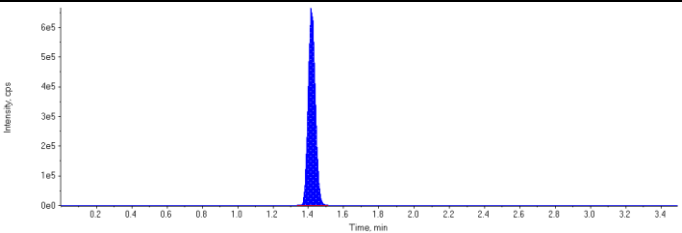
6. Continuing Calibration

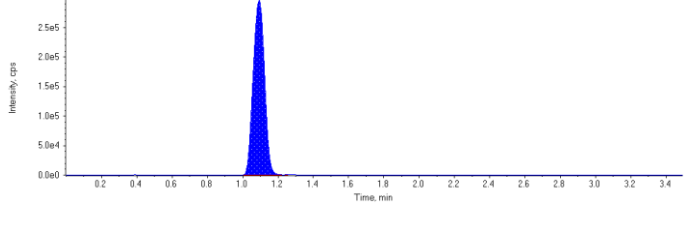
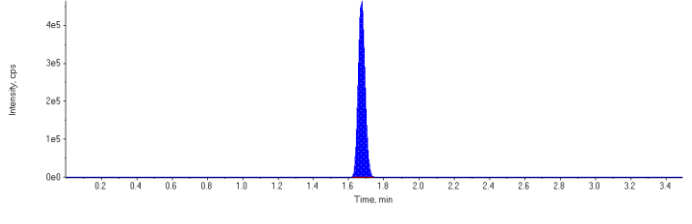
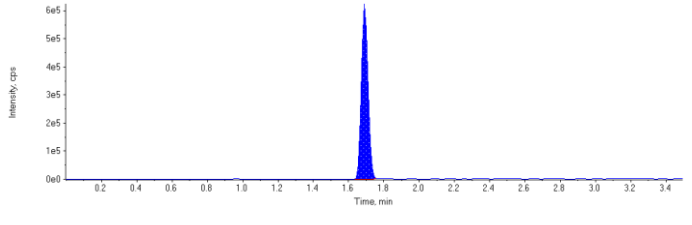
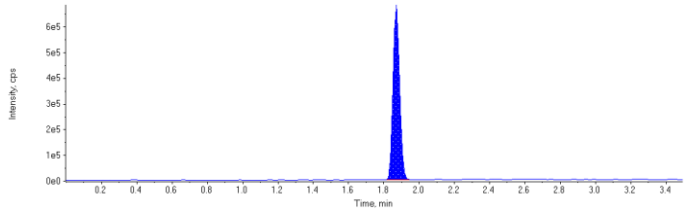
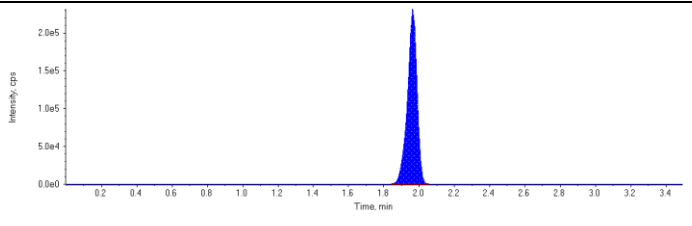
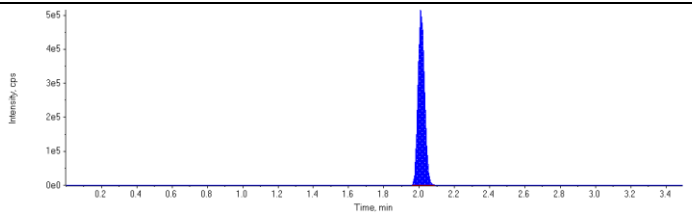
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6740 Campobello Rd
Mississauga, Ontario, Canada
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1-800-668-0639
www.maxxamanalytics.com

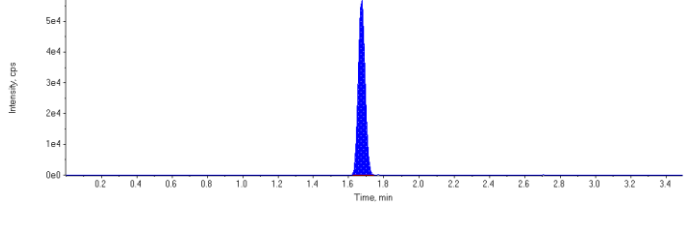
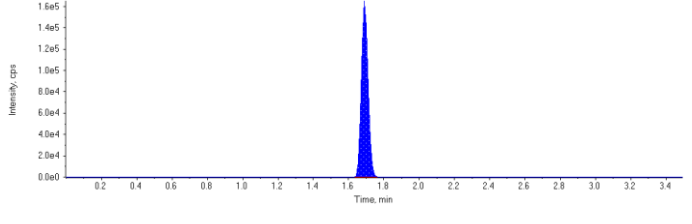
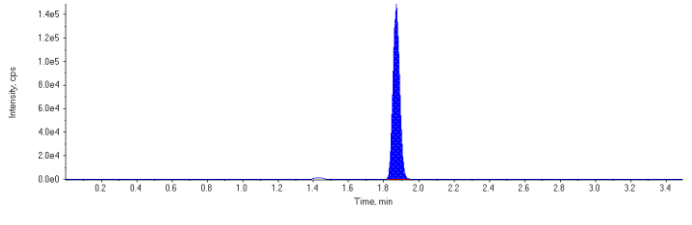
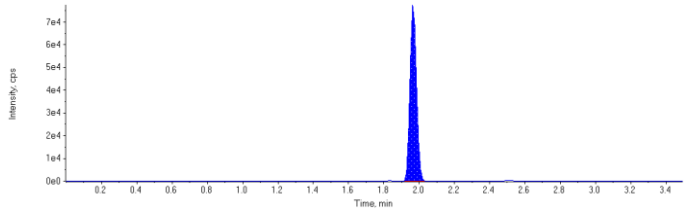
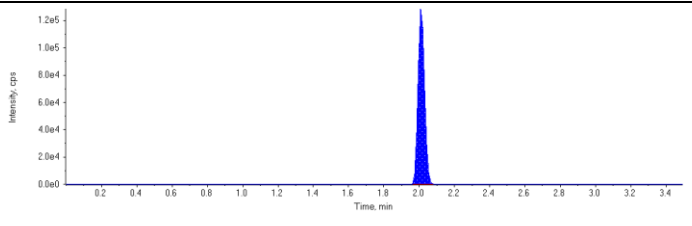
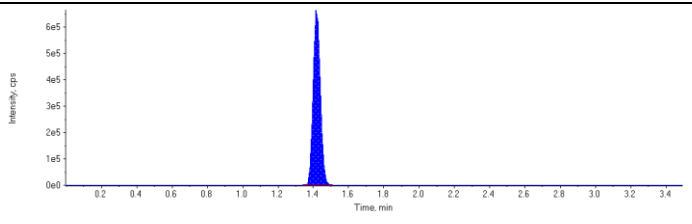
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (μL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 2:36:50 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	155000.	1.67	1.00	-
MPFHpA	431000.	1.69	1.00	-
MPFOA	384000.	1.87	1.00	-
MPFOS	200000.	1.97	1.00	-
MPFNA	332000.	2.01	1.00	-
13C6-PFHxA IS	1910000.	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	1330000	1.09	30.0	28.7	95.8
PFHxS 1	1250000	1.67	30.0	27.5	91.7
PFHpA 1	1630000	1.69	30.0	30.5	102.0
PFOA 1	1750000	1.87	30.0	31.5	105.0
PFOS 1	871000	1.96	30.0	26.1	87.1
PFNA 1	1330000	2.01	30.0	29.9	99.6
18O2-PFHxS	155000	1.67	100.	101.	101.0
13C4-PFHpA	431000	1.69	100.	98.0	98.0
13C4-PFOA	384000	1.87	100.	96.9	96.9
13C4-PFOS	200000	1.97	100.	102.	102.0
13C5-PFNA	332000	2.01	100.	99.3	99.3
13C6-PFHxA	1910000	1.42	100.	96.9	96.9

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): 1.97(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

