



**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 1701824**

*Marine Corps Outlying Landing Field Atlantic
MCAS Cherry Point NC*

February 2019



December 12, 2017

Vista Work Order No. 1701824

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 02, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08/MCOLF ATLANTIC PFAS INV.'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Karen J. Volpenko
for

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1701824**Case Narrative****Sample Condition on Receipt:**

Eighteen drinking water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:**EPA Method 537**

Sample "CH-AT-2RW32-1117" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for PFBS, PFOA and PFOS using EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Laboratory Fortified Blank (LFB) and Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

A Laboratory Fortified Sample Matrix (LFSM) and Laboratory Fortified Sample Matrix Duplicate (LFSMD) were performed on sample "CH-AT-2RW30-1117". The analyte recoveries and RPDs were within the method acceptance criteria.

TABLE OF CONTENTS

Case Narrative.....	1
Table of Contents.....	3
Sample Inventory.....	4
Analytical Results.....	6
Qualifiers.....	28
Certifications.....	29
Sample Receipt.....	32

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701824-01	CH-AT-2RW30-1117	MS/MSD30-Nov-17 09:15	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-02	CH-AT-2FB30-1117	30-Nov-17 09:15	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-03	CH-AT-2RW31-1117	30-Nov-17 10:10	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-04	CH-AT-2FB31-1117	30-Nov-17 10:10	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-05	CH-AT-2RW32-1117	30-Nov-17 10:52	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-06	CH-AT-2FB32-1117	30-Nov-17 10:52	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-07	CH-AT-2RW33-1117	30-Nov-17 11:16	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-08	CH-AT-2FB33-1117	30-Nov-17 11:16	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-09	CH-AT-2RW34-1117	30-Nov-17 12:05	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-10	CH-AT-2FB34-1117	30-Nov-17 12:05	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-11	CH-AT-2RW35-1117	30-Nov-17 13:40	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-12	CH-AT-2FB35-1117	30-Nov-17 13:40	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-13	CH-AT-2RW36-1117	30-Nov-17 13:24	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-14	CH-AT-2FB36-1117	30-Nov-17 13:24	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-15	CH-AT-2RW37-1117	30-Nov-17 14:30	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-16	CH-AT-2FB37-1117	30-Nov-17 14:30	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-17	CH-AT-2RW38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-18	CH-AT-2FB38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL

Vista Project: 1701824

Client Project: CTO-08/MCOLF ATLANTIC PFAS INV.

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701824-18	CH-AT-2FB38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: B7L0031-BLK1 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130			B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: LFB					EPA Method 537					
Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	B7L0031-BS1	Column:	BEH HILIC		
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.									
Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	34.3	35.4	96.8	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
PFOA	42.3	40.0	106	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
PFOS	33.7	37.0	91.0	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
Labeled Standards	Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR		103	70- 130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1

Sample ID: CH-AT-2RW30-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-01 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
PFOA	ND	1.07	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
PFOS	ND	1.03	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	99.2	70 - 130			B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW30-1117														EPA Method 537			
Name: CH2M Hill					Lab Sample: B7L0031-MS1/B7L0031-MSD1					Source Lab Sample: 1701824-01							
Project: CTO-08/MCOLF ATLANTIC PFAS INV.					QC Batch: B7L0031					Date Extracted: 07-Dec-17							
Matrix: Drinking Water					Samp Size: 0.252/0.254 L					Column: BEH HILIC							
Analyte	Sample (ng/L)	MS (ng/L)	MS Spike Amt	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil	
PFBS	ND	33.8	35.1	96.3		32.3	34.8	92.8	3.70		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
PFOA	ND	42.4	39.7	106		40.7	39.4	102	3.85		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
PFOS	ND	35.2	36.7	95.9		34.1	36.4	93.6	2.43		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
Labeled Standards		Type		MS % Rec	MS Quals			MSD % Rec		MSD Quals	Limits		MS Analyzed	MS Dil	MSD Analyzed	MSD Dil	
13C2-PFHxA		SURR		103				96.8			70-130		11-Dec-17 21:48	1	11-Dec-17 22:00	1	

Sample ID: CH-AT-2FB30-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 09:15					Laboratory Data Lab Sample: 1701824-02 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOA	ND	1.05	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOS	ND	1.01	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	94.0	70 - 130			B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
DL - Detection Limit		LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.				
		LOO - Limit of quantitation	Results reported to the DL.			Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB31-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 10:10					Laboratory Data Lab Sample: 1701824-04 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.425	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1
PFOA	ND	1.04	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1
PFOS	ND	0.998	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130			B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2RW32-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 10:52					Laboratory Data Lab Sample: 1701824-05 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	96.1	70 - 130		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1	
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2FB32-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-06 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.424	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
PFOA	ND	1.03	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
PFOS	ND	0.994	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105	70 - 130			B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW33-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 11:16					Laboratory Data Lab Sample: 1701824-07 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.440	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
PFOA	ND	1.07	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
PFOS	ND	1.03	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130			B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2RW34-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 12:05					Laboratory Data Lab Sample: 1701824-09 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130			B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW35-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-11 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.438	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
PFOA	ND	1.07	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
PFOS	ND	1.03	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	101	70 - 130			B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW36-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-13 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.424	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
PFOA	ND	1.03	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
PFOS	ND	0.996	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	98.6	70 - 130			B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB36-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-14 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.452	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
PFOA	ND	1.10	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
PFOS	ND	1.06	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130			B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW37-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-15 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	85.9	70 - 130			B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB37-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-16 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.434	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
PFOA	ND	1.06	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
PFOS	ND	1.02	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	97.5	70 - 130			B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW38-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 15:53					Laboratory Data Lab Sample: 1701824-17 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
PFOA	ND	1.06	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
PFOS	ND	1.02	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	97.3	70 - 130		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1	
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB38-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 15:53					Laboratory Data Lab Sample: 1701824-18 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.427	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
PFOA	ND	1.04	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
PFOS	ND	1.00	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.6	70 - 130		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1	
DL - Detection Limit		LOD - Limit of Detection LOO - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



Submit by Email*

PAGE 1 OF 2

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY

Laboratory Project ID:

1701824

Temp 3.7 °C

Storage ID:

WR-2

Storage Secured:
Yes ☒ No ☐

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051

Sampler: K.Rabe/A.Seay

(Name)

Invoice to: Name
Tiffany HillCompany
CH2M HILLAddress
1100 NE Circle BlvdCity
CorvallisState
OR

Zip

Ph#

Fax #

541-768-3109

Relinquished by: (Printed Name and Signature)

David Lubell

Date:
12/01/17Time:
1500

Received by: (Signature and Printed Name)

L. Hill Ian Arguelles

Date:

12/2/17

Time:

0942

Relinquished by: (Printed Name and Signature)

Date:

Time:

Received by: (Signature and Printed Name)

Date:

Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment:

FEDEX

Tracking No.:

7887 1060 5602

ATTN: Martha Maier

Add Analysis(es) Requested

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	TOTAL	COPL	209 CO	PBDF	PAH	WHO-29	PFOS, PFAS
CH-AT-2RW30-1117	11/30/17	0915		2	P	DW															X	
CH-AT-2FB30-1117	11/30/17	0915		2	P	DW															X	
CH-AT-2RW31-1117	11/30/17	1010		2	P	DW															X	
CH-AT-2FB31-1117	11/30/17	1010		2	P	DW															X	
CH-AT-2RW32-1117	11/30/17	1052		2	P	DW															X	
CH-AT-2FB32-1117	11/30/17	1052		2	P	DW															X	
CH-AT-2RW33-1117	11/30/17	1116		2	P	DW															X	
CH-AT-2FB33-1117	11/30/17	1116		2	P	DW															X	
CH-AT-2RW34-1117	11/30/17	1205		2	P	DW															X	
CH-AT-2FB34-1117	11/30/17	1205		2	P	DW															X	

Special Instructions/Comments:

PFOA/PFOS/PBFS DRINKING WATER ANALYSIS

SEND
DOCUMENTATION
AND RESULTS TO:

Name: Tiffany Hill

Company: CH2M HILL

Address: 1100 NE Circle Blvd Suite 300

City: Corvallis

State: OR

Zip: 97330

Phone: 541-768-3109

Fax:

Email: Tiffany.Hill@CH2M.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other*Bottle Preservative Type: ☐ T = Thiosulfate,
☒ O = Other TrizmaMatrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
O = Other



12/01/17 COOLER #1

679580.15.FI.FS

FOR LABORATORY USE ONLY

Laboratory Project ID: 1701824

Temp 3.7 °C

Storage ID: WR-2

Storage Secured:
Yes ☒ No ☐

CHAIN OF CUSTODY RECORD

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051 Sampler: K.Rabe/A.Seay

(Name)

Invoice to: Name

Tiffany Hill

Company

CH2M HILL

Address

1100 NE Circle Blvd

City

Corvallis

State

OR

Zip

Ph#

541-768-3109

Fax #

Relinquished by: (Printed Name and Signature)

David Lubell

Date:

12/01/17

Time:

1500

Received by: (Signature and Printed Name)

K. Rabe / A. Seay

Date:

12/2/17

Time:

0942

Relinquished by: (Printed Name and Signature)

Date:

Time:

Received by: (Signature and Printed Name)

Date:

Time:

TAT: (Check One)

Standard ☐ 21 days

Rush (surcharge may apply)

☐ 14 days ☒ 7 days Specify: _____

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment:

FEDEX

ATTN: Martha Maier

Tracking No.:

7887 1060 5602

Add Analysis(es) Requested

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TC	2378-TU	PCDDs	2378-TC	2378-TU	PCDDs	2378-TC	2378-TU	PCDDs	TOTAL	COPL	209 CC	PBDDs	PAH	WHO-29	800A PCBs
CH-AT-2RW35-1117	11/30/17	1340		2	P	DW															x	
CH-AT-2FB35-1117	11/30/17	1340		2	P	DW															x	
CH-AT-2RW36-1117	11/30/17	1324		2	P	DW															x	
CH-AT-2FB36-1117	11/30/17	1324		2	P	DW															x	
CH-AT-2RW37-1117	11/30/17	1430		2	P	DW															x	
CH-AT-2FB37-1117	11/30/17	1430		2	P	DW															x	
CH-AT-2RW38-1117	11/30/17	1553		2	P	DW															x	
CH-AT-2FB38-1117	11/30/17	1553		2	P	DW															x	
CH-AT-2RW30-1117-MS	11/30/17	0915		2	P	DW															x	
CH-AT-2RW30-1117-SD	11/30/17	0915		2	P	DW															x	

Special Instructions/Comments:

PFOA/PFOS/PBFS DRINKING WATER ANALYSIS

SEND
DOCUMENTATION
AND RESULTS TO:

Name: Tiffany Hill

Company: CH2M HILL

Address: 1100 NE Circle Blvd Suite 300

City: Corvallis State: OR Zip: 97330

Phone: 541-768-3109 Fax: _____

Email: Tiffany.Hill@CH2M.com

Container Types: A = 1 Liter Amber, G = Glass Jar

P = PUF, T = MM5 Train, O = Other

*Bottle Preservative Type: ☐ T = Thiosulfate,☒ O = Other TrizmaMatrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
O = Other

Sample Log-in Checklist

Vista Work Order #: 1701824 TAT 7

Samples Arrival:	Date/Time <u>12/2/17</u> <u>0937</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>12/02/17</u> <u>0946</u>	Initials: <u>JPB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>B5</u>
Delivered By:	☒ FedEx	☐ UPS	☐ On Trac
	☐ GSO	☐ DHL	☐ Hand Delivered
Other			
Preservation:	☒ Ice	☐ Blue Ice	☐ Dry Ice
None			
Temp °C: <u>3.6</u> (uncorrected)	Time: <u>0947</u>		Thermometer ID: IR-1
Temp °C: <u>3.7</u> (corrected)	Probe used: Yes ☐ No ☒		

		YES	NO	NA
Adequate Sample Volume Received?		☒		
Holding Time Acceptable?		☒		
Shipping Container(s) Intact?		☒		
Shipping Custody Seals Intact?		☒		
Shipping Documentation Present?		☒		
Airbill	Trk # <u>7887 1060 5602</u>	☒		
Sample Container Intact?		☒		
Sample Custody Seals Intact?				☒
Chain of Custody / Sample Documentation Present?		☒		
COC Anomaly/Sample Acceptance Form completed?			☒	☒
If Chlorinated or Drinking Water Samples, Acceptable Preservation?		☒		
Preservation Documented:	Na ₂ S ₂ O ₃ ☒ Trizma ☐ None	☒ Yes	☐ No	☐ NA
Shipping Container	Vista ☐ Client ☐ Retain ☐ Return ☐ Dispose			

Comments:



December 12, 2017

Vista Work Order No. 1701824

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 02, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08/MCOLF ATLANTIC PFAS INV.'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Karen J. Volpenstein
for

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1701824**Case Narrative****Sample Condition on Receipt:**

Eighteen drinking water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:**EPA Method 537**

Sample "CH-AT-2RW32-1117" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for PFBS, PFOA and PFOS using EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Laboratory Fortified Blank (LFB) and Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

A Laboratory Fortified Sample Matrix (LFSM) and Laboratory Fortified Sample Matrix Duplicate (LFSMD) were performed on sample "CH-AT-2RW30-1117". The analyte recoveries and RPDs were within the method acceptance criteria.

TABLE OF CONTENTS

Case Narrative.....	1
Table of Contents.....	3
Sample Inventory.....	4
Analytical Results.....	6
Qualifiers.....	28
Certifications.....	29
Sample Receipt.....	32
Extraction Information.....	35
Sample Data - EPA Method 537.....	40
IIS Areas and CCVs.....	85
ICAL with ICV.....	126

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701824-01	CH-AT-2RW30-1117	MS/MSD30-Nov-17 09:15	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-02	CH-AT-2FB30-1117	30-Nov-17 09:15	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-03	CH-AT-2RW31-1117	30-Nov-17 10:10	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-04	CH-AT-2FB31-1117	30-Nov-17 10:10	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-05	CH-AT-2RW32-1117	30-Nov-17 10:52	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-06	CH-AT-2FB32-1117	30-Nov-17 10:52	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-07	CH-AT-2RW33-1117	30-Nov-17 11:16	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-08	CH-AT-2FB33-1117	30-Nov-17 11:16	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-09	CH-AT-2RW34-1117	30-Nov-17 12:05	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-10	CH-AT-2FB34-1117	30-Nov-17 12:05	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-11	CH-AT-2RW35-1117	30-Nov-17 13:40	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-12	CH-AT-2FB35-1117	30-Nov-17 13:40	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-13	CH-AT-2RW36-1117	30-Nov-17 13:24	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-14	CH-AT-2FB36-1117	30-Nov-17 13:24	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-15	CH-AT-2RW37-1117	30-Nov-17 14:30	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-16	CH-AT-2FB37-1117	30-Nov-17 14:30	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-17	CH-AT-2RW38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701824-18	CH-AT-2FB38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL

Vista Project: 1701824

Client Project: CTO-08/MCOLF ATLANTIC PFAS INV.

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701824-18	CH-AT-2FB38-1117	30-Nov-17 15:53	02-Dec-17 09:37	HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: B7L0031-BLK1 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130			B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:35	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: LFB					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: B7L0031-BS1 Column: BEH HILIC					
Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	34.3	35.4	96.8	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
PFOA	42.3	40.0	106	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
PFOS	33.7	37.0	91.0	70-130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1
Labeled Standards	Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR		103	70- 130		B7L0031	07-Dec-17	0.250 L	11-Dec-17 21:23	1

Sample ID: CH-AT-2RW30-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 09:15					Laboratory Data Lab Sample: 1701824-01 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
PFOA	ND	1.07	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
PFOS	ND	1.03	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	99.2	70 - 130		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1	
DL - Detection Limit		LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.					
		LOO - Limit of quantitation	Results reported to the DL.		Only the linear isomer is reported for all other analytes.					

Sample ID: CH-AT-2RW30-1117														EPA Method 537			
Name: CH2M Hill					Lab Sample: B7L0031-MS1/B7L0031-MSD1					Source Lab Sample: 1701824-01							
Project: CTO-08/MCOLF ATLANTIC PFAS INV.					QC Batch: B7L0031					Date Extracted: 07-Dec-17							
Matrix: Drinking Water					Samp Size: 0.252/0.254 L					Column: BEH HILIC							
Analyte	Sample (ng/L)	MS (ng/L)	MS Spike Amt	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil	
PFBS	ND	33.8	35.1	96.3		32.3	34.8	92.8	3.70		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
PFOA	ND	42.4	39.7	106		40.7	39.4	102	3.85		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
PFOS	ND	35.2	36.7	95.9		34.1	36.4	93.6	2.43		70-130	30	11-Dec-17 21:48	1	11-Dec-17 22:00	1	
Labeled Standards		Type		MS % Rec	MS Quals			MSD % Rec		MSD Quals	Limits		MS Analyzed	MS Dil	MSD Analyzed	MSD Dil	
13C2-PFHxA		SURR		103				96.8			70-130		11-Dec-17 21:48	1	11-Dec-17 22:00	1	

Sample ID: CH-AT-2FB30-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 09:15					Laboratory Data Lab Sample: 1701824-02 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOA	ND	1.05	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOS	ND	1.01	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	94.0	70 - 130			B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
DL - Detection Limit		LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.				
		LOO - Limit of quantitation	Results reported to the DL.			Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW32-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 10:52					Laboratory Data Lab Sample: 1701824-05 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	96.1	70 - 130			B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2FB32-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 10:52					Laboratory Data Lab Sample: 1701824-06 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.424	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
PFOA	ND	1.03	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
PFOS	ND	0.994	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105	70 - 130			B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1
DL - Detection Limit		LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.				
		LOO - Limit of quantitation	Results reported to the DL.			Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW33-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 11:16					Laboratory Data Lab Sample: 1701824-07 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.440	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
PFOA	ND	1.07	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
PFOS	ND	1.03	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130			B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2RW34-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 12:05					Laboratory Data Lab Sample: 1701824-09 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130			B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW35-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-11 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.438	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
PFOA	ND	1.07	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
PFOS	ND	1.03	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	101	70 - 130			B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB35-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-12 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1
PFOA	ND	1.05	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1
PFOS	ND	1.01	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130			B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW36-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-13 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.424	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
PFOA	ND	1.03	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
PFOS	ND	0.996	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	98.6	70 - 130			B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB36-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 13:24					Laboratory Data Lab Sample: 1701824-14 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.452	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
PFOA	ND	1.10	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
PFOS	ND	1.06	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130			B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

Sample ID: CH-AT-2RW37-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-15 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	85.9	70 - 130			B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB37-1117										EPA Method 537
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.					Laboratory Data Lab Sample: 1701824-16 Date Received: 02-Dec-17 09:37					Column: BEH HILIC
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.434	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
PFOA	ND	1.06	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
PFOS	ND	1.02	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	97.5	70 - 130			B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04	1
DL - Detection Limit		LOD - Limit of Detection LOQ - Limit of quantitation		LCL-UCL- Lower control limit - upper control limit Results reported to the DL.		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2RW38-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 15:53					Laboratory Data					
					Lab Sample: 1701824-17		Column: BEH HILIC			
					Date Received: 02-Dec-17 09:37					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
PFOA	ND	1.06	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
PFOS	ND	1.02	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	97.3	70 - 130			B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit		When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.				
		LOO - Limit of quantitation		Results reported to the DL.		Only the linear isomer is reported for all other analytes.				

Sample ID: CH-AT-2FB38-1117					EPA Method 537					
Client Data Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV. Matrix: Drinking Water Date Collected: 30-Nov-17 15:53					Laboratory Data Lab Sample: 1701824-18 Date Received: 02-Dec-17 09:37 Column: BEH HILIC					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.427	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
PFOA	ND	1.04	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
PFOS	ND	1.00	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.6	70 - 130			B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1
DL - Detection Limit		LOD - Limit of Detection		LCL-UCL- Lower control limit - upper control limit			When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.			
		LOO - Limit of quantitation		Results reported to the DL.			Only the linear isomer is reported for all other analytes.			

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



Submit by Email*

PAGE 1 OF 2

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY

Laboratory Project ID: 1701824

Temp 3.7 °C

Storage ID: WR-2

Storage Secured:
Yes ☒ No ☐

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051 Sampler: K.Rabe/A.Seay

Invoice to: Name **Tiffany Hill** Company **CH2M HILL** Address **1100 NE Circle Blvd** City **Corvallis** State **OR** Zip **97330** Ph# **541-768-3109** Fax #

Relinquished by: (Printed Name and Signature) **David Lubell** Date: **12/01/17** Time: **1500** Received by: (Signature and Printed Name) **Mr. Ian Anguilles** Date: **12/21/17** Time: **0942**

Relinquished by: (Printed Name and Signature) Date: Time: Received by: (Signature and Printed Name) Date: Time:

TAT: (Check One)

Standard ☐ 21 days

Rush (surcharge may apply)

☐ 14 days ☒ 7 days Specify:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment:

FEDEX

Tracking No.:

7887 1060 5602

ATTN: Martha Maier

Add Analysis(es) Requested

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	TOTAL	COPL	209 CO	PBDD/F	PAH	WHO-29	PFOS, PFAS
CH-AT-2RW30-1117	11/30/17	0915		2	P	DW															X	
CH-AT-2FB30-1117	11/30/17	0915		2	P	DW															X	
CH-AT-2RW31-1117	11/30/17	1010		2	P	DW															X	
CH-AT-2FB31-1117	11/30/17	1010		2	P	DW															X	
CH-AT-2RW32-1117	11/30/17	1052		2	P	DW															X	
CH-AT-2FB32-1117	11/30/17	1052		2	P	DW															X	
CH-AT-2RW33-1117	11/30/17	1116		2	P	DW															X	
CH-AT-2FB33-1117	11/30/17	1116		2	P	DW															X	
CH-AT-2RW34-1117	11/30/17	1205		2	P	DW															X	
CH-AT-2FB34-1117	11/30/17	1205		2	P	DW															X	

Special Instructions/Comments:

PFOA/PFOS/PBFS DRINKING WATER ANALYSIS

SEND
DOCUMENTATION
AND RESULTS TO:

Name: Tiffany Hill

Company: CH2M HILL

Address: 1100 NE Circle Blvd Suite 300

City: Corvallis State: OR Zip: 97330

Phone: 541-768-3109 Fax:

Email: Tiffany.Hill@CH2M.com

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other

*Bottle Preservative Type: ☐ T = Thiosulfate,
☒ O = Other Trizma

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum
O = Other



12/01/17 COOLER #1

679580.15.FI.FS

FOR LABORATORY USE ONLY

Laboratory Project ID: 1701824

Temp 3.7 °C

Storage ID: WR-2

Storage Secured:
Yes ☒ No ☐

CHAIN OF CUSTODY RECORD

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051 Sampler: K.Rabe/A.Seay

(Name)

Invoice to: Name

Tiffany Hill

Company

CH2M HILL

Address

1100 NE Circle Blvd

City

Corvallis

State

OR

Zip

Ph#

541-768-3109

Fax #

Relinquished by: (Printed Name and Signature)

David Lubell

Date:

12/01/17

Time:

1500

Received by: (Signature and Printed Name)

K. Rabe / A. Seay

Date:

12/2/17

Time:

0942

Relinquished by: (Printed Name and Signature)

Date:

Time:

Received by: (Signature and Printed Name)

Date:

Time:

TAT: (Check One)

Standard ☐ 21 days

Rush (surcharge may apply)

☐ 14 days ☒ 7 days Specify: _____

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment:

FEDEX

ATTN: Martha Maier

Tracking No.:

7887 1060 5602

Add Analysis(es) Requested

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	2378-TCDD	2378-TCDF	PCDD/F	TOTAL	COPL	209 CC	PBDF	PAH	WHO-29	800A PCB
CH-AT-2RW35-1117	11/30/17	1340		2	P	DW															x	
CH-AT-2FB35-1117	11/30/17	1340		2	P	DW															x	
CH-AT-2RW36-1117	11/30/17	1324		2	P	DW															x	
CH-AT-2FB36-1117	11/30/17	1324		2	P	DW															x	
CH-AT-2RW37-1117	11/30/17	1430		2	P	DW															x	
CH-AT-2FB37-1117	11/30/17	1430		2	P	DW															x	
CH-AT-2RW38-1117	11/30/17	1553		2	P	DW															x	
CH-AT-2FB38-1117	11/30/17	1553		2	P	DW															x	
CH-AT-2RW30-1117-MS	11/30/17	0915		2	P	DW															x	
CH-AT-2RW30-1117-SD	11/30/17	0915		2	P	DW															x	

Special Instructions/Comments:

PFOA/PFOS/PBFS DRINKING WATER ANALYSIS

SEND
DOCUMENTATION
AND RESULTS TO:

Name: Tiffany Hill

Company: CH2M HILL

Address: 1100 NE Circle Blvd Suite 300

City: Corvallis

State: OR

Zip: 97330

Phone: 541-768-3109

Fax:

Email: Tiffany.Hill@CH2M.com

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B=Blood/Serum
O = OtherContainer Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other*Bottle Preservative Type: ☐ T = Thiosulfate,☒ O = Other Trizma

Sample Log-in Checklist

Vista Work Order #: 1701824 TAT 7

Samples Arrival:	Date/Time <u>12/2/17</u> <u>0937</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>12/02/17</u> <u>0946</u>	Initials: <u>MSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>B5</u>
Delivered By:	☒ FedEx	☐ UPS	☐ On Trac
	☐ GSO	☐ DHL	☐ Hand Delivered
Other			
Preservation:	☒ Ice	☐ Blue Ice	☐ Dry Ice
None			
Temp °C: <u>3.6</u> (uncorrected)	Time: <u>0947</u>		Thermometer ID: IR-1
Temp °C: <u>3.7</u> (corrected)	Probe used: Yes ☐ No ☒		

		YES	NO	NA
Adequate Sample Volume Received?		☒		
Holding Time Acceptable?		☒		
Shipping Container(s) Intact?		☒		
Shipping Custody Seals Intact?		☒		
Shipping Documentation Present?		☒		
Airbill	Trk # <u>7887 1060 5602</u>	☒		
Sample Container Intact?		☒		
Sample Custody Seals Intact?				☒
Chain of Custody / Sample Documentation Present?		☒		
COC Anomaly/Sample Acceptance Form completed?			☒	☒
If Chlorinated or Drinking Water Samples, Acceptable Preservation?		☒		
Preservation Documented:	Na ₂ S ₂ O ₃ ☒ Trizma ☐ None ☐ Yes ☒ No ☐ NA			
Shipping Container	Vista ☐ Client ☐ Retain ☐ Return ☐ Dispose			

Comments:

EXTRACTION INFORMATION

Process Sheet
Workorder: 1701824



Prep Expiration: 2017-Dec-14
Client: CH2M Hill

Workorder Due: 09-Dec-17 00:00

TAT: 7

Method: 537 PFAS DW DoD Unmodified
Matrix: Drinking Water
Client Matrix: Drinking Water

Prep Batch: B7L0031

Prep Data Entered: GPA 12.8.17
Date and Initials

Version: PFOA, PFOS, & PFBS
DoD: DoD QSM 5.1

Initial Sequence:

LabSampleID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1701824-01	NSC	☒	☒	CH-AT-2RW30-1117	MS/MSD	WR-2 B-5	HDPE Bottle, 250 mL
1701824-02		☒	☒	CH-AT-2FB30-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-03		☒	☒	CH-AT-2RW31-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-04		☒	☒	CH-AT-2FB31-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-05		☒	☒	CH-AT-2RW32-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-06		☒	☒	CH-AT-2FB32-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-07		☒	☒	CH-AT-2RW33-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-08		☒	☒	CH-AT-2FB33-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-09		☒	☒	CH-AT-2RW34-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-10		☒	☒	CH-AT-2FB34-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-11		☒	☒	CH-AT-2RW35-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-12		☒	☒	CH-AT-2FB35-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-13		☒	☒	CH-AT-2RW36-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-14		☒	☒	CH-AT-2FB36-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-15		☒	☒	CH-AT-2RW37-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-16		☒	☒	CH-AT-2FB37-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-17		☒	☒	CH-AT-2RW38-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701824-18		☒	☒	CH-AT-2FB38-1117		WR-2 B-5	HDPE Bottle, 250 mL