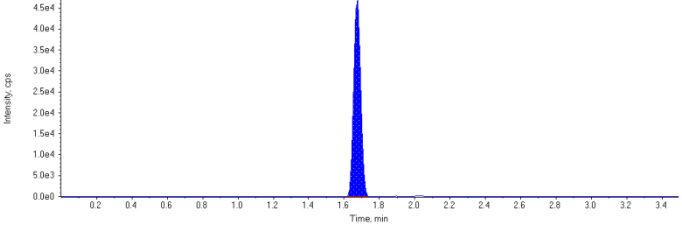
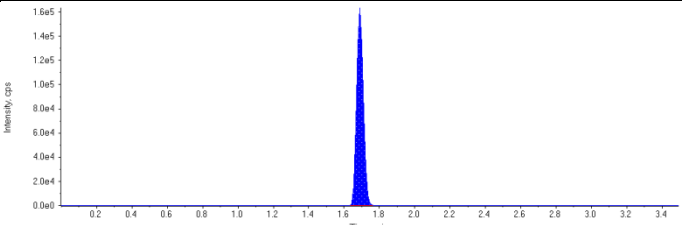
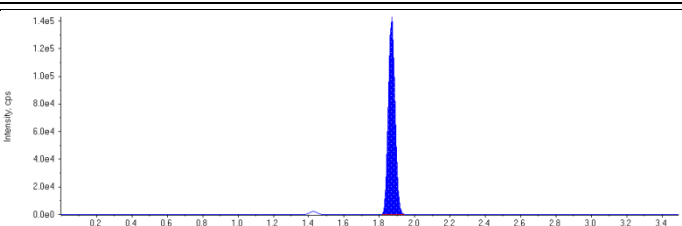
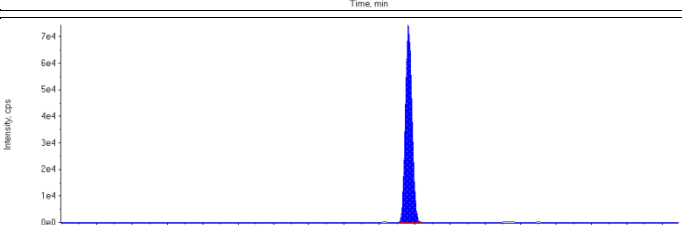
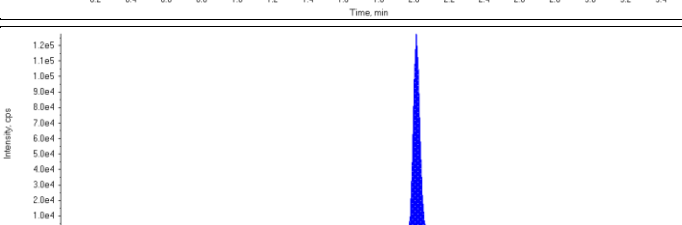
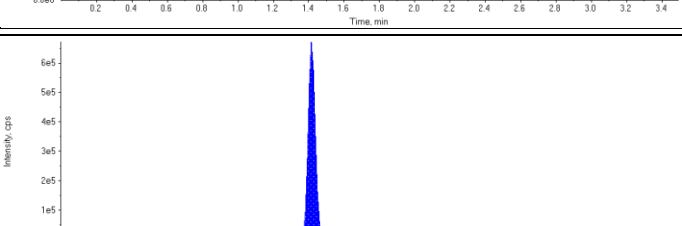
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 28.7 ng/L Area Ratio: 8.60 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 27.5 ng/L Area Ratio: 8.10 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 30.5 ng/L Area Ratio: 3.77 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 31.5 ng/L Area Ratio: 4.57 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 26.1 ng/L Area Ratio: 4.36 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 29.9 ng/L Area Ratio: 4.00 Sample Type: (Quality Control)	

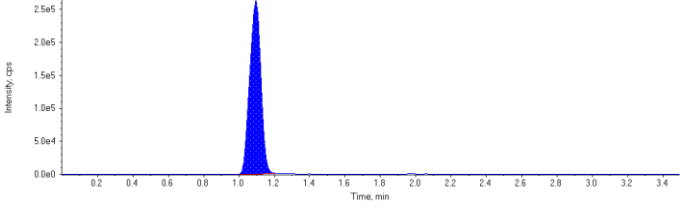
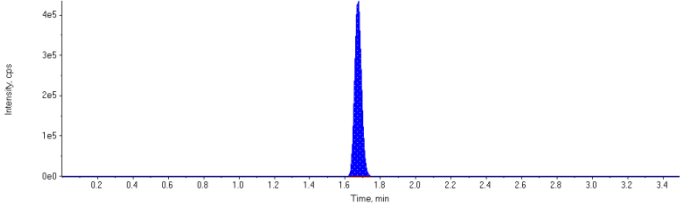
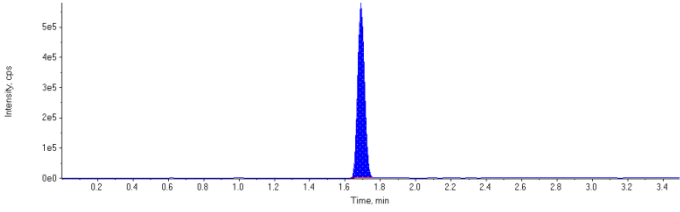
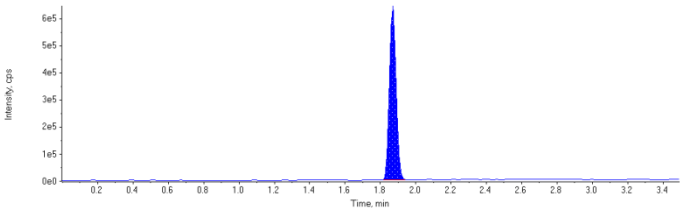
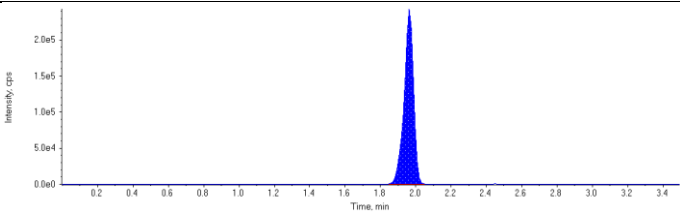
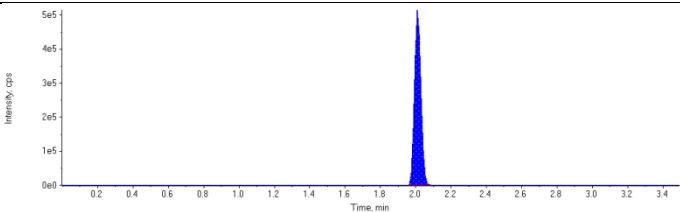
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0810 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.0 ng/L Area Ratio: 0.226 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 96.9 ng/L Area Ratio: 0.201 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 0.105 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 99.3 ng/L Area Ratio: 0.174 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.9 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

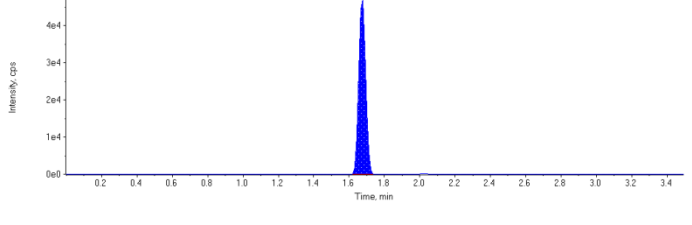
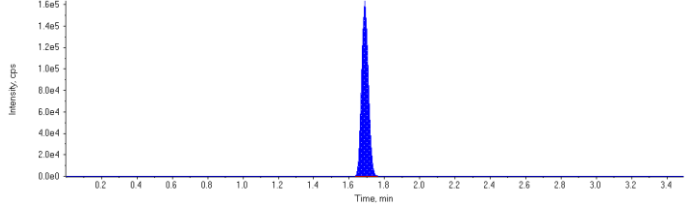
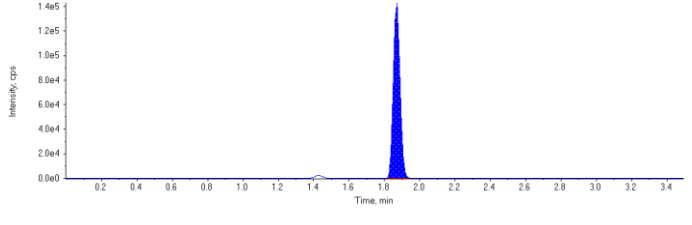
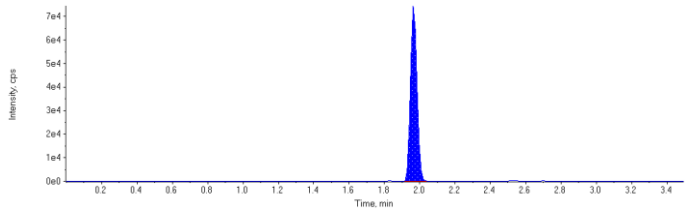
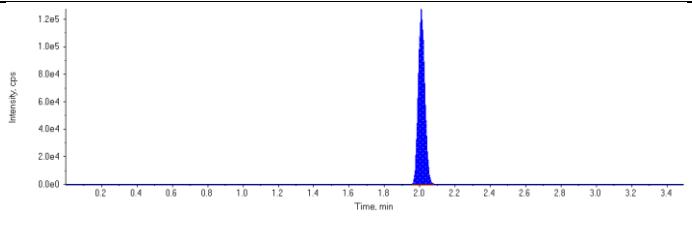
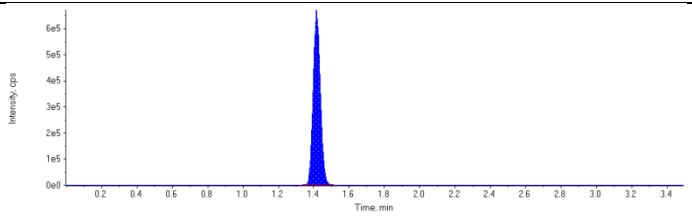
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 3:48:16 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	130000.	1.67	1.00	-
MPFHpA	430000.	1.69	1.00	-
MPFOA	375000.	1.87	1.00	-
MPFOS	192000.	1.97	1.00	-
MPFNA	324000.	2.01	1.00	-
13C6-PFHxA IS	1890000.	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	1160000	1.09	30.0	29.9	99.6
PFHxS 1	1180000	1.67	30.0	30.9	103.0
PFHpA 1	1530000	1.69	30.0	28.8	95.9
PFOA 1	1690000	1.87	30.0	31.0	103.0
PFOS 1	901000	1.96	30.0	28.0	93.5
PFNA 1	1320000	2.01	30.0	30.5	102.0
18O2-PFHxS	130000	1.67	100.	85.5	85.5
13C4-PFHpA	430000	1.69	100.	98.5	98.5
13C4-PFOA	375000	1.87	100.	95.6	95.6
13C4-PFOS	192000	1.97	100.	98.8	98.8
13C5-PFNA	324000	2.01	100.	97.7	97.7
13C6-PFHxA	1890000	1.42	100.	96.0	96.0