Pre-Prep Check Out: 12/6/17 ST
Pre-Prep Check In: 12/6/17 ST

Prep Check Out: KC 12/7/17
Prep Check In: NA

Prep Reconciled Initials/Date: 12/6/17 ST
Spike Reconciled Initials/Date: KC 12/7/17
VialBoxID: woodhouse

Batch: B7L0031

Matrix: Drinking Water

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1701824-01	0.25321	NA	NA	1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-02	0.25812			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-03	0.24951			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-04	0.26064			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-05	0.25406			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-06	0.26151			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-07	0.25185			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-08	0.26295			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-09	0.25405			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-10	0.24979			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-11	0.2526			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-12	0.25792			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-13	0.26093			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-14	0.24528			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-15	0.25012			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-16	0.25022			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-17	0.25473			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
1701824-18	0.25911			1000	07-Dec-17 09:45	KBF			Drinking Water	537 PFAS DW DoD Unmoc
B7L0031-BLK1	0.25			1000	07-Dec-17 09:45	KBF				QC
B7L0031-BS1	0.25			1000	07-Dec-17 09:45	KBF	17I2601	10		QC
B7L0031-MS1	0.25179			1000	07-Dec-17 09:45	KBF	17I2601	10		QC
B7L0031-MSD1	0.25406			1000	07-Dec-17 09:45	KBF	17I2601	10		QC

GPO 12-8-17

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7L0031

Chemist: KBF

Prep Date/Time: 06-Dec-17 09:45

7

Prepared using: LCMS - SPE Extraction-LCMS

		Balance ID: <u>HRMS-8</u>						
Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE	
☐	1701824-13	248.42	27.89	0.26093 ✓	<u>KBF KC 12/7/17</u>	<u>KC HN 12/7/17</u>	<u>HC KC 12.7.17</u>	
☐	1701824-14	272.74	27.46	0.24528 ✓	↓	↓	↓	
☐	1701824-15	278.05	27.93	0.25012 ✓				
☐	1701824-16	242.73	27.71	0.25502 ✓				
☐	1701824-17	282.93	28.20	0.25473 ✓				
☐	1701824-18	286.34	27.23	0.25911 ✓				

SS/IS: <u>17L0515, 10µL (V1)</u> NS: <u>17I2601, 10µL (V2)</u> IS/RS: <u>17L0516, 20µL (V1)</u>	SPE Chem: <u>Strata-X-33µm 500mg 10mL</u> Lot#: <u>S17-003106</u> Ele SOLV: <u>MeOH KC 12/7/17</u> Lot#: <u>4685291685209324</u> Final Volume(s) <u>1mL</u>	Notes:
---	---	--------

Comments: Assume 1 g = 1 mL

Cen = Centrifuged
Work Order 1701824

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7L0031

Chemist: KBF

Prep Date/Time: 06-Dec-17 09:45

Prepared using: LCMS - SPE Extraction-LCMS

		Balance ID: <u>HRMS-8</u>								
Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE			
☐	B7L0031-BLK1 <u>(A)</u>	<u>N/A</u>	<u>N/A</u>	<u>(0.250)</u> ✓	<u>KBF</u> <u>KL</u> <u>12/7/17</u>	<u>KL</u> <u>HN</u> <u>12/7/17</u>	<u>HC</u> <u>KL</u> <u>12-7-17</u>			
☐	B7L0031-BS1 <u>↓</u>	<u>↓</u>	<u>↓</u>	<u>(0.250)</u> ✓	<u>KBF</u>	<u>↓</u>	<u>↓</u>			
☐	B7L0031-MS1 1701824-01	<u>279.54</u>	<u>27.75</u>	<u>0.25179</u> ✓	<u>↓</u>	<u>↓</u>	<u>↓</u>			
☐	B7L0031-MSD1 1701824-01	<u>282.24</u>	<u>28.18</u>	<u>0.25406</u> ✓						
☐	1701824-01	<u>280.77</u>	<u>27.56</u>	<u>0.25321</u> ✓						
☐	1701824-02	<u>285.10</u>	<u>26.98</u>	<u>0.25812</u> ✓						
☐	1701824-03	<u>277.00</u>	<u>27.49</u>	<u>0.24951</u> ✓						
☐	1701824-04	<u>288.20</u>	<u>27.56</u>	<u>0.26064</u> ✓						
☒	1701824-05	<u>281.93</u>	<u>27.87</u>	<u>0.25406</u> ✓						
☐	1701824-06	<u>289.15</u>	<u>27.64</u>	<u>0.26151</u> ✓						
☐	1701824-07	<u>279.85</u>	<u>28.00</u>	<u>0.25185</u> ✓						
☐	1701824-08	<u>290.63</u>	<u>27.68</u>	<u>0.26295</u> ✓						
☐	1701824-09	<u>282.00</u>	<u>27.95</u>	<u>0.25405</u> ✓						
☐	1701824-10	<u>277.32</u>	<u>27.53</u>	<u>0.24979</u> ✓						
☐	1701824-11	<u>280.86</u>	<u>28.26</u>	<u>0.25260</u> ✓						
☐	1701824-12	<u>285.64</u>	<u>27.72</u>	<u>0.25792</u> ✓	<u>↓</u>	<u>↓</u>	<u>↓</u>			

SS/IS: <u>17L0515, 10µL (u)</u> NS: <u>17L0516, 10µL (u)</u> IS/RS: <u>17L0516, 20µL (u)</u>	SPE Chem: <u>Strata-33µm 500mg</u> Lot#: <u>517-003100</u> Ele SOLV: <u>MeOH</u> Lot#: <u>1685209324</u> Final Volume(s): <u>1mL</u>	Notes: <u>(A) 1.25g of Trizma added 12/6/17 ST</u>
--	--	--

Comments: Assume 1 g = 1 mL

Gen = Centrifuged
Work Order 1701824

SAMPLE DATA –EPA METHOD 537

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-38.qld

Last Altered: Tuesday, December 12, 2017 09:38:00 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:38:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_38, Date: 11-Dec-2017, Time: 21:35:39, ID: B7L0031-BLK1 LRB 0.25, Description: LRB

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.11e4		0.2500	3.02				
2	2 PFOA	413 > 368.7	6.05e1	8.53e3		0.2500	4.31	4.31	0.0709	0.349	
3	3 PFOS	499 >79.9		1.11e4		0.2500	4.72				
4	4 13C2-PFHxA	315 > 269.8	4.09e3	8.53e3	0.443	0.2500	3.37	3.37	4.80	43.3	108.3
5	5 13C2-PFDA	515.1 > 469.9	4.40e3	8.53e3	0.509	0.2500	4.94	4.96	5.16	40.6	101.4
6	6 13C2-PFOA	414.9 > 369.7	8.53e3	8.53e3	1.000	0.2500	4.41	4.31	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.11e4	1.11e4	1.000	0.2500	4.81	4.72	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-38.qld

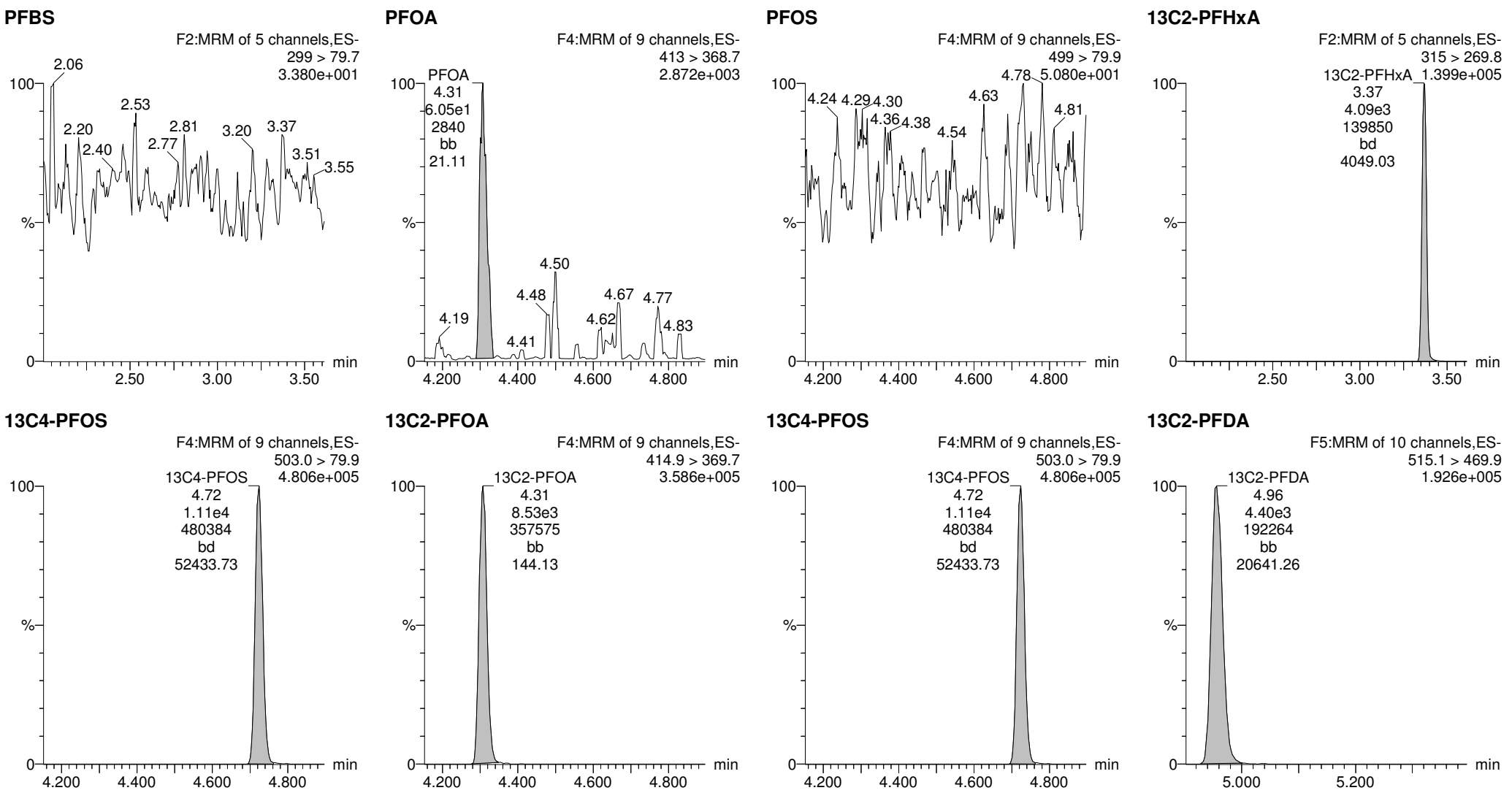
Last Altered: Tuesday, December 12, 2017 09:38:00 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:38:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_38, Date: 11-Dec-2017, Time: 21:35:39, ID: B7L0031-BLK1 LRB 0.25, Description: LRB



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-37.qld

Last Altered: Tuesday, December 12, 2017 09:35:22 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:36:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

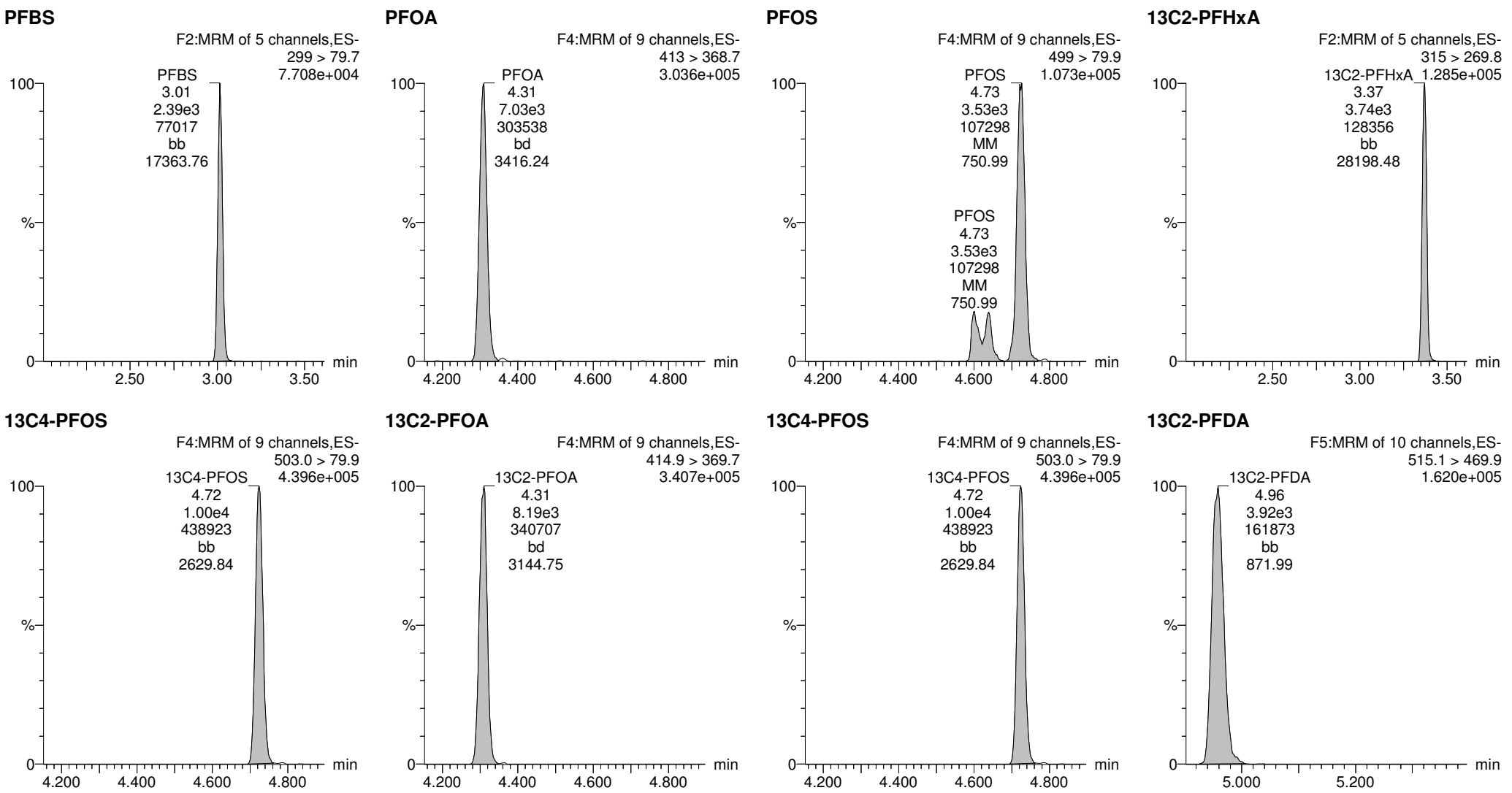
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_37, **Date:** 11-Dec-2017, **Time:** 21:23:12, **ID:** B7L0031-BS1 LFB 0.25, **Description:** LFB

	#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.39e3	1.00e4		0.2500	3.02	3.01	6.86	34.3	96.8
2	2	PFOA	413 > 368.7	7.03e3	8.19e3		0.2500	4.31	4.31	8.59	42.3	105.8
3	3	PFOS	499 > 79.9	3.53e3	1.00e4		0.2500	4.72	4.73	10.1	33.7	91.0
4	4	13C2-PFHxA	315 > 269.8	3.74e3	8.19e3	0.443	0.2500	3.37	3.37	4.57	41.3	103.3
5	5	13C2-PFDA	515.1 > 469.9	3.92e3	8.19e3	0.509	0.2500	4.94	4.96	4.79	37.6	94.0
6	6	13C2-PFOA	414.9 > 369.7	8.19e3	8.19e3	1.000	0.2500	4.41	4.31	10.0	40.0	100.0
7	7	13C4-PFOS	503.0 > 79.9	1.00e4	1.00e4	1.000	0.2500	4.81	4.72	28.7	115	100.0

Last Altered: Tuesday, December 12, 2017 09:35:22 Pacific Standard Time
Printed: Tuesday, December 12, 2017 09:36:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55
Name: 171211G1_37, Date: 11-Dec-2017, Time: 21:23:12, ID: B7L0031-BS1 LFB 0.25, Description: LFB



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-41.qld

Last Altered: Tuesday, December 12, 2017 09:43:27 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:43:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_41, Date: 11-Dec-2017, Time: 22:12:55, ID: 1701824-01 CH-AT-2RW30-1117 0.25321, Description: CH-AT-2RW30-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.05e4		0.2532	3.02				
2	2 PFOA	413 > 368.7	6.00e1	8.42e3		0.2532	4.31	4.31	0.0713	0.347	
3	3 PFOS	499 >79.9		1.05e4		0.2532	4.72				
4	4 13C2-PFHxA	315 > 269.8	3.70e3	8.42e3	0.443	0.2532	3.37	3.37	4.40	39.2	99.2
5	5 13C2-PFDA	515.1 > 469.9	3.87e3	8.42e3	0.509	0.2532	4.94	4.96	4.59	35.6	90.2
6	6 13C2-PFOA	414.9 > 369.7	8.42e3	8.42e3	1.000	0.2532	4.41	4.31	10.0	39.5	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.05e4	1.05e4	1.000	0.2532	4.81	4.72	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-41.qld

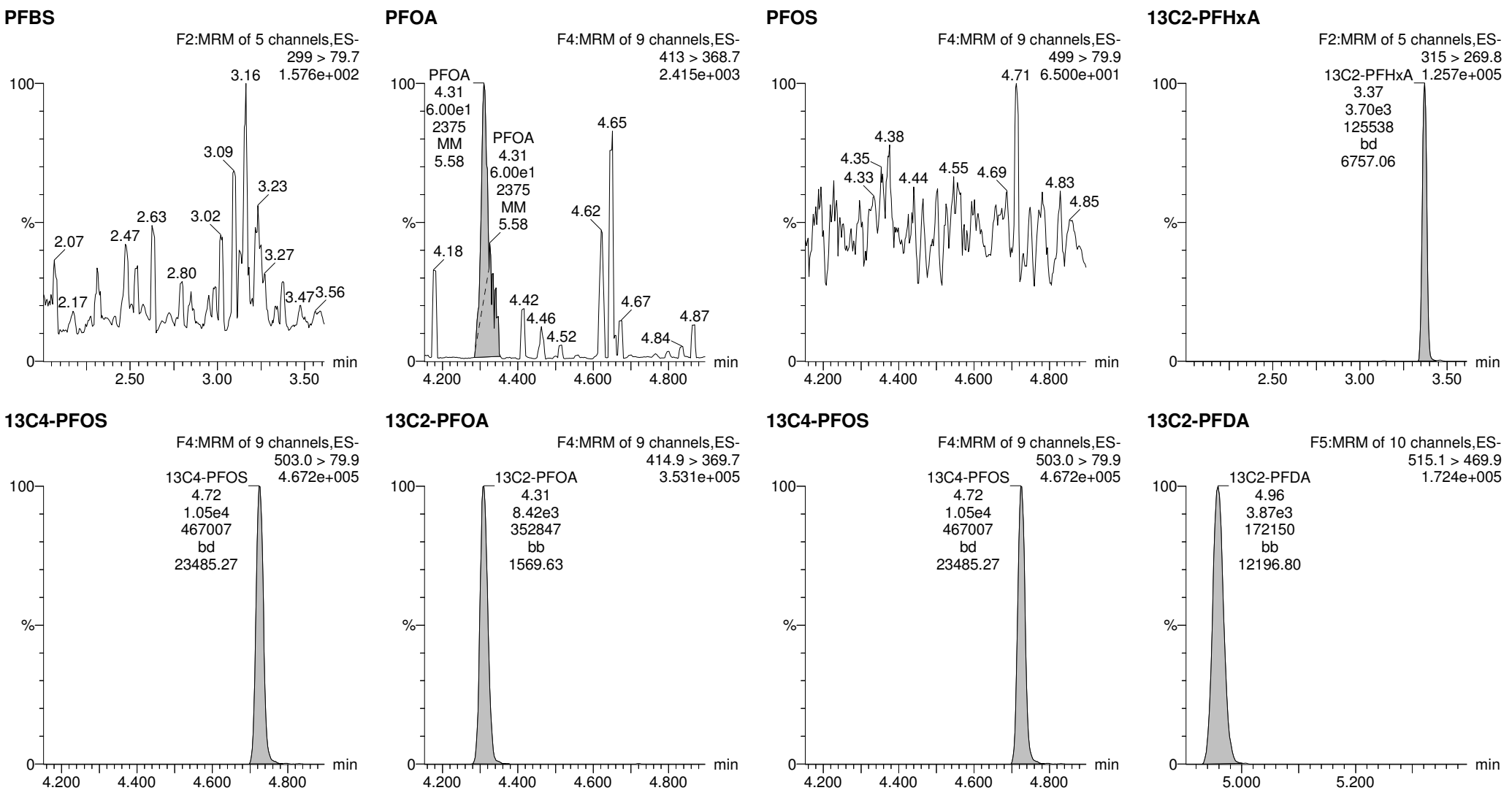
Last Altered: Tuesday, December 12, 2017 09:43:27 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:43:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_41, Date: 11-Dec-2017, Time: 22:12:55, ID: 1701824-01 CH-AT-2RW30-1117 0.25321, Description: CH-AT-2RW30-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-39.qld

Last Altered: Tuesday, December 12, 2017 09:40:21 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:40:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_39, Date: 11-Dec-2017, Time: 21:48:05, ID: B7L0031-MS1 LFSM 0.25179, Description: LFSM

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.37e3	9.99e3		0.2518	3.02	3.01	6.81	33.8	
2	2 PFOA	413 > 368.7	7.41e3	8.56e3		0.2518	4.31	4.31	8.66	42.4	
3	3 PFOS	499 >79.9	3.71e3	9.99e3		0.2518	4.72	4.72	10.7	35.2	
4	4 13C2-PFHxA	315 > 269.8	3.90e3	8.56e3	0.443	0.2518	3.37	3.37	4.56	40.9	102.9
5	5 13C2-PFDA	515.1 > 469.9	4.16e3	8.56e3	0.509	0.2518	4.94	4.96	4.86	37.9	95.4
6	6 13C2-PFOA	414.9 > 369.7	8.56e3	8.56e3	1.000	0.2518	4.41	4.31	10.0	39.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.99e3	9.99e3	1.000	0.2518	4.81	4.72	28.7	114	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-39.qld

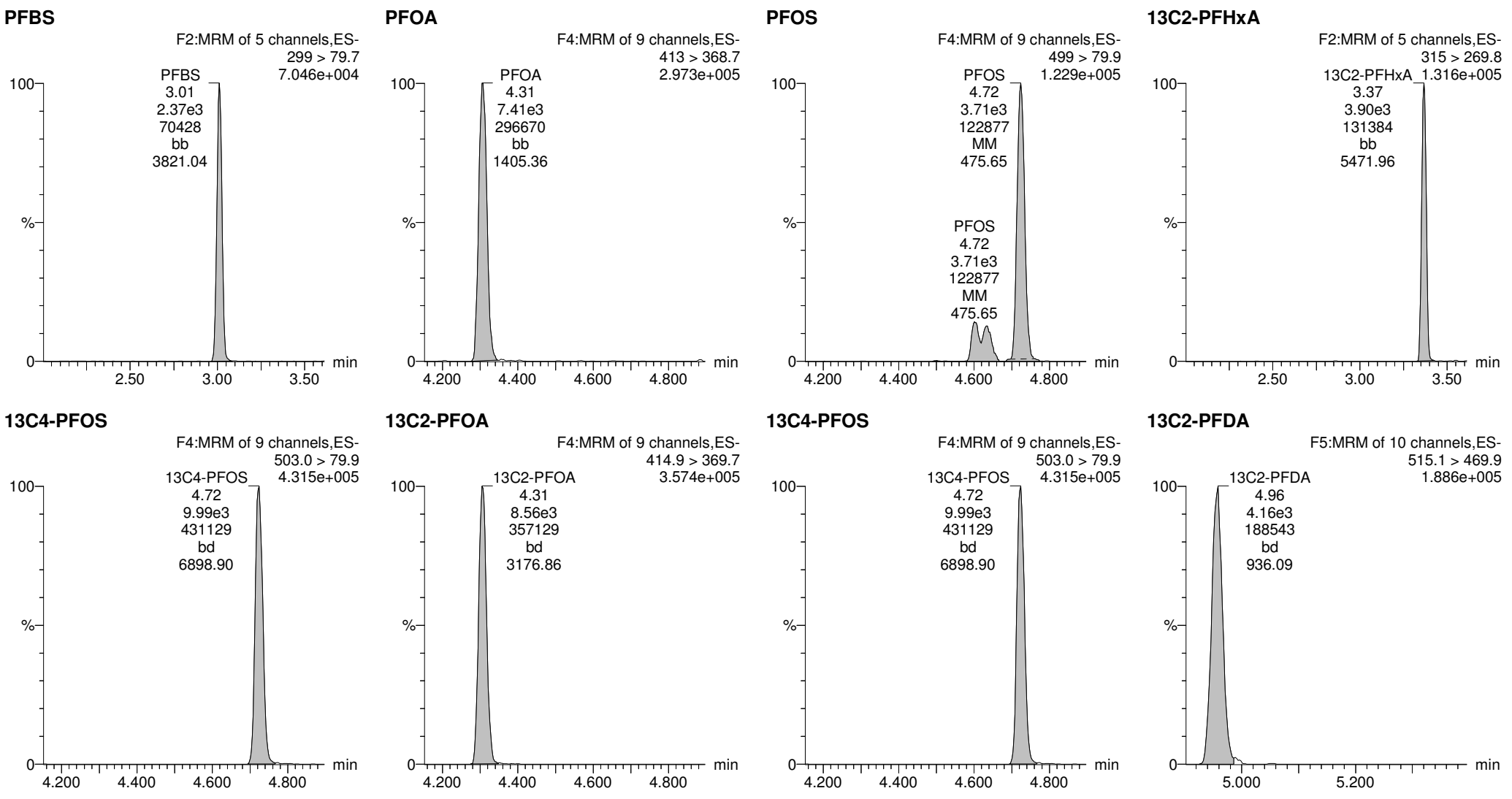
Last Altered: Tuesday, December 12, 2017 09:40:21 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:40:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_39, Date: 11-Dec-2017, Time: 21:48:05, ID: B7L0031-MS1 LFSM 0.25179, Description: LFSM



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-40.qld

Last Altered: Tuesday, December 12, 2017 09:41:13 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:41:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_40, Date: 11-Dec-2017, Time: 22:00:32, ID: B7L0031-MSD1 LFSMD 0.25406, Description: LFSMD

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.48e3	1.08e4		0.2541	3.02	3.01	6.57	32.3	
2	2 PFOA	413 > 368.7	7.53e3	8.97e3		0.2541	4.31	4.31	8.40	40.7	
3	3 PFOS	499 >79.9	3.93e3	1.08e4		0.2541	4.72	4.72	10.4	34.1	
4	4 13C2-PFHxA	315 > 269.8	3.85e3	8.97e3	0.443	0.2541	3.37	3.37	4.29	38.1	96.8
5	5 13C2-PFDA	515.1 > 469.9	4.22e3	8.97e3	0.509	0.2541	4.94	4.96	4.71	36.4	92.4
6	6 13C2-PFOA	414.9 > 369.7	8.97e3	8.97e3	1.000	0.2541	4.41	4.31	10.0	39.4	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	0.2541	4.81	4.72	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-40.qld