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): 1.97(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

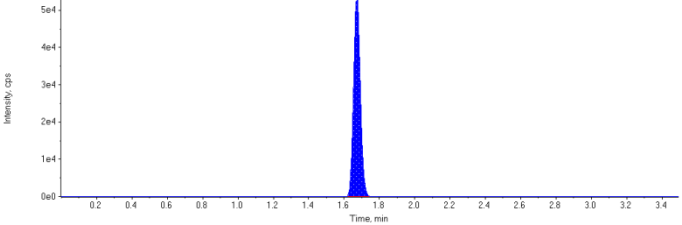
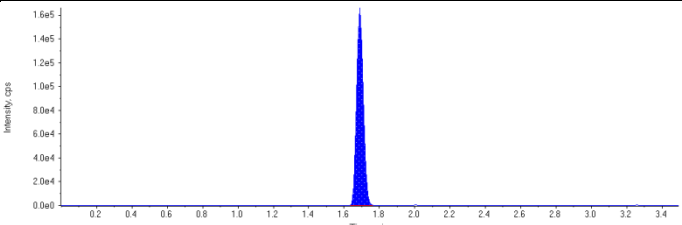
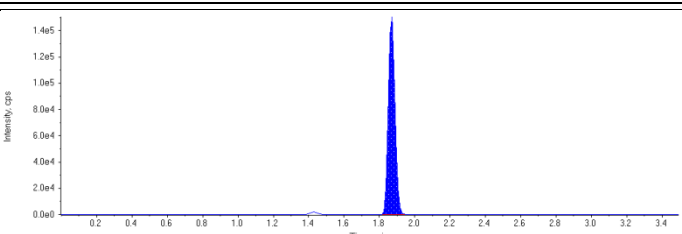
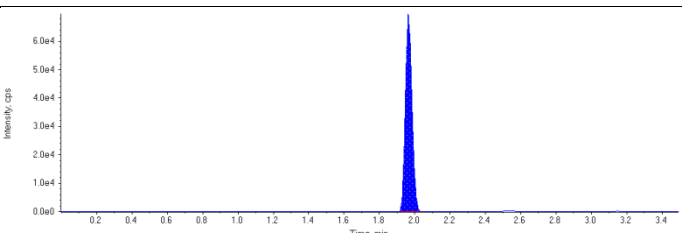
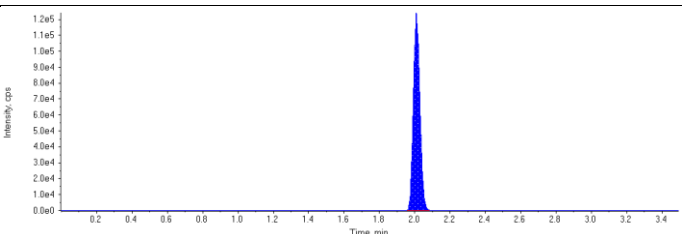
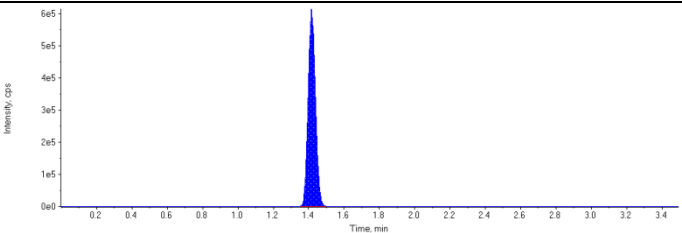
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 29.9 ng/L Area Ratio: 8.95 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 30.9 ng/L Area Ratio: 9.11 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 28.8 ng/L Area Ratio: 3.56 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 31.0 ng/L Area Ratio: 4.50 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 28.0 ng/L Area Ratio: 4.68 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 30.5 ng/L Area Ratio: 4.07 Sample Type: (Quality Control)	

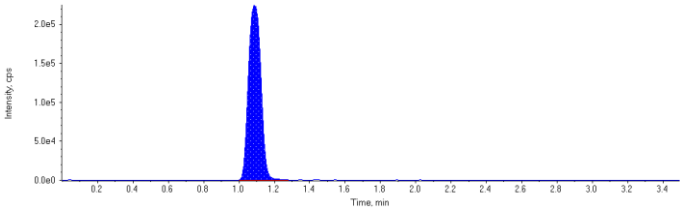
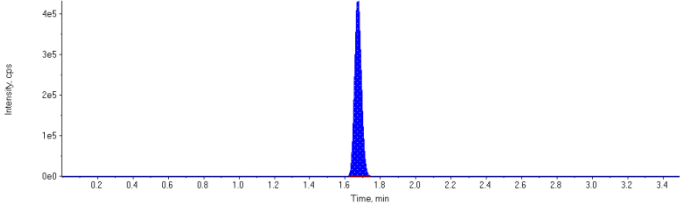
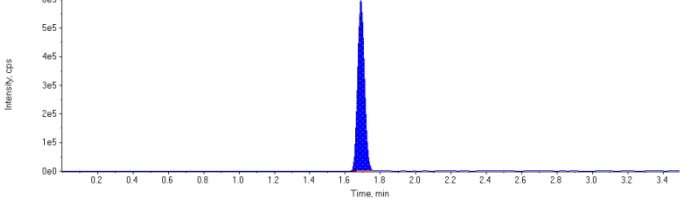
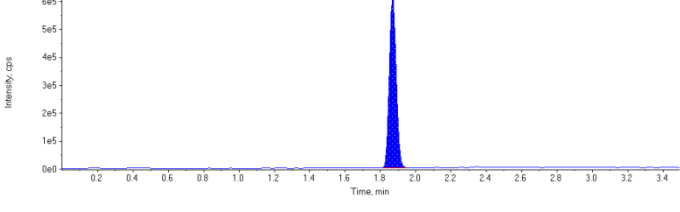
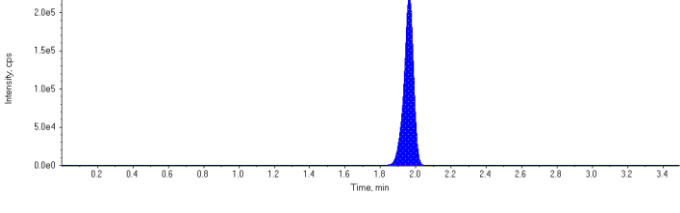
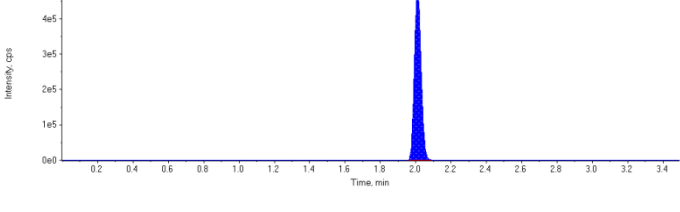
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 85.5 ng/L Area Ratio: 0.0685 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.5 ng/L Area Ratio: 0.227 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 95.6 ng/L Area Ratio: 0.198 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.97 (1.97) min Calculated Conc: 98.8 ng/L Area Ratio: 0.102 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 97.7 ng/L Area Ratio: 0.171 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.0 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