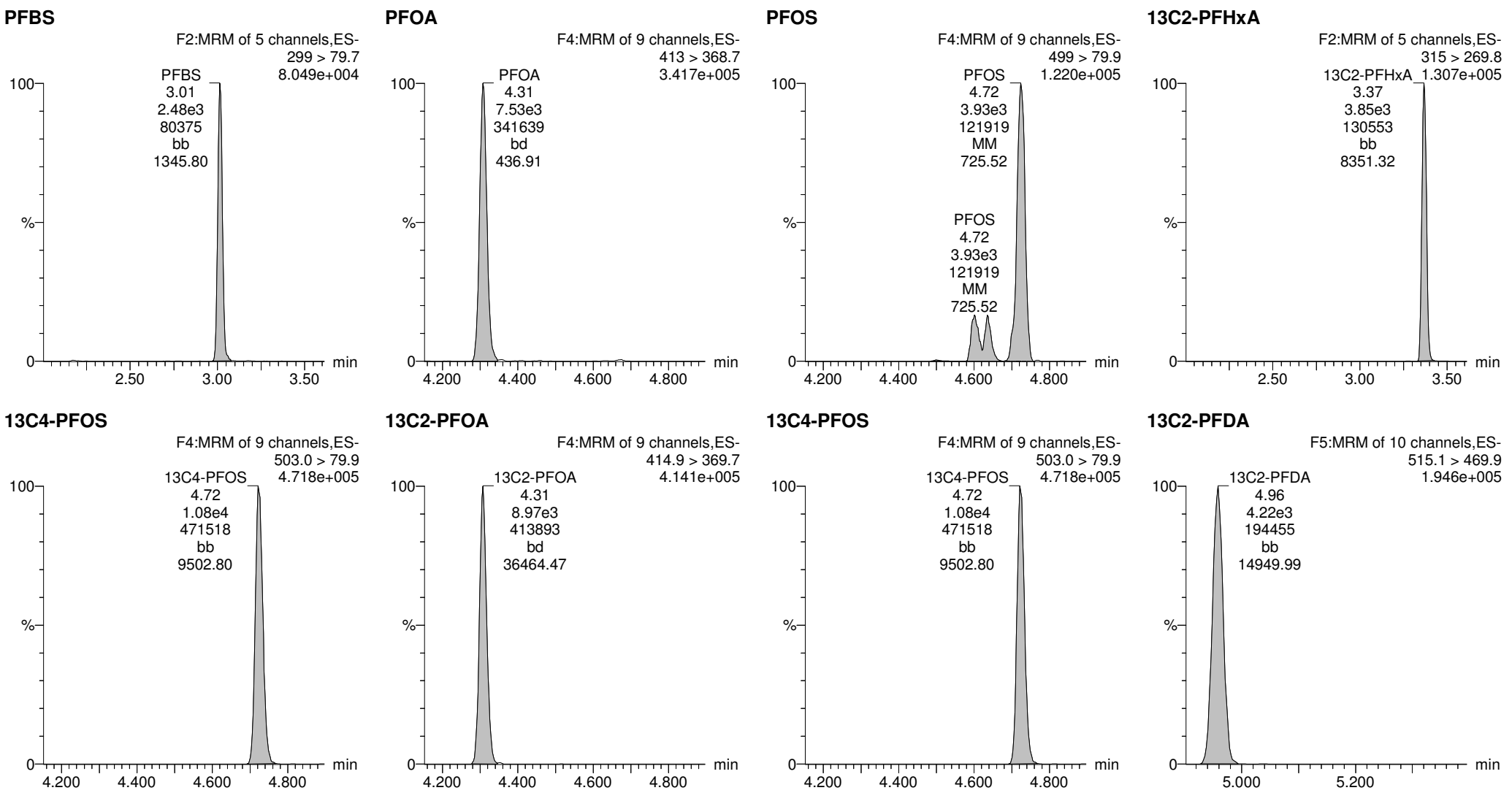
Last Altered: Tuesday, December 12, 2017 09:41:13 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:41:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_40, Date: 11-Dec-2017, Time: 22:00:32, ID: B7L0031-MSD1 LFSMD 0.25406, Description: LFSMD



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-42.qld

Rev'd: MM 12/12/17

Last Altered: Tuesday, December 12, 2017 09:44:58 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:45:46 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_42, Date: 11-Dec-2017, Time: 22:25:20, ID: 1701824-02 CH-AT-2FB30-1117 0.25812, Description: CH-AT-2FB30-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.08e4		0.2581	3.02				
2	2 PFOA	413 > 368.7	4.78e1	9.60e3		0.2581	4.31	4.31	0.0498	0.238	
3	3 PFOS	499 >79.9	8.07e-1	1.08e4		0.2581	4.72	4.73	0.00214	0.00690	
4	4 13C2-PFHxA	315 > 269.8	4.00e3	9.60e3	0.443	0.2581	3.37	3.37	4.16	36.4	94.0
5	5 13C2-PFDA	515.1 > 469.9	4.02e3	9.60e3	0.509	0.2581	4.94	4.96	4.19	31.9	82.2
6	6 13C2-PFOA	414.9 > 369.7	9.60e3	9.60e3	1.000	0.2581	4.41	4.31	10.0	38.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	0.2581	4.81	4.72	28.7	111	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-42.qld

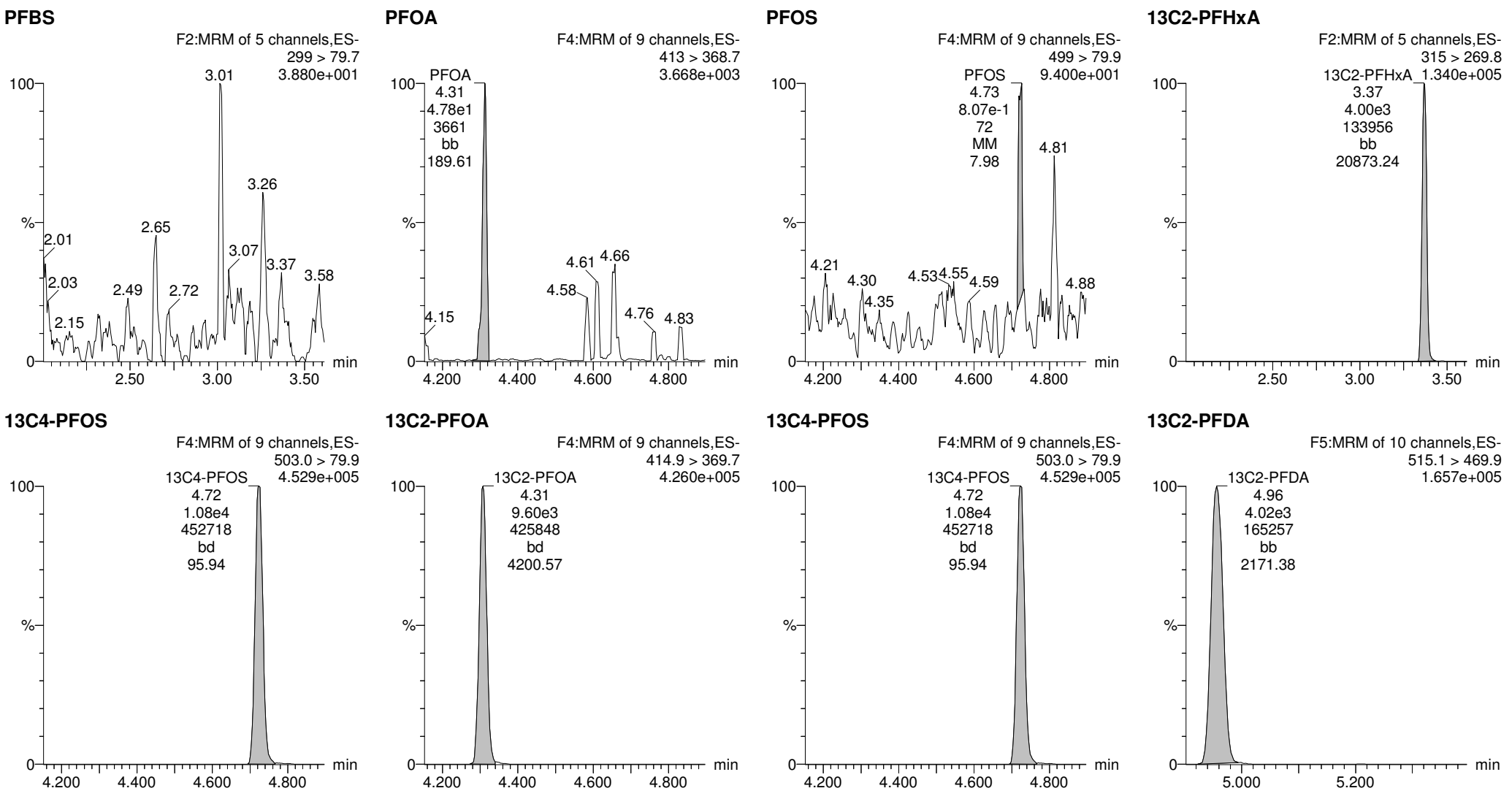
Last Altered: Tuesday, December 12, 2017 09:44:58 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:45:46 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_42, Date: 11-Dec-2017, Time: 22:25:20, ID: 1701824-02 CH-AT-2FB30-1117 0.25812, Description: CH-AT-2FB30-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-43.qld

Last Altered: Tuesday, December 12, 2017 09:46:46 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:47:04 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_43, Date: 11-Dec-2017, Time: 22:37:44, ID: 1701824-03 CH-AT-2RW31-1117 0.24951, Description: CH-AT-2RW31-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.02e4		0.2495	3.03				
2	2 PFOA	413 > 368.7	4.87e1	8.85e3		0.2495	4.31	4.31	0.0551	0.272	
3	3 PFOS	499 >79.9	1.01e0	1.02e4		0.2495	4.73	4.72	0.00285	0.00951	
4	4 13C2-PFHxA	315 > 269.8	3.99e3	8.85e3	0.443	0.2495	3.37	3.37	4.51	40.8	101.7
5	5 13C2-PFDA	515.1 > 469.9	4.03e3	8.85e3	0.509	0.2495	4.94	4.96	4.55	35.8	89.4
6	6 13C2-PFOA	414.9 > 369.7	8.85e3	8.85e3	1.000	0.2495	4.41	4.31	10.0	40.1	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	0.2495	4.81	4.73	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-43.qld

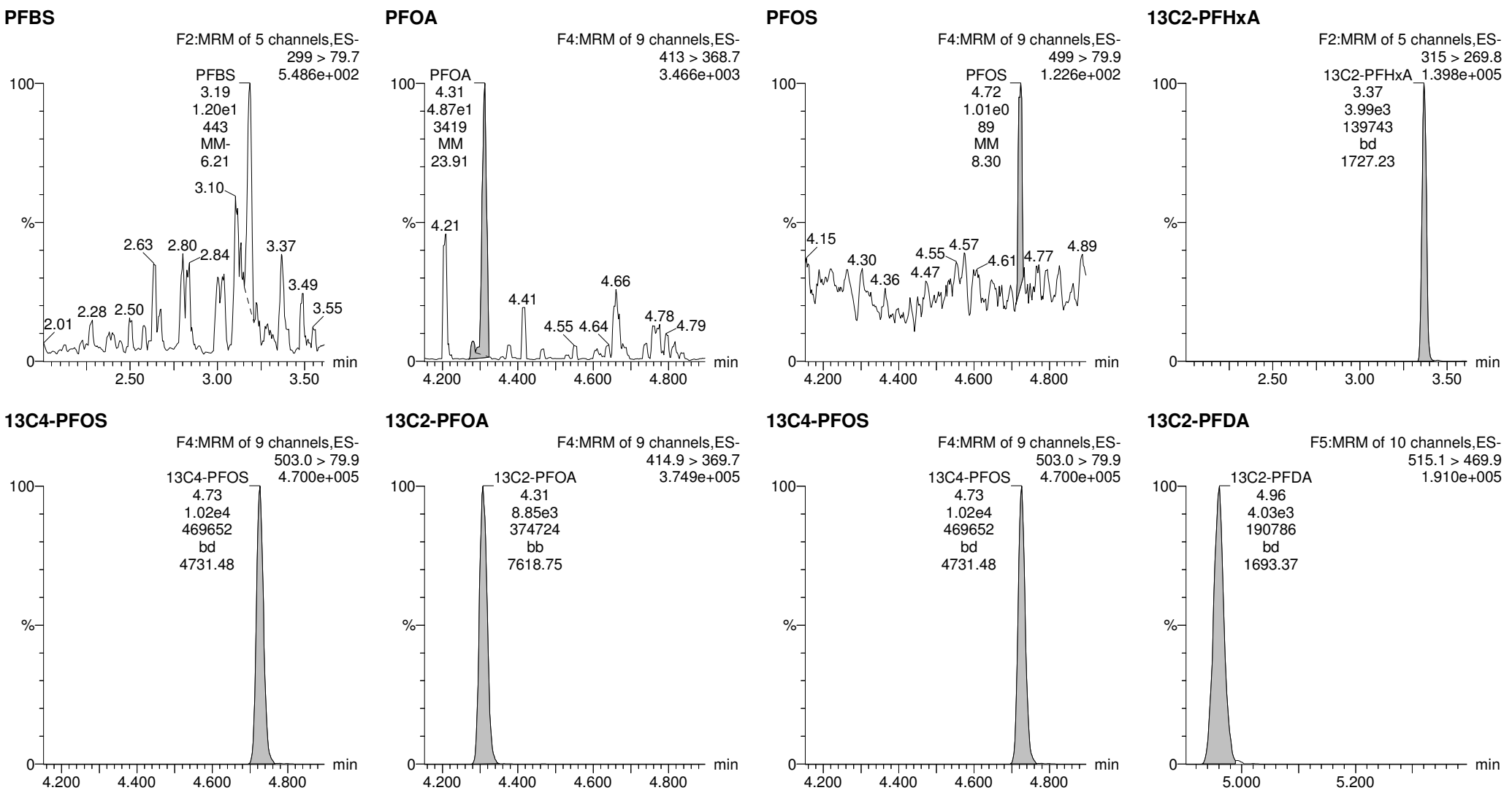
Last Altered: Tuesday, December 12, 2017 09:46:46 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:47:04 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_43, Date: 11-Dec-2017, Time: 22:37:44, ID: 1701824-03 CH-AT-2RW31-1117 0.24951, Description: CH-AT-2RW31-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-44.qld