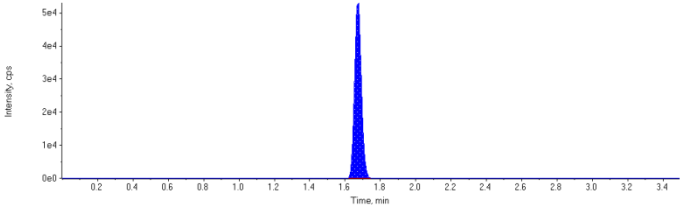
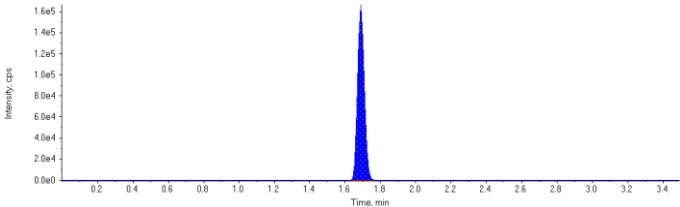
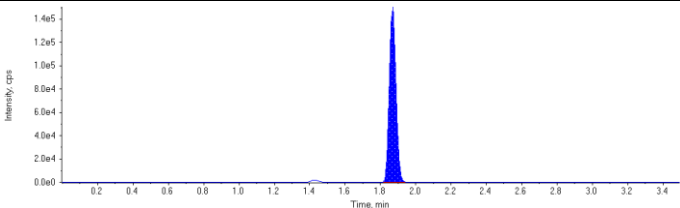
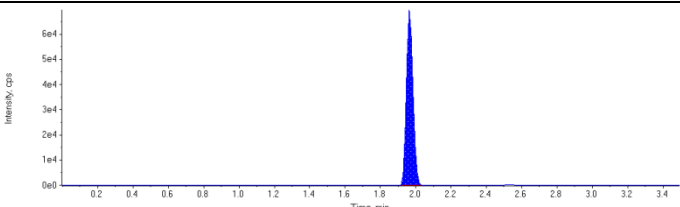
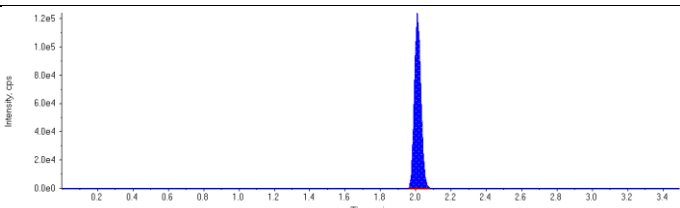
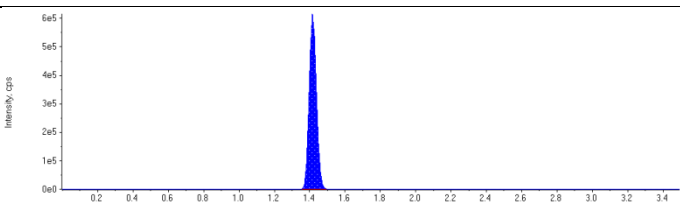
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/23 4:44:19 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	Re-analyzed
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160223\WS#4390179.wiff		
Result Table	PFC_Water_160223_4390179_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	143000.	1.67	1.00	-
MPFHpA	433000.	1.69	1.00	-
MPFOA	395000.	1.87	1.00	-
MPFOS	180000.	1.96	1.00	-
MPFNA	319000.	2.01	1.00	-
13C6-PFHxA IS	1760000.	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	1100000	1.09	30.0	25.8	86.1
PFHxS 1	1190000	1.67	30.0	28.2	94.0
PFHpA 1	1600000	1.69	30.0	29.8	99.2
PFOA 1	1660000	1.87	30.0	28.9	96.4
PFOS 1	842000	1.96	30.0	28.0	93.2
PFNA 1	1280000	2.01	30.0	30.0	99.8
18O2-PFHxS	143000	1.67	100.	101.	101.0
13C4-PFHpA	433000	1.69	100.	106.	106.0
13C4-PFOA	395000	1.87	100.	108.	108.0
13C4-PFOS	180000	1.96	100.	99.3	99.3
13C5-PFNA	319000	2.01	100.	103.	103.0
13C6-PFHxA	1760000	1.42	100.	89.5	89.5

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

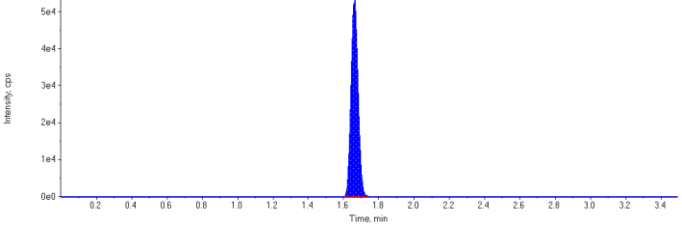
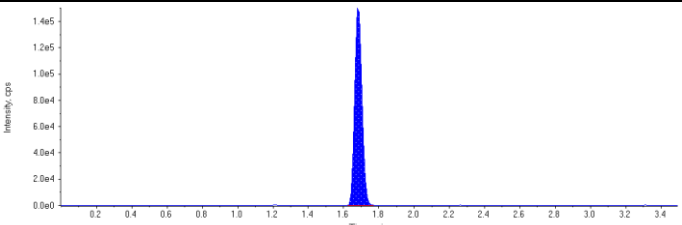
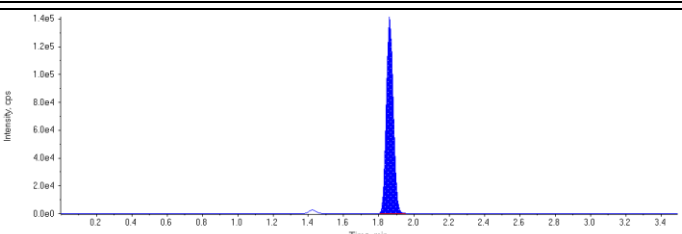
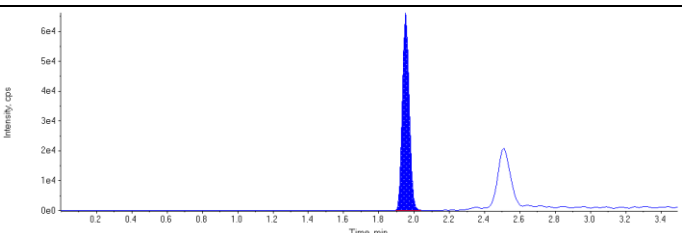
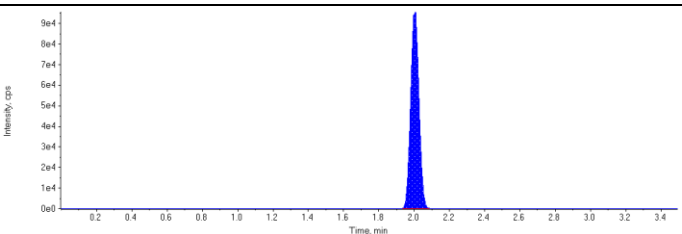
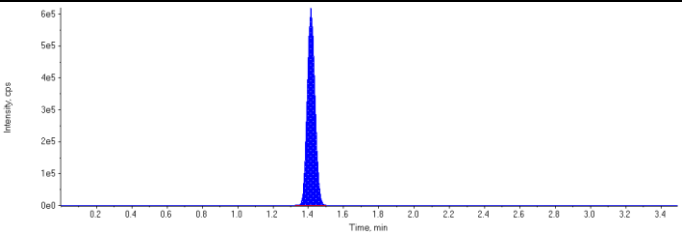
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 25.8 ng/L Area Ratio: 7.71 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 28.2 ng/L Area Ratio: 8.30 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 29.8 ng/L Area Ratio: 3.69 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 28.9 ng/L Area Ratio: 4.20 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 28.0 ng/L Area Ratio: 4.67 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 30.0 ng/L Area Ratio: 4.00 Sample Type: (Quality Control)	

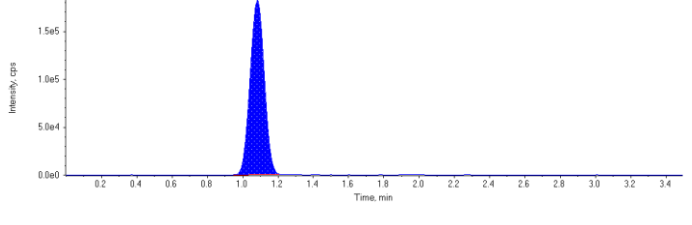
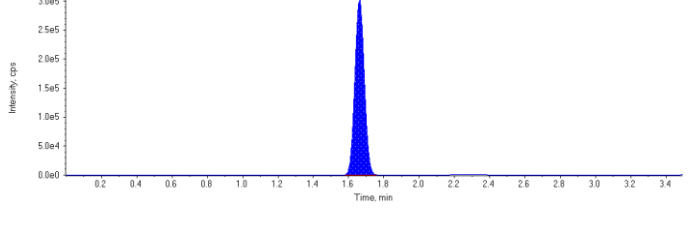
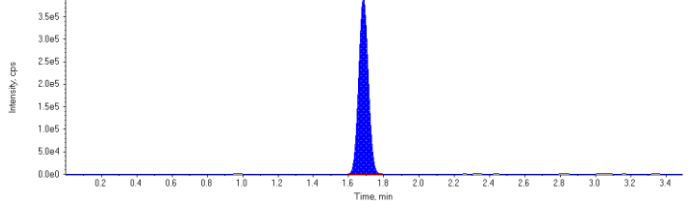
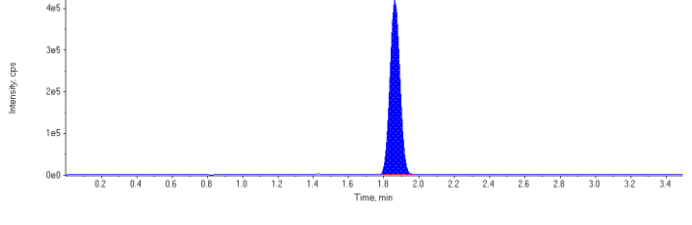
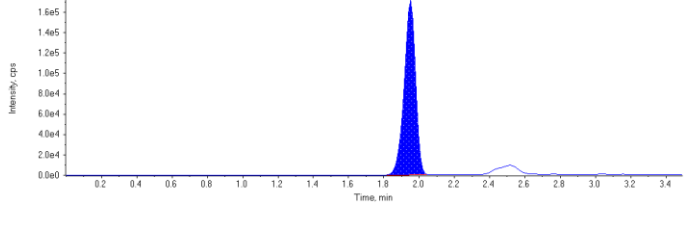
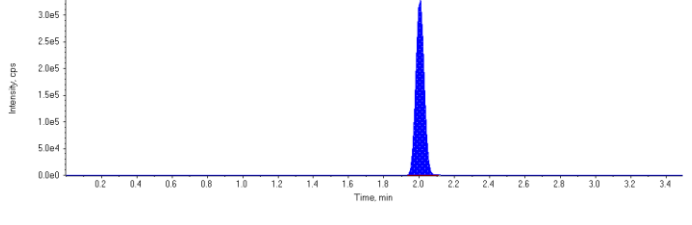
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0812 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 106. ng/L Area Ratio: 0.246 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 108. ng/L Area Ratio: 0.224 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 99.3 ng/L Area Ratio: 0.102 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.181 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 89.5 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