Last Altered: Tuesday, December 12, 2017 09:47:39 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:48:02 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_44, Date: 11-Dec-2017, Time: 22:50:09, ID: 1701824-04 CH-AT-2FB31-1117 0.26064, Description: CH-AT-2FB31-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.10e4		0.2606	3.03				
2	2 PFOA	413 > 368.7	4.33e1	8.97e3		0.2606	4.31	4.31	0.0483	0.228	
3	3 PFOS	499 >79.9		1.10e4		0.2606	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.20e3	8.97e3	0.443	0.2606	3.37	3.37	4.68	40.6	105.7
5	5 13C2-PFDA	515.1 > 469.9	4.23e3	8.97e3	0.509	0.2606	4.94	4.96	4.72	35.6	92.7
6	6 13C2-PFOA	414.9 > 369.7	8.97e3	8.97e3	1.000	0.2606	4.41	4.31	10.0	38.4	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.10e4	1.10e4	1.000	0.2606	4.81	4.73	28.7	110	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-44.qld

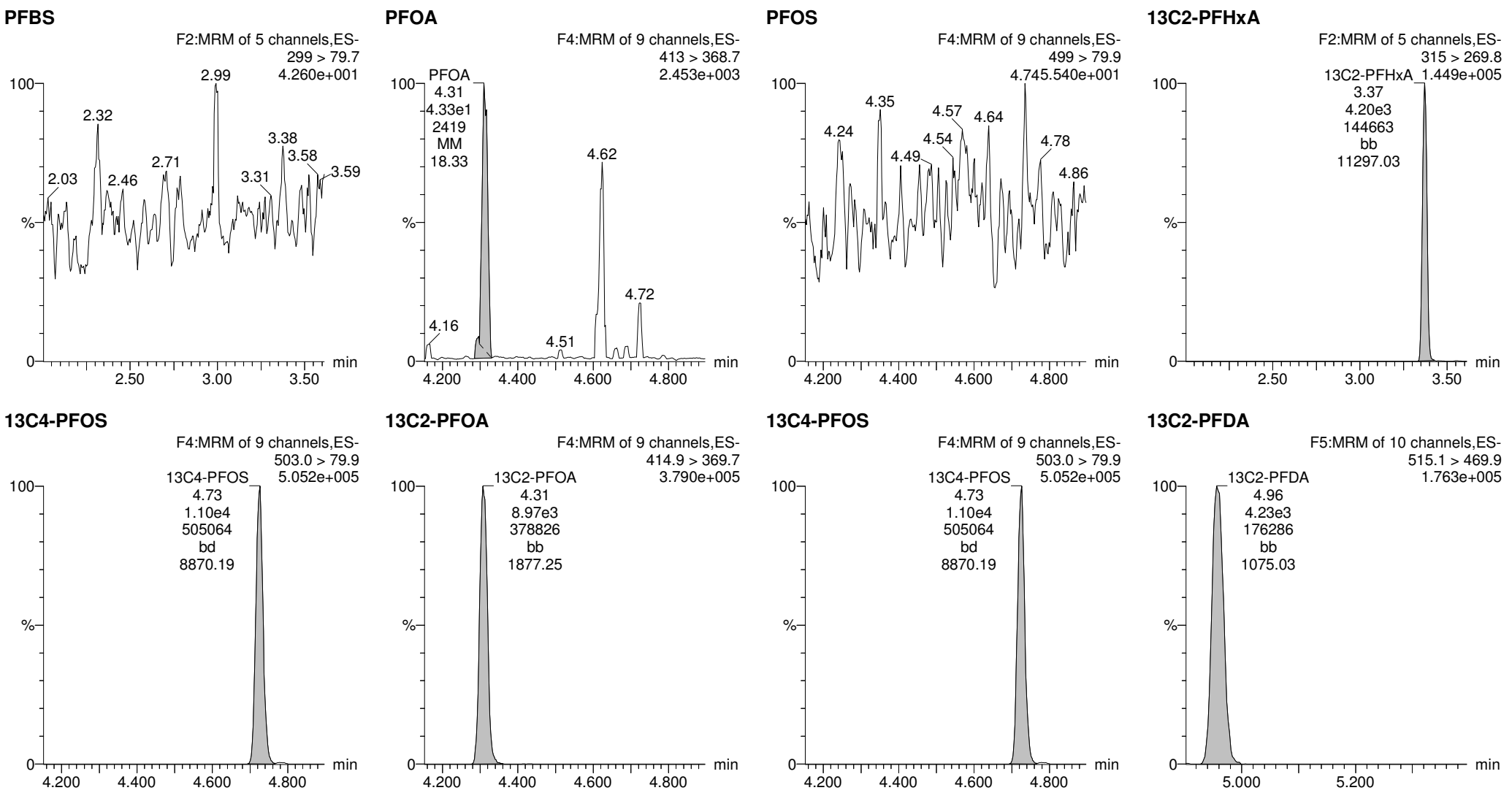
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Printed: Tuesday, December 12, 2017 09:48:02 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_44, Date: 11-Dec-2017, Time: 22:50:09, ID: 1701824-04 CH-AT-2FB31-1117 0.26064, Description: CH-AT-2FB31-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-45.qld

Last Altered: Tuesday, December 12, 2017 09:48:55 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:49:14 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_45, Date: 11-Dec-2017, Time: 23:02:34, ID: 1701824-05 CH-AT-2RW32-1117 0.25406, Description: CH-AT-2RW32-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.07e4		0.2541	3.03				
2	2 PFOA	413 > 368.7	6.03e1	9.19e3		0.2541	4.31	4.31	0.0655	0.318	
3	3 PFOS	499 >79.9		1.07e4		0.2541	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.91e3	9.19e3	0.443	0.2541	3.37	3.37	4.25	37.8	96.1
5	5 13C2-PFDA	515.1 > 469.9	3.79e3	9.19e3	0.509	0.2541	4.94	4.96	4.12	31.8	80.9
6	6 13C2-PFOA	414.9 > 369.7	9.19e3	9.19e3	1.000	0.2541	4.41	4.31	10.0	39.4	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.07e4	1.07e4	1.000	0.2541	4.81	4.73	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-45.qld

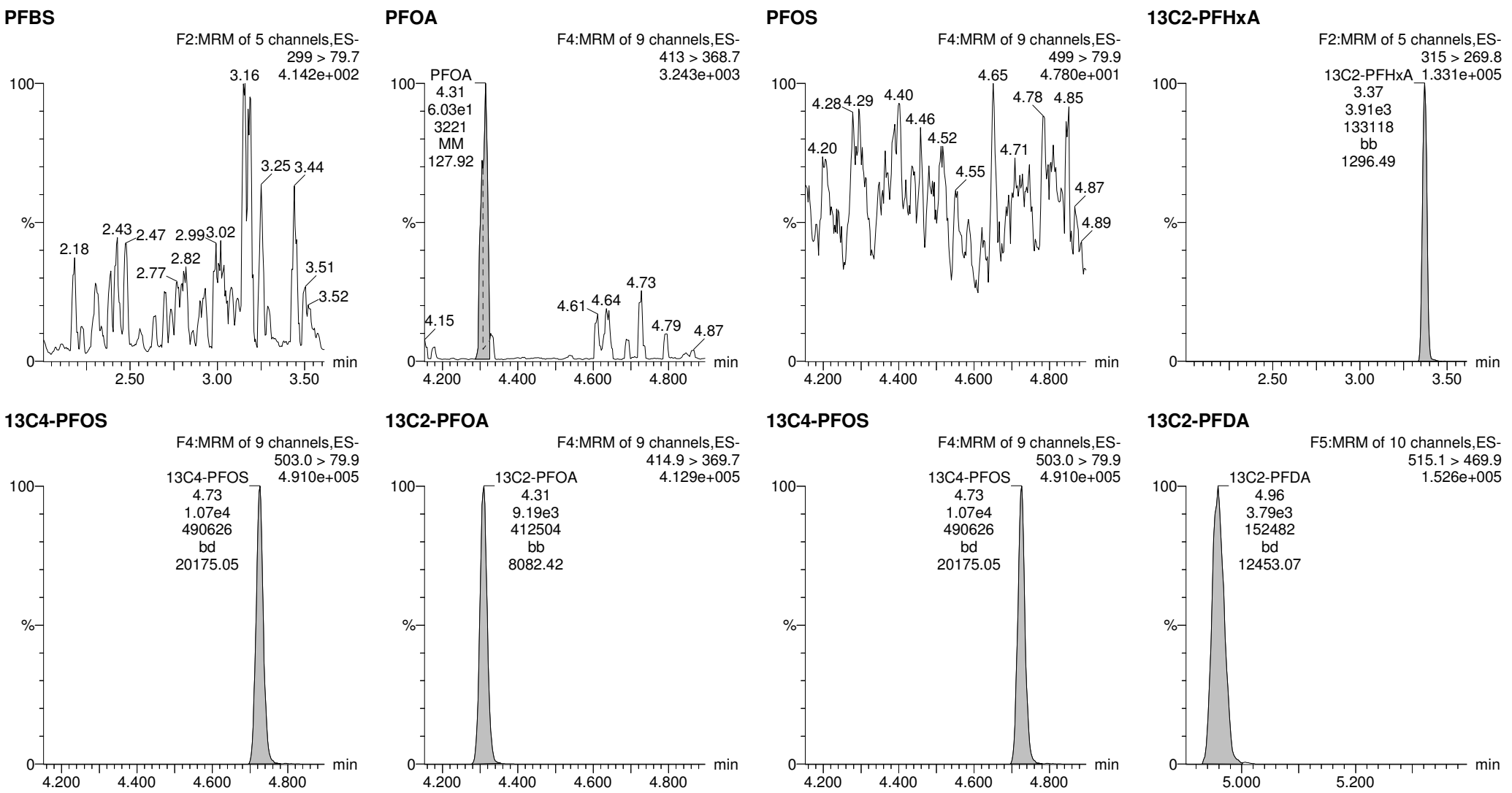
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Printed: Tuesday, December 12, 2017 09:49:14 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_45, Date: 11-Dec-2017, Time: 23:02:34, ID: 1701824-05 CH-AT-2RW32-1117 0.25406, Description: CH-AT-2RW32-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-46.qld

Last Altered: Tuesday, December 12, 2017 09:52:05 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:52:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_46, Date: 11-Dec-2017, Time: 23:15:00, ID: 1701824-06 CH-AT-2FB32-1117 0.26151, Description: CH-AT-2FB32-1117

	#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.15e0	1.02e4		0.2615	3.02	3.01	0.00607	0.0290	
2	2	PFOA	413 > 368.7	5.36e1	8.13e3		0.2615	4.31	4.31	0.0659	0.310	
3	3	PFOS	499 >79.9		1.02e4		0.2615	4.72				
4	4	13C2-PFHxA	315 > 269.8	3.77e3	8.13e3	0.443	0.2615	3.37	3.37	4.63	40.0	104.6
5	5	13C2-PFDA	515.1 > 469.9	4.31e3	8.13e3	0.509	0.2615	4.94	4.96	5.30	39.8	104.0
6	6	13C2-PFOA	414.9 > 369.7	8.13e3	8.13e3	1.000	0.2615	4.41	4.31	10.0	38.2	100.0
7	7	13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	0.2615	4.81	4.72	28.7	110	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-46.qld

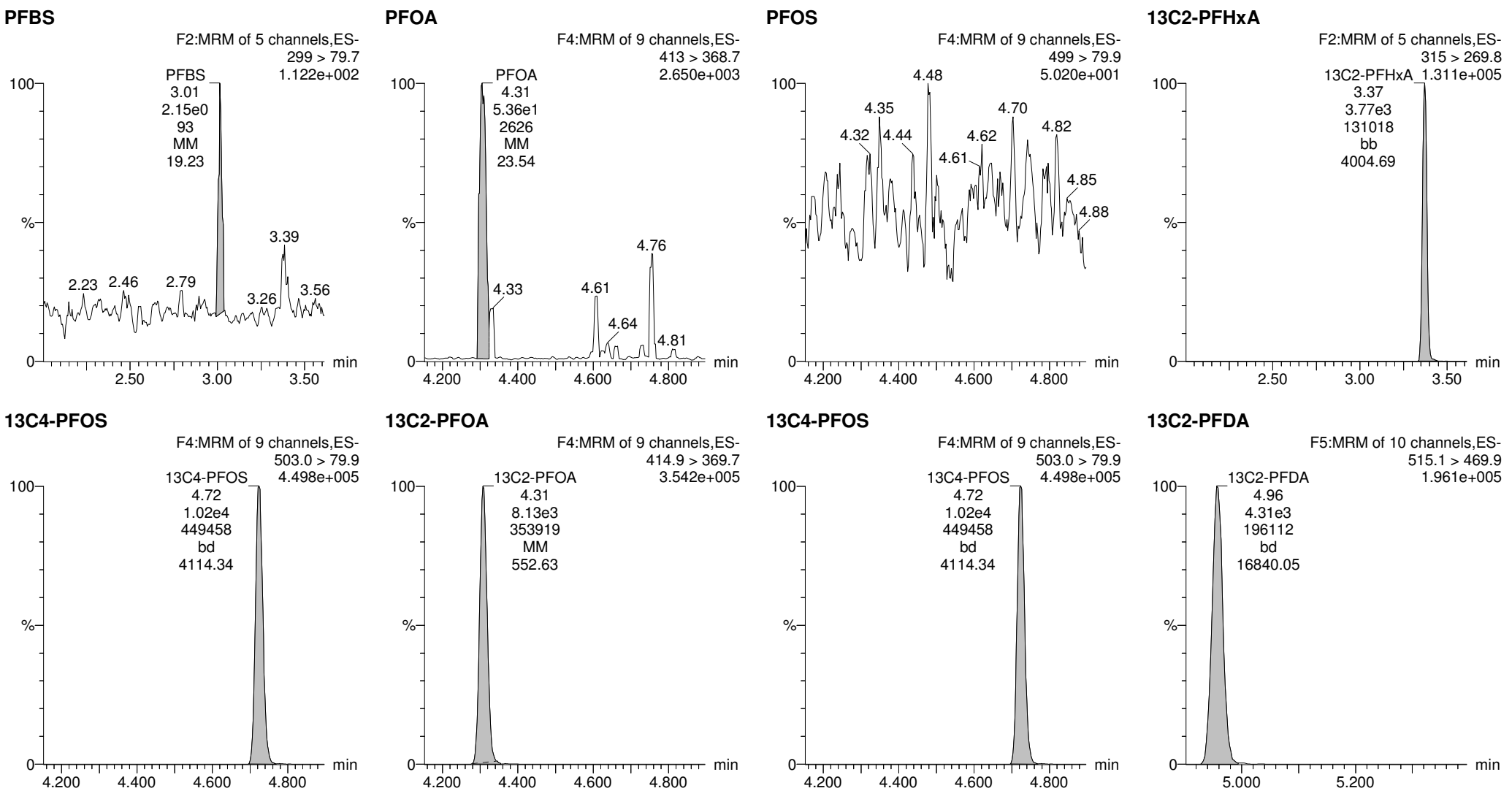
Last Altered: Tuesday, December 12, 2017 09:52:05 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:52:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_46, Date: 11-Dec-2017, Time: 23:15:00, ID: 1701824-06 CH-AT-2FB32-1117 0.26151, Description: CH-AT-2FB32-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-47.qld

Last Altered: Tuesday, December 12, 2017 09:53:32 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:53:56 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_47, Date: 11-Dec-2017, Time: 23:27:26, ID: 1701824-07 CH-AT-2RW33-1117 0.25185, Description: CH-AT-2RW33-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.09e4		0.2519	3.02				
2	2 PFOA	413 > 368.7	8.62e1	9.04e3		0.2519	4.31	4.31	0.0953	0.466	
3	3 PFOS	499 >79.9	2.97e0	1.09e4		0.2519	4.72	4.73	0.00779	0.0257	
4	4 13C2-PFHxA	315 > 269.8	4.16e3	9.04e3	0.443	0.2519	3.37	3.37	4.60	41.3	103.9
5	5 13C2-PFDA	515.1 > 469.9	4.23e3	9.04e3	0.509	0.2519	4.94	4.96	4.67	36.4	91.8
6	6 13C2-PFOA	414.9 > 369.7	9.04e3	9.04e3	1.000	0.2519	4.41	4.31	10.0	39.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.09e4	1.09e4	1.000	0.2519	4.81	4.72	28.7	114	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-47.qld

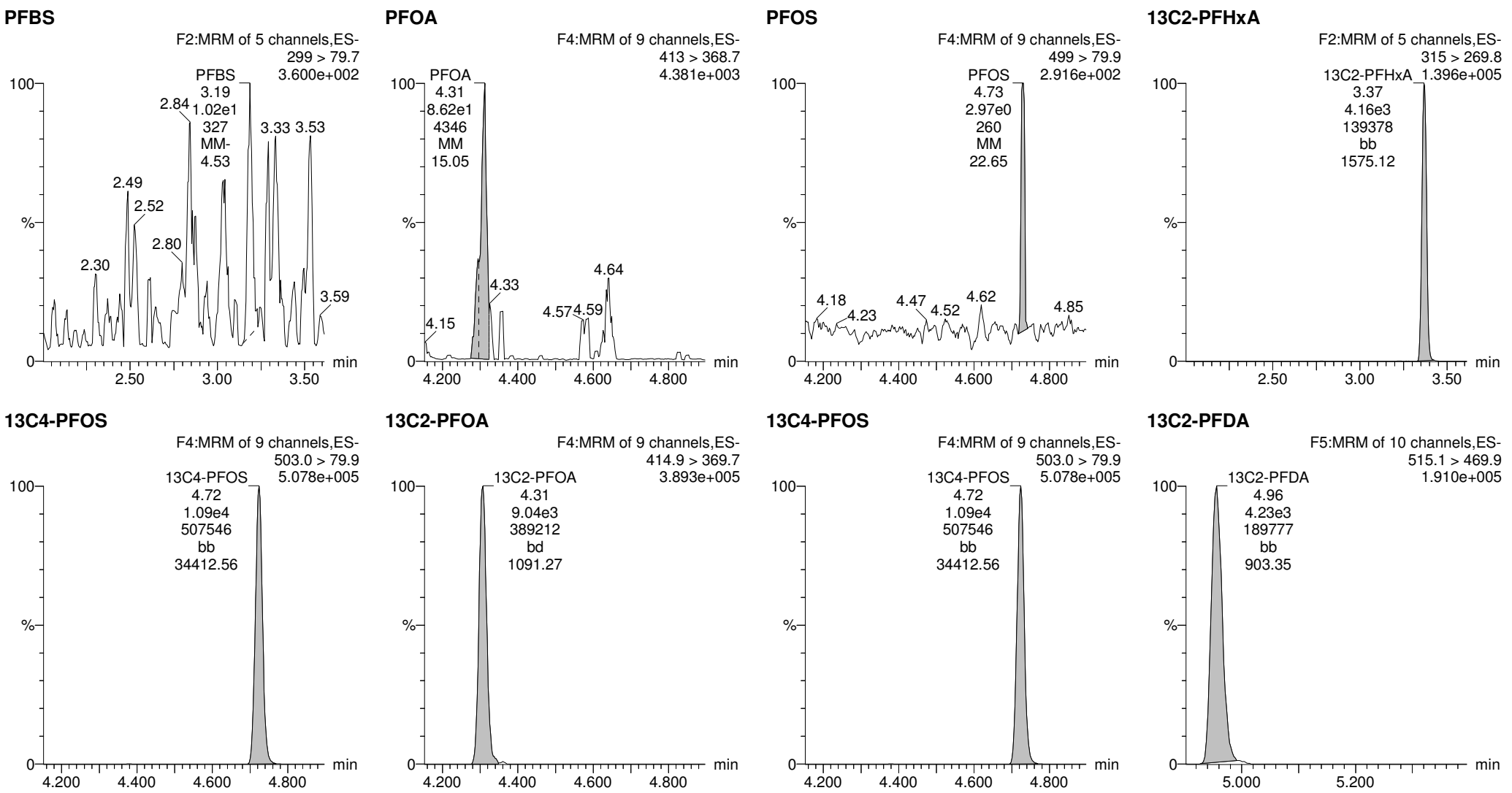
Last Altered: Tuesday, December 12, 2017 09:53:32 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:53:56 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_47, Date: 11-Dec-2017, Time: 23:27:26, ID: 1701824-07 CH-AT-2RW33-1117 0.25185, Description: CH-AT-2RW33-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-48.qld

Last Altered: Tuesday, December 12, 2017 09:55:40 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:56:06 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_48, Date: 11-Dec-2017, Time: 23:39:55, ID: 1701824-08 CH-AT-2FB33-1117 0.26295, Description: CH-AT-2FB33-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.72e3		0.2630	3.02				
2	2 PFOA	413 > 368.7	3.31e1	9.01e3		0.2630	4.31	4.31	0.0367	0.172	
3	3 PFOS	499 >79.9		9.72e3		0.2630	4.72				
4	4 13C2-PFHxA	315 > 269.8	3.81e3	9.01e3	0.443	0.2630	3.37	3.37	4.23	36.3	95.4
5	5 13C2-PFDA	515.1 > 469.9	3.63e3	9.01e3	0.509	0.2630	4.94	4.96	4.03	30.1	79.1
6	6 13C2-PFOA	414.9 > 369.7	9.01e3	9.01e3	1.000	0.2630	4.41	4.31	10.0	38.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.72e3	9.72e3	1.000	0.2630	4.81	4.72	28.7	109	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-48.qld

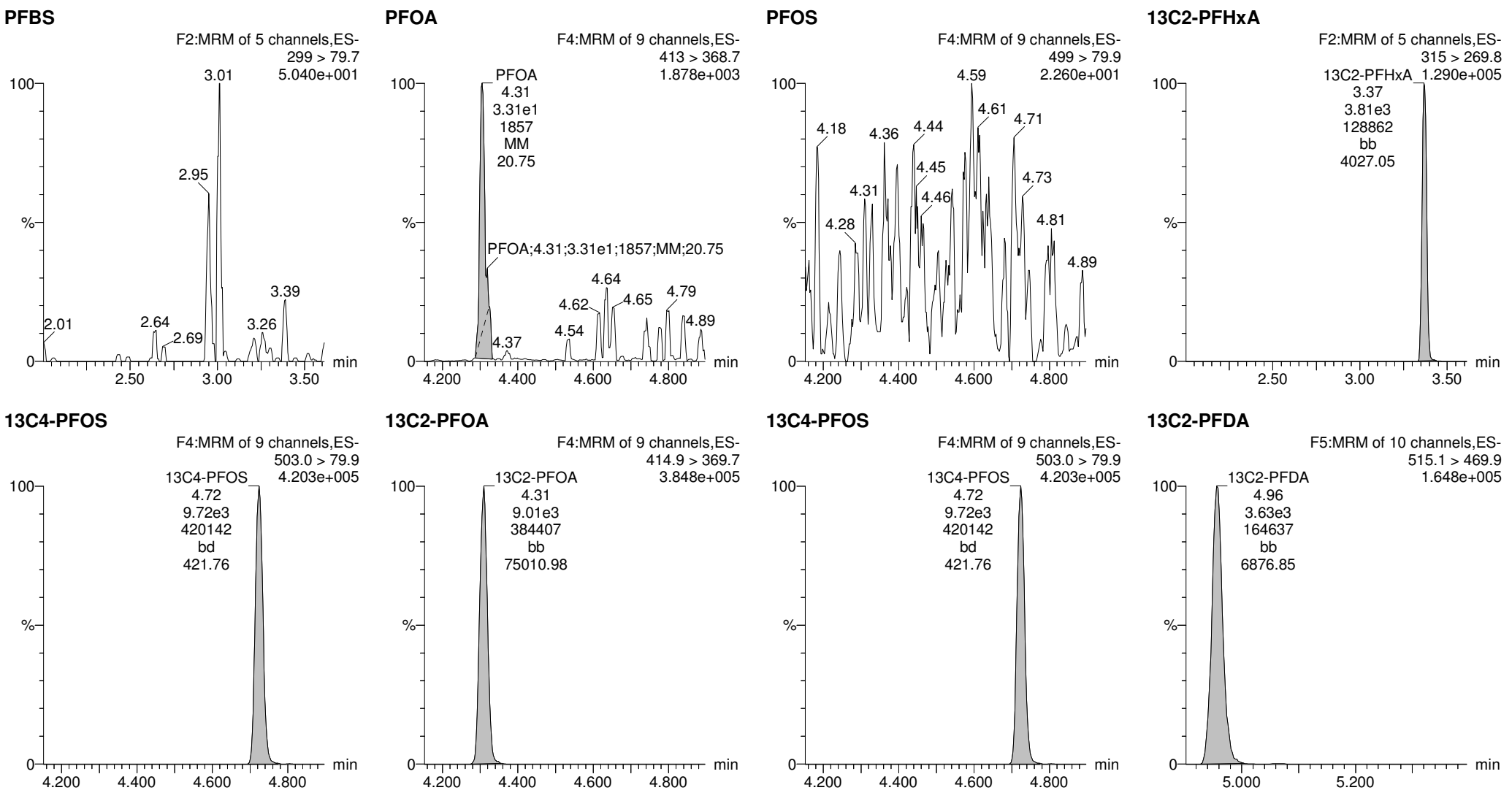
Last Altered: Tuesday, December 12, 2017 09:55:40 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:56:06 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_48, Date: 11-Dec-2017, Time: 23:39:55, ID: 1701824-08 CH-AT-2FB33-1117 0.26295, Description: CH-AT-2FB33-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-49.qld

Last Altered: Tuesday, December 12, 2017 09:56:43 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:56:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_49, Date: 11-Dec-2017, Time: 23:52:18, ID: 1701824-09 CH-AT-2RW34-1117 0.25405, Description: CH-AT-2RW34-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.56e3		0.2541	3.02				
2	2 PFOA	413 > 368.7	5.96e1	8.09e3		0.2541	4.31	4.31	0.0736	0.357	
3	3 PFOS	499 >79.9	3.19e0	9.56e3		0.2541	4.72	4.73	0.00957	0.0313	
4	4 13C2-PFHxA	315 > 269.8	3.87e3	8.09e3	0.443	0.2541	3.37	3.37	4.78	42.5	107.9
5	5 13C2-PFDA	515.1 > 469.9	4.30e3	8.09e3	0.509	0.2541	4.94	4.96	5.31	41.0	104.2
6	6 13C2-PFOA	414.9 > 369.7	8.09e3	8.09e3	1.000	0.2541	4.41	4.31	10.0	39.4	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.56e3	9.56e3	1.000	0.2541	4.81	4.72	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-49.qld