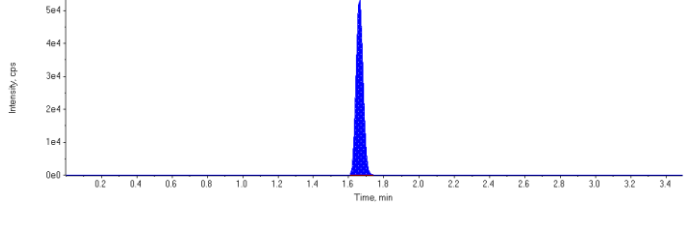
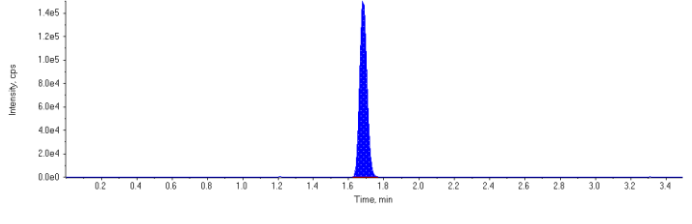
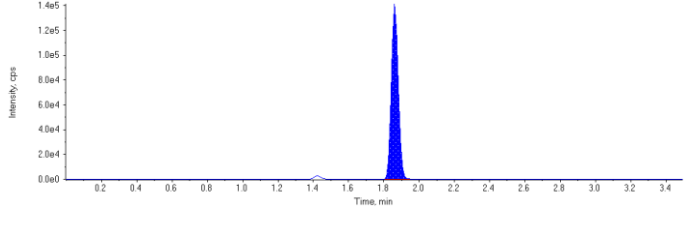
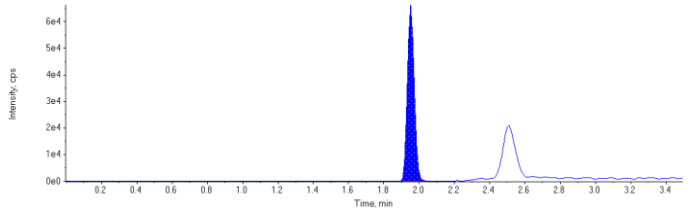
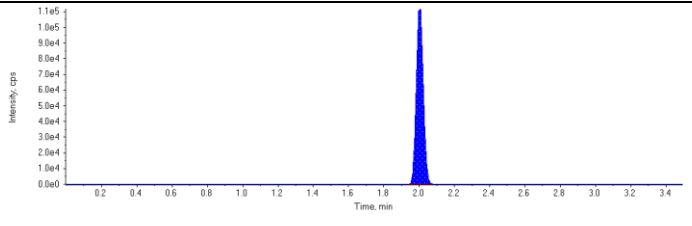
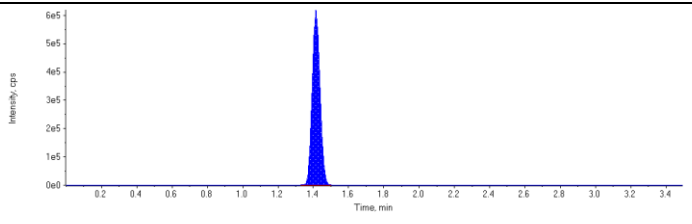
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 3:58:41 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	150000.	1.66	1.00	-
MPFHpA	435000.	1.68	1.00	-
MPFOA	383000.	1.86	1.00	-
MPFOS	178000.	1.95	1.00	-
MPFNA	315000.	2.00	1.00	-
13C6-PFHxA IS	1910000.	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	1020000	1.08	30.0	25.6	85.2
PFHxS 1	1130000	1.66	30.0	26.8	89.2
PFHpA 1	1470000	1.68	30.0	31.3	104.0
PFOA 1	1630000	1.86	30.0	31.6	105.0
PFOS 1	762000	1.95	30.0	30.1	100.0
PFNA 1	1080000	2.00	30.0	30.7	102.0
18O2-PFHxS	150000	1.66	100.	120.	120.0
13C4-PFHpA	435000	1.68	100.	107.	107.0
13C4-PFOA	383000	1.86	100.	108.	108.0
13C4-PFOS	178000	1.95	100.	104.	104.0
13C5-PFNA	315000	2.00	100.	103.	103.0
13C6-PFHxA	1910000	1.42	100.	96.6	96.6

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(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

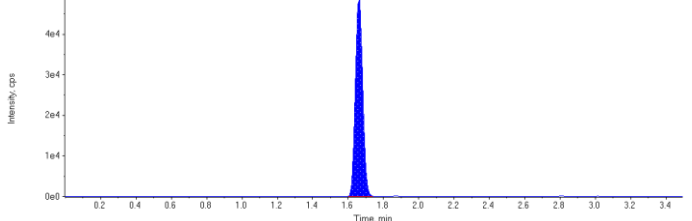
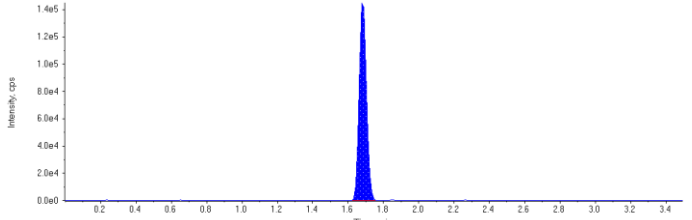
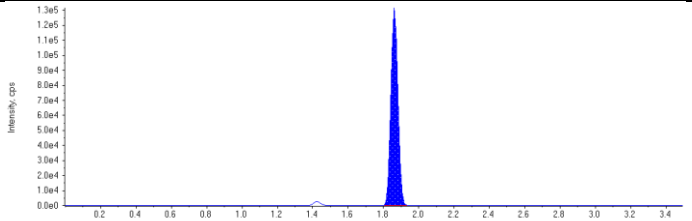
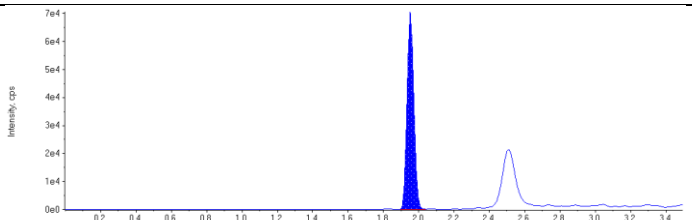
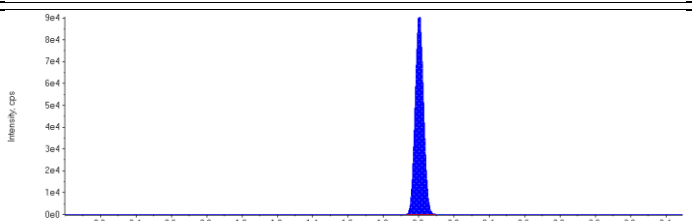
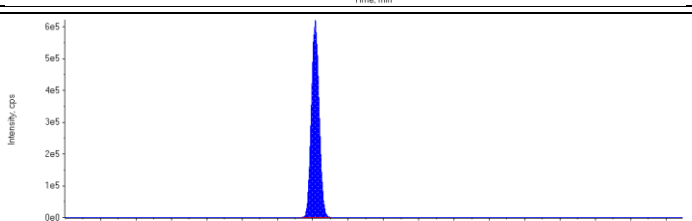
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 25.6 ng/L Area Ratio: 6.79 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 26.8 ng/L Area Ratio: 7.52 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 31.3 ng/L Area Ratio: 3.38 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 31.6 ng/L Area Ratio: 4.26 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 30.1 ng/L Area Ratio: 4.29 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 30.7 ng/L Area Ratio: 3.44 Sample Type: (Quality Control)	

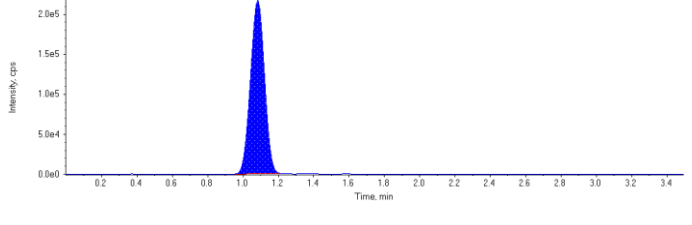
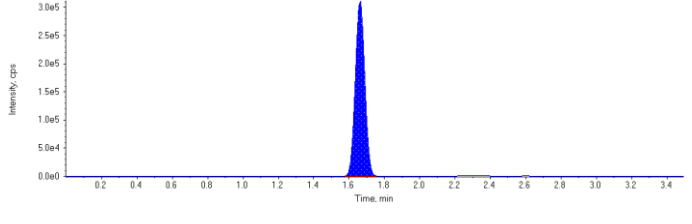
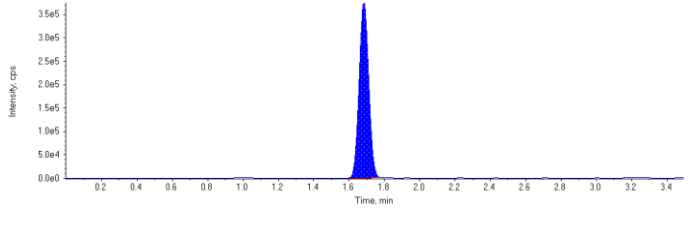
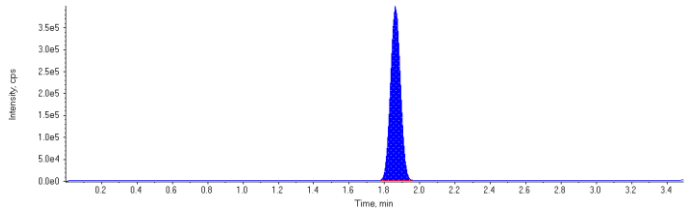
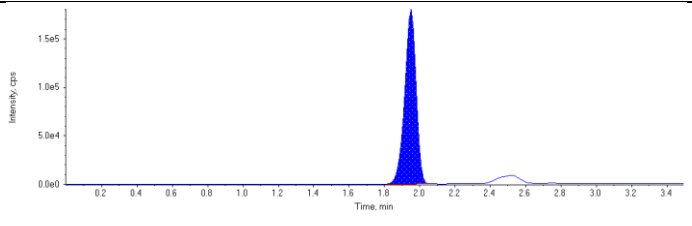
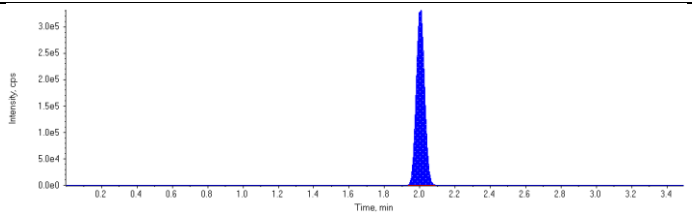
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 120. ng/L Area Ratio: 0.0787 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 107. ng/L Area Ratio: 0.228 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 108. ng/L Area Ratio: 0.200 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 104. ng/L Area Ratio: 0.0931 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.165 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.6 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

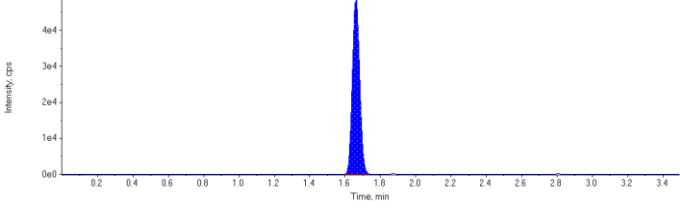
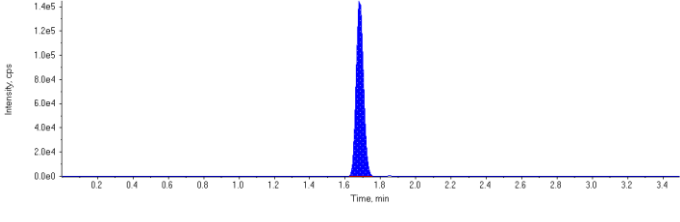
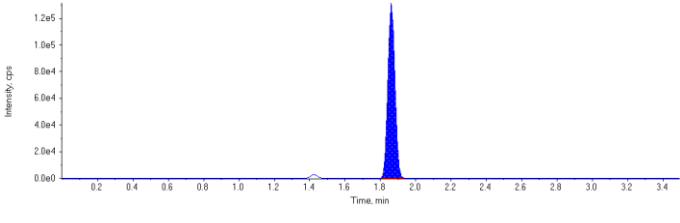
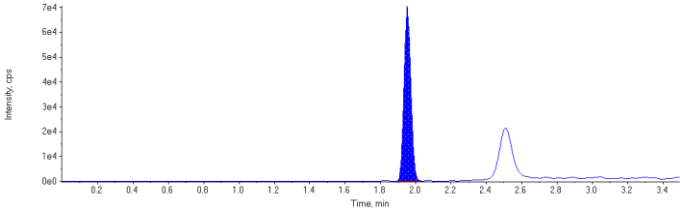
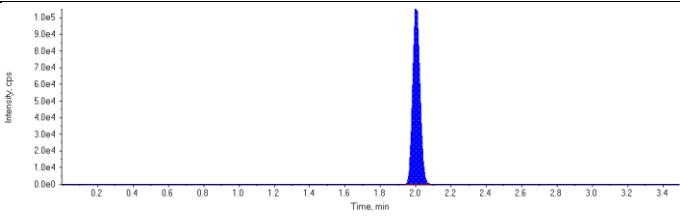
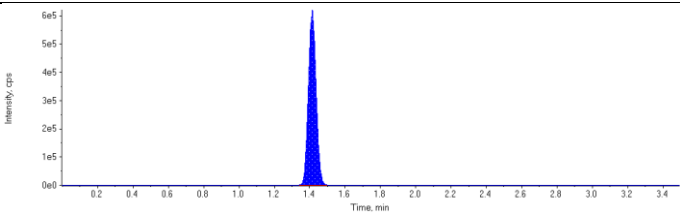
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 5:10:08 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	141000.	1.66	1.00	-
MPFHpA	419000.	1.68	1.00	-
MPFOA	361000.	1.86	1.00	-
MPFOS	187000.	1.95	1.00	-
MPFNA	308000.	2.00	1.00	-
13C6-PFHxA IS	1890000.	1.41	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	1200000	1.08	30.0	31.8	106.0
PFHxS 1	1170000	1.66	30.0	29.4	98.0
PFHpA 1	1420000	1.68	30.0	31.4	105.0
PFOA 1	1550000	1.86	30.0	31.9	106.0
PFOS 1	803000	1.95	30.0	30.2	101.0
PFNA 1	1100000	2.00	30.0	31.9	106.0
18O2-PFHxS	141000	1.66	100.	114.	114.0
13C4-PFHpA	419000	1.68	100.	104.	104.0
13C4-PFOA	361000	1.86	100.	103.	103.0
13C4-PFOS	187000	1.95	100.	111.	111.0
13C5-PFNA	307000	2.00	100.	102.	102.0
13C6-PFHxA	1890000	1.41	100.	95.7	95.7

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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

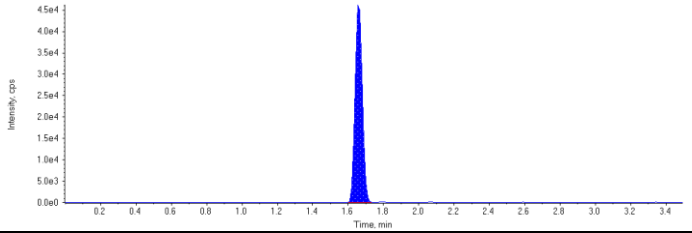
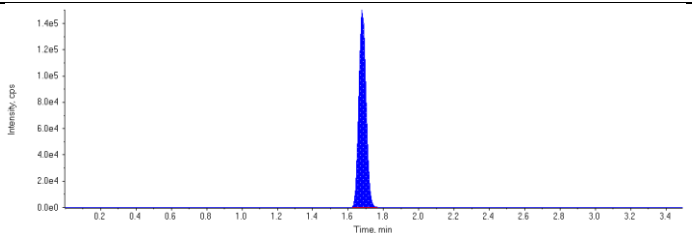
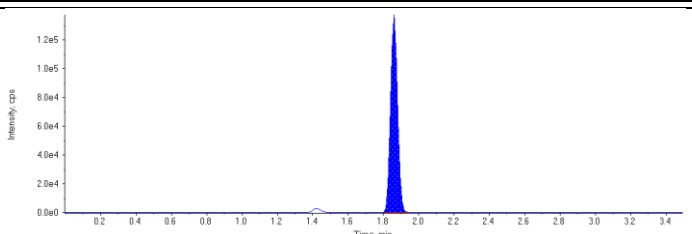
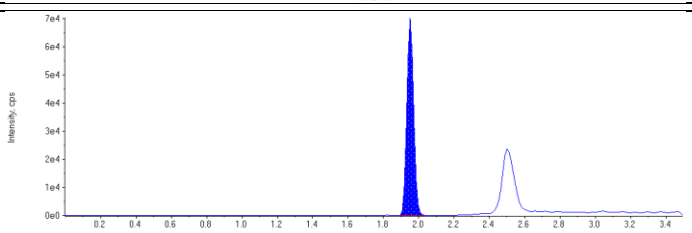
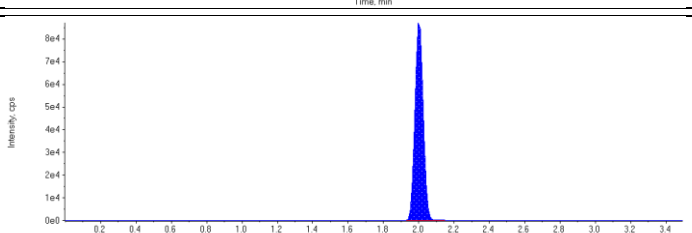
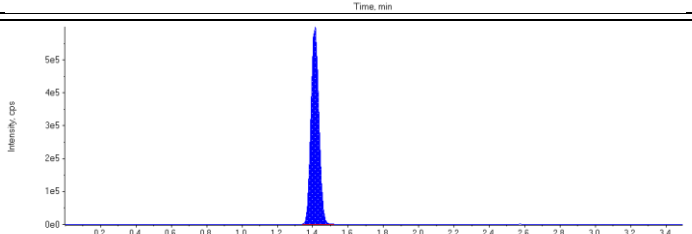
PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.15) min Calculated Conc: 31.8 ng/L Area Ratio: 8.46 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 29.4 ng/L Area Ratio: 8.27 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 31.4 ng/L Area Ratio: 3.38 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 31.9 ng/L Area Ratio: 4.29 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 30.2 ng/L Area Ratio: 4.30 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 31.9 ng/L Area Ratio: 3.58 Sample Type: (Quality Control)	

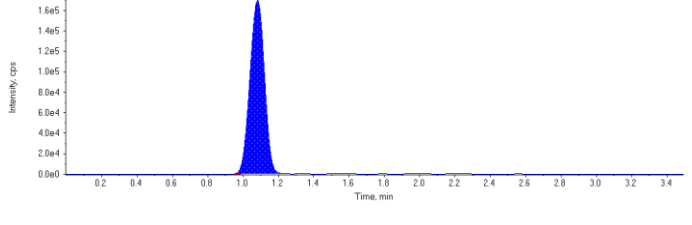
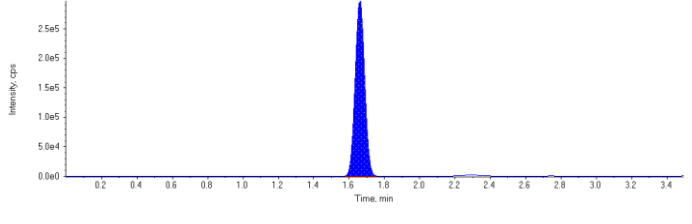
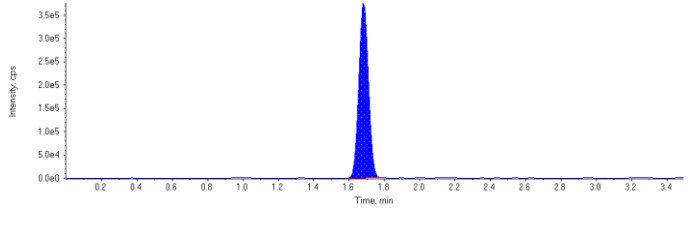
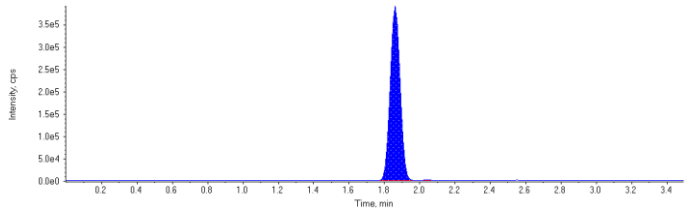
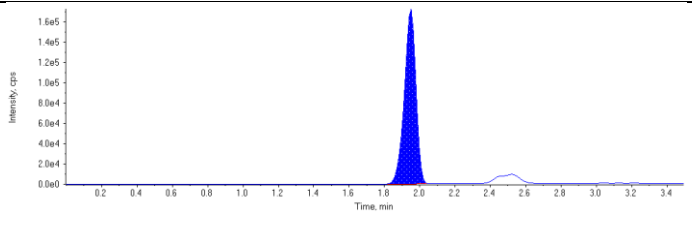
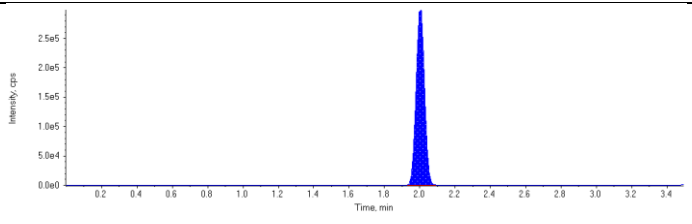
18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 114. ng/L Area Ratio: 0.0747 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 104. ng/L Area Ratio: 0.222 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 103. ng/L Area Ratio: 0.191 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 111. ng/L Area Ratio: 0.0987 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.162 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 95.7 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

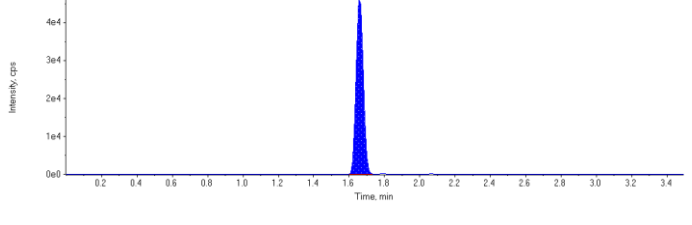
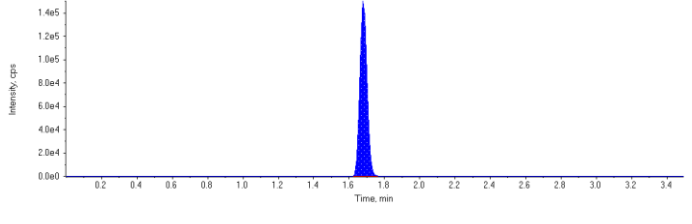
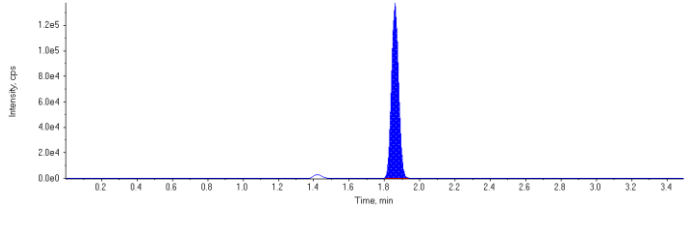
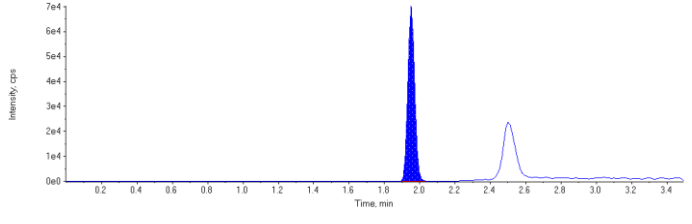
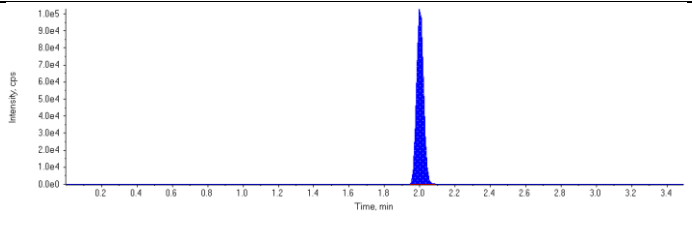
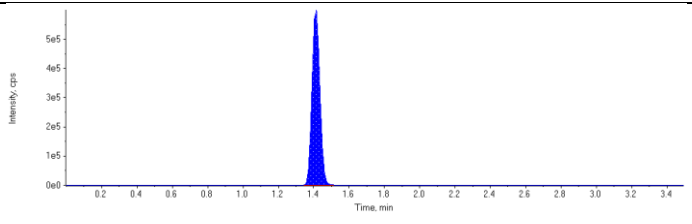
Sample Name	CCV	Injection Vial	6
Sample ID	CCV	Injection Volume (µL)	3
Sample Type	Quality Control	Algorithm Used	Analyst Classic
Acquisition Date	2016/02/29 5:56:02 PM	Dilution Factor	1.00
Acquisition Method	PFC_Water_Low.dam	Sample Annotation	-
Project	Enviro\PFOS	Instrument Name	LCMS03
Data File	PFC_160229\WS#4396598.wiff		
Result Table	PFC_Water_160229_4396598_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	132000.	1.66	1.00	-
MPFHpA	424000.	1.68	1.00	-
MPFOA	374000.	1.86	1.00	-
MPFOS	187000.	1.95	1.00	-
MPFNA	287000.	2.00	1.00	-
13C6-PFHxA IS	1870000.	1.41	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	966000	1.08	30.0	27.5	91.5
PFHxS 1	1120000	1.66	30.0	30.1	100.0
PFHpA 1	1410000	1.68	30.0	30.9	103.0
PFOA 1	1510000	1.86	30.0	30.1	100.0
PFOS 1	784000	1.95	30.0	29.4	97.9
PFNA 1	998000	2.00	30.0	31.0	103.0
18O2-PFHxS	132000	1.66	100.	108.	108.0
13C4-PFHpA	424000	1.68	100.	106.	106.0
13C4-PFOA	374000	1.86	100.	108.	108.0
13C4-PFOS	187000	1.95	100.	112.	112.0
13C5-PFNA	285000	2.00	100.	95.5	95.5
13C6-PFHxA	1870000	1.41	100.	94.7	94.7

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): 1.68(1.73) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOA (Internal Standard) RT (Exp. RT): 1.86(1.88) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFOS (Internal Standard) RT (Exp. RT): 1.95(1.97) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
MPFNA (Internal Standard) RT (Exp. RT): 2.00(2.02) min Concentration: 1.00 ng/L Sample Type: (Quality Control)	
13C6-PFHxA IS (Internal Standard) RT (Exp. RT): 1.41(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): 1.08 (1.15) min Calculated Conc: 27.5 ng/L Area Ratio: 7.30 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 30.1 ng/L Area Ratio: 8.45 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.68 (1.75) min Calculated Conc: 30.9 ng/L Area Ratio: 3.33 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.92) min Calculated Conc: 30.1 ng/L Area Ratio: 4.05 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 29.4 ng/L Area Ratio: 4.19 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 31.0 ng/L Area Ratio: 3.48 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 108. ng/L Area Ratio: 0.0707 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.73) min Calculated Conc: 106. ng/L Area Ratio: 0.227 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 108. ng/L Area Ratio: 0.200 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 112. ng/L Area Ratio: 0.100 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 95.5 ng/L Area Ratio: 0.153 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.41 (1.42) min Calculated Conc: 94.7 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	



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

Shipping and Receiving Documents

RUSH**Chain of
Custody Record**

Temperature on Receipt _____

Drinking Water? Yes ☒ No ☐**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

CTO WE7G

TAL-4124 (1007)

Client CH2M Hill		Project Manager Bill Friedmann		Date 02/12/16	Chain of Custody Number 283619
Address 5701 Cleveland St Suite 200		Telephone Number (Area Code)/Fax Number 757-671-6223		Lab Number	
City Virginia Beach	State VA	Zip Code 23462	Site Contact	Lab Contact	Page 1 of 1

Project Name and Location (State) CTO WE7G PFC Sampling		Carrier/Waybill Number FEDEX		Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
Contract/Purchase Order/Quote No. PO# 10006-7-184000					

Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date	Time	Matrix				Preservatives						Select																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

17-Feb-16 15:50

Ivana Vukovic



B632546

RGN ENV-408

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 Kathleen Smith		Date 02/16/16	Time 1330	1. Received By ROHILIN GRACIAH		Date 2016/02/17	Time 15:50								
2. Relinquished By		Date	Time	2. Received By		Date	Time								
3. Relinquished By		Date	Time	3. Received By		Date	Time								

Comments
NOTE: FROM TEST AMERICA DUE 02/22/2016

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

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**.

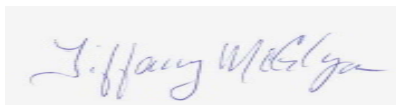
Sample Name	SDG
OF-RW37-0216	320-17154
OF-FB56-0216	320-17185

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

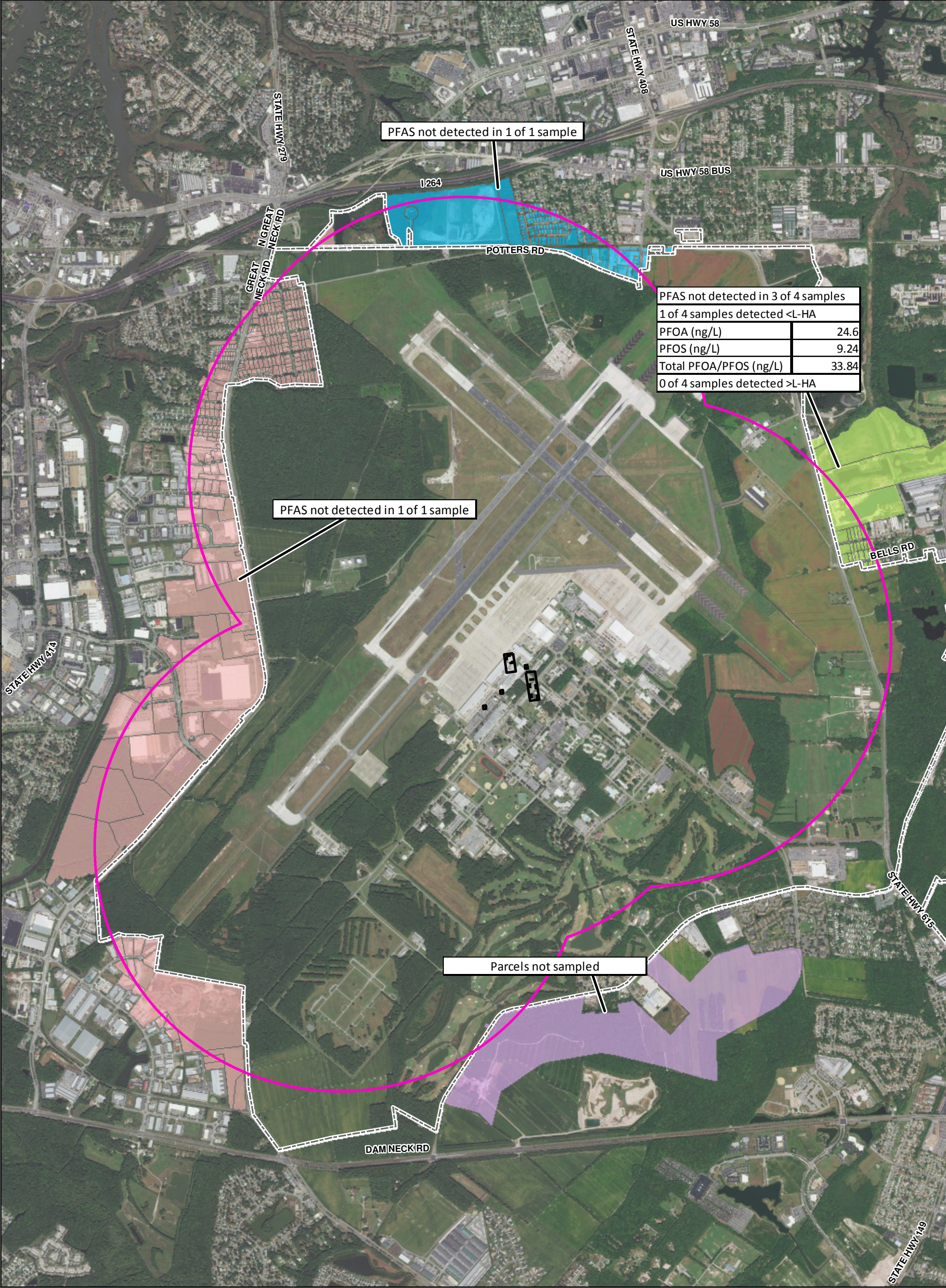
Qualification Flags

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)
[Pink Line] Sampling Area
[Dashed Line] Installation Boundary
Off-Base Parcels
[Green] East
[Blue] North
[Purple] South
[Red] West

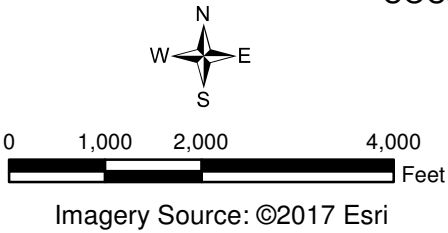


Figure 4-3
COCs Detections in Potable Wells Sampled from Parcels Located Off-Base
Basewide Per- and Polyfluoroalkyl Substances Site Inspection Report
NAS Oceana, Virginia Beach, Virginia