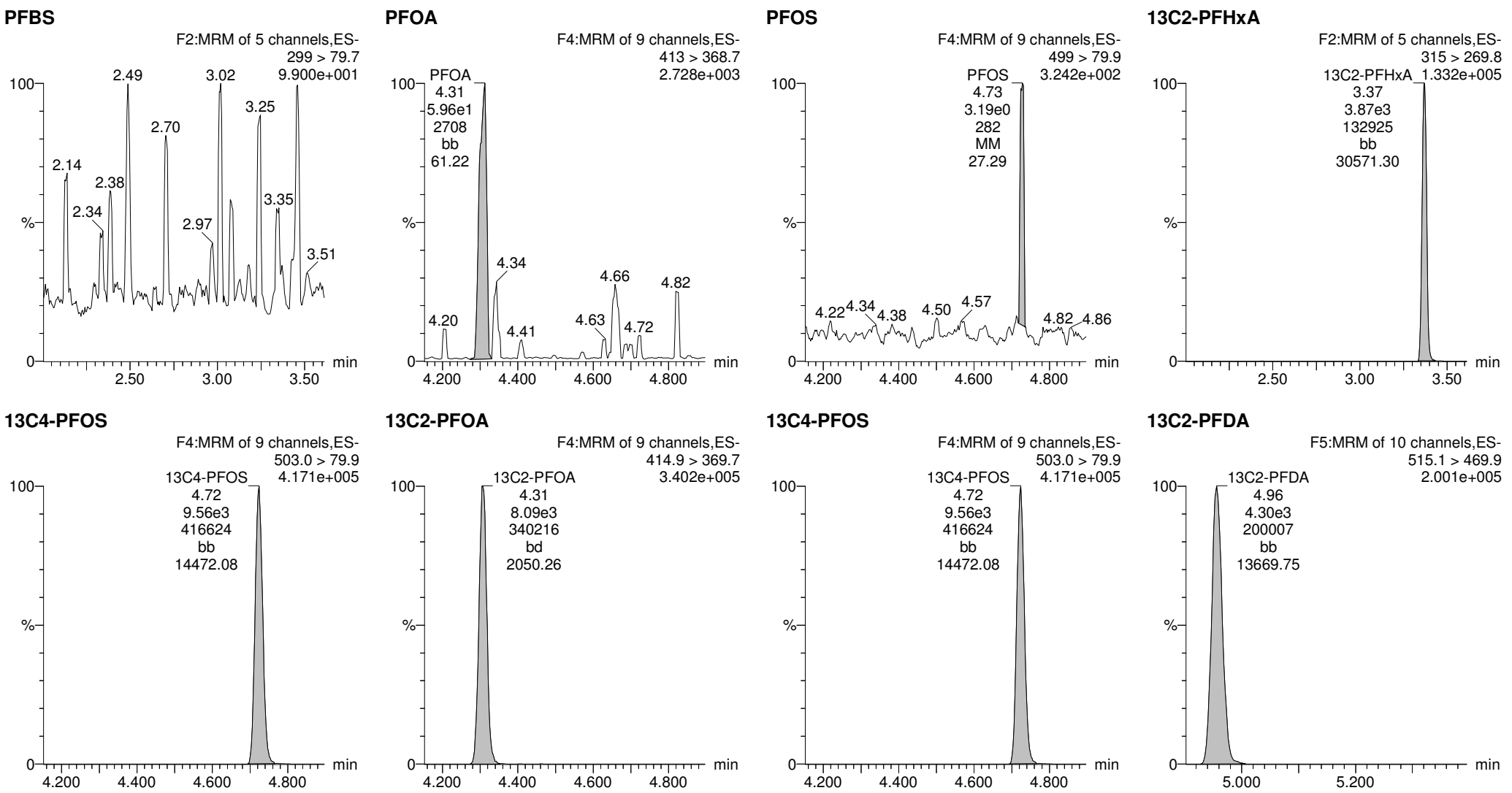
Last Altered: Tuesday, December 12, 2017 09:56:43 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:56:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_49, Date: 11-Dec-2017, Time: 23:52:18, ID: 1701824-09 CH-AT-2RW34-1117 0.25405, Description: CH-AT-2RW34-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-50.qld

Last Altered: Tuesday, December 12, 2017 09:57:26 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:57:42 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_50, Date: 12-Dec-2017, Time: 00:04:41, ID: 1701824-10 CH-AT-2FB34-1117 0.24979, Description: CH-AT-2FB34-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.09e4		0.2498	3.02				
2	2 PFOA	413 > 368.7	7.07e1	8.62e3		0.2498	4.31	4.31	0.0820	0.404	
3	3 PFOS	499 >79.9		1.09e4		0.2498	4.72				
4	4 13C2-PFHxA	315 > 269.8	3.73e3	8.62e3	0.443	0.2498	3.37	3.37	4.33	39.1	97.7
5	5 13C2-PFDA	515.1 > 469.9	3.71e3	8.62e3	0.509	0.2498	4.94	4.96	4.31	33.9	84.6
6	6 13C2-PFOA	414.9 > 369.7	8.62e3	8.62e3	1.000	0.2498	4.41	4.31	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.09e4	1.09e4	1.000	0.2498	4.81	4.72	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-50.qld

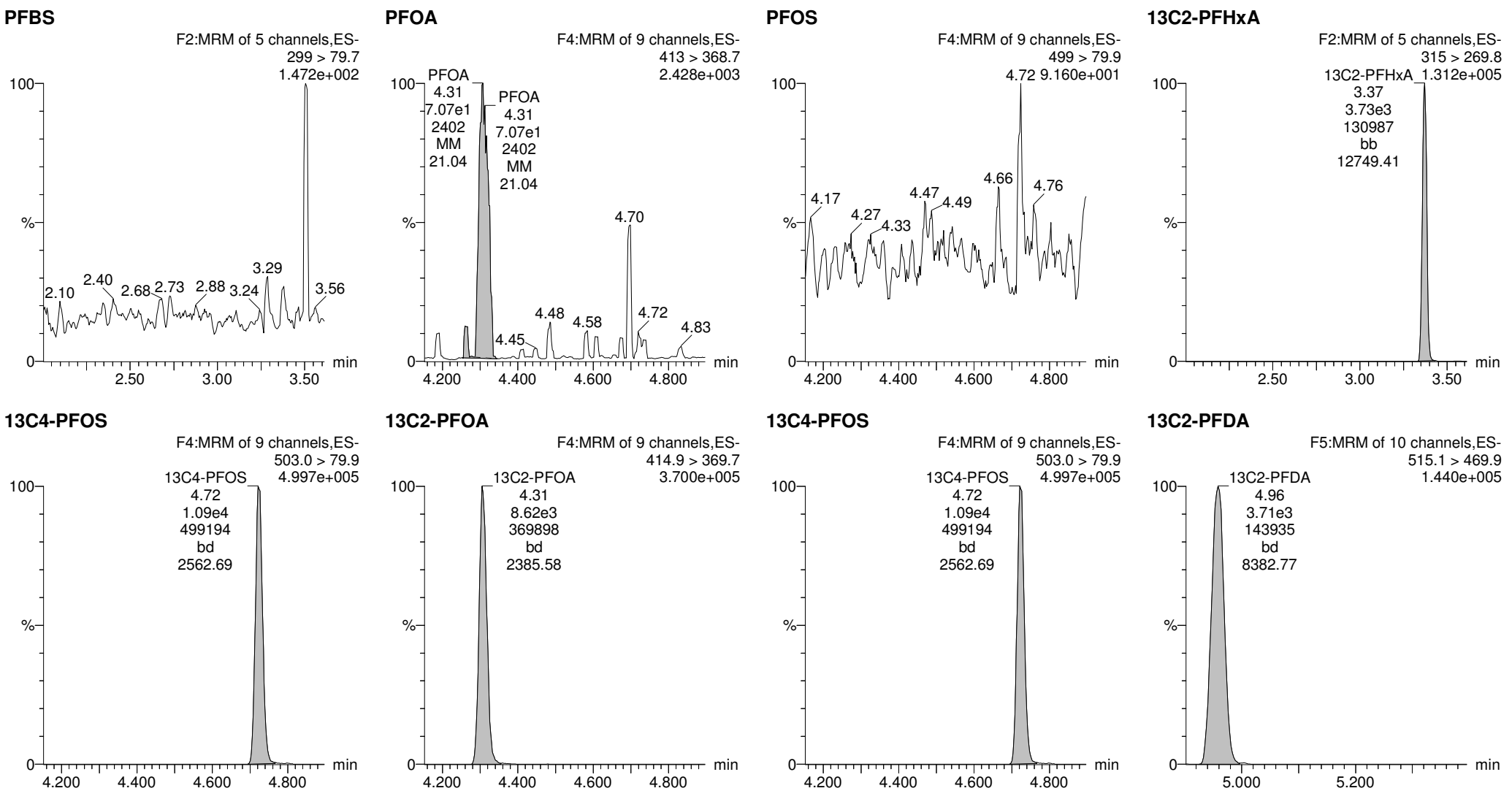
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Printed: Tuesday, December 12, 2017 09:57:42 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_50, Date: 12-Dec-2017, Time: 00:04:41, ID: 1701824-10 CH-AT-2FB34-1117 0.24979, Description: CH-AT-2FB34-1117



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-51.qld

Last Altered: Tuesday, December 12, 2017 09:59:51 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:00:14 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_51, Date: 12-Dec-2017, Time: 00:17:06, ID: 1701824-11 CH-AT-2RW35-1117 0.2526, Description: CH-AT-2RW35-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.17e4		0.2526	3.02				
2	2 PFOA	413 > 368.7	8.46e1	9.37e3		0.2526	4.31	4.30	0.0903	0.440	
3	3 PFOS	499 >79.9	2.91e0	1.17e4		0.2526	4.72	4.65	0.00714	0.0235	
4	4 13C2-PFHxA	315 > 269.8	4.19e3	9.37e3	0.443	0.2526	3.37	3.37	4.48	40.0	101.0
5	5 13C2-PFDA	515.1 > 469.9	4.58e3	9.37e3	0.509	0.2526	4.94	4.96	4.89	38.0	96.0
6	6 13C2-PFOA	414.9 > 369.7	9.37e3	9.37e3	1.000	0.2526	4.41	4.31	10.0	39.6	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.17e4	1.17e4	1.000	0.2526	4.81	4.72	28.7	114	100.0

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-51.qld

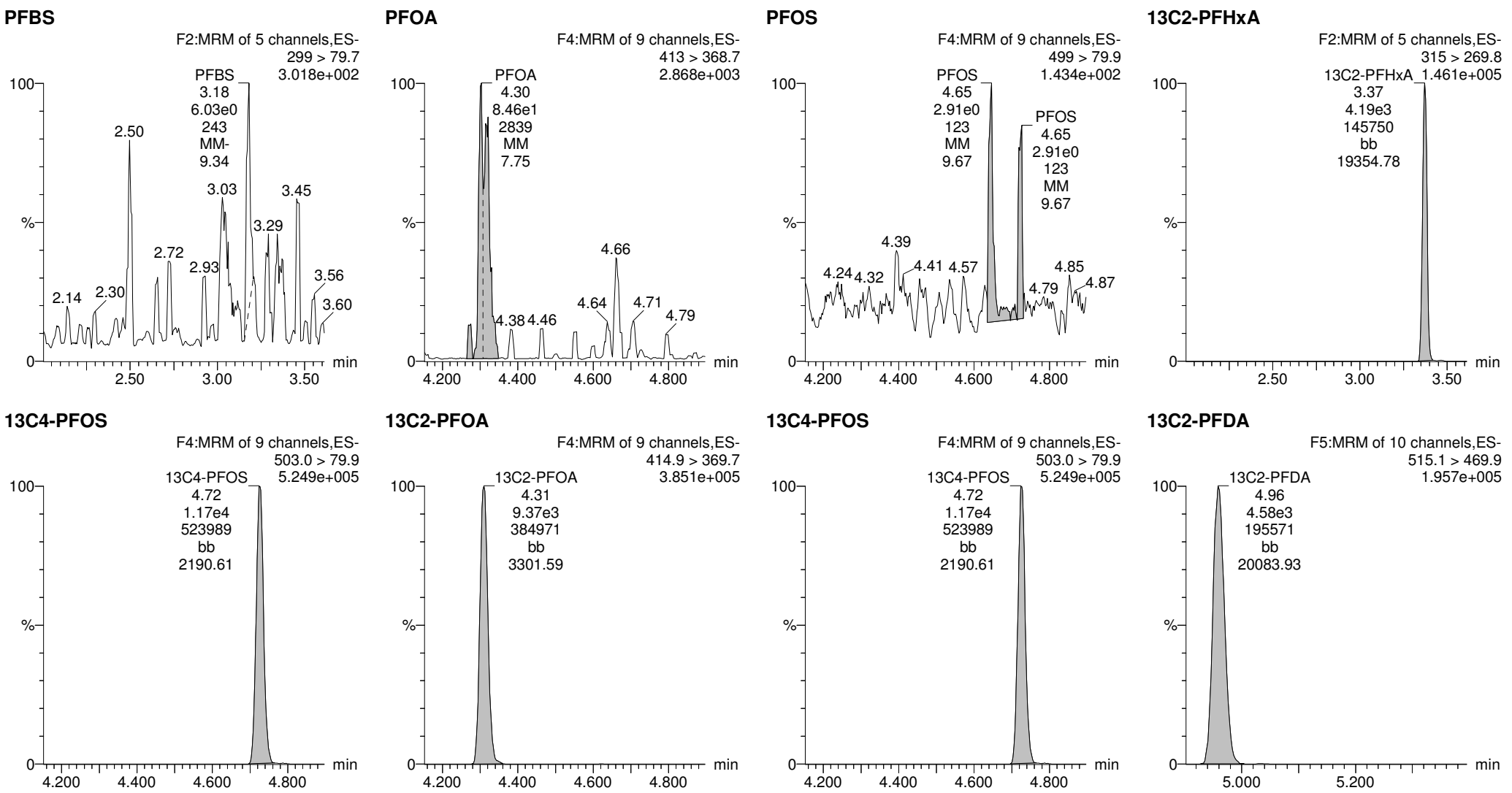
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Printed: Tuesday, December 12, 2017 10:00:14 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_51, Date: 12-Dec-2017, Time: 00:17:06, ID: 1701824-11 CH-AT-2RW35-1117 0.2526, Description: CH-AT-2RW35-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-4.qld

Rev'd: MM 12/12/17

Last Altered: Tuesday, December 12, 2017 10:02:05 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:02:26 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_4, Date: 09-Dec-2017, Time: 12:15:10, ID: 1701824-12 CH-AT-2FB35-1117 0.25792, Description: CH-AT-2FB35-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.05e4		0.2579	3.02				
2	2 PFOA	413 > 368.7	4.57e1	9.23e3		0.2579	4.31	4.31	0.0495	0.236	
3	3 PFOS	499 > 79.9	1.01e0	1.05e4		0.2579	4.72	4.71	0.00278	0.00895	
4	4 13C2-PFHxA	315 > 269.8	4.24e3	9.23e3	0.443	0.2579	3.37	3.37	4.59	40.2	103.7
5	5 13C2-PFDA	515.1 > 469.9	5.04e3	9.23e3	0.509	0.2579	4.94	4.96	5.46	41.6	107.2
6	6 13C2-PFOA	414.9 > 369.7	9.23e3	9.23e3	1.000	0.2579	4.41	4.31	10.0	38.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.05e4	1.05e4	1.000	0.2579	4.81	4.72	28.7	111	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-4.qld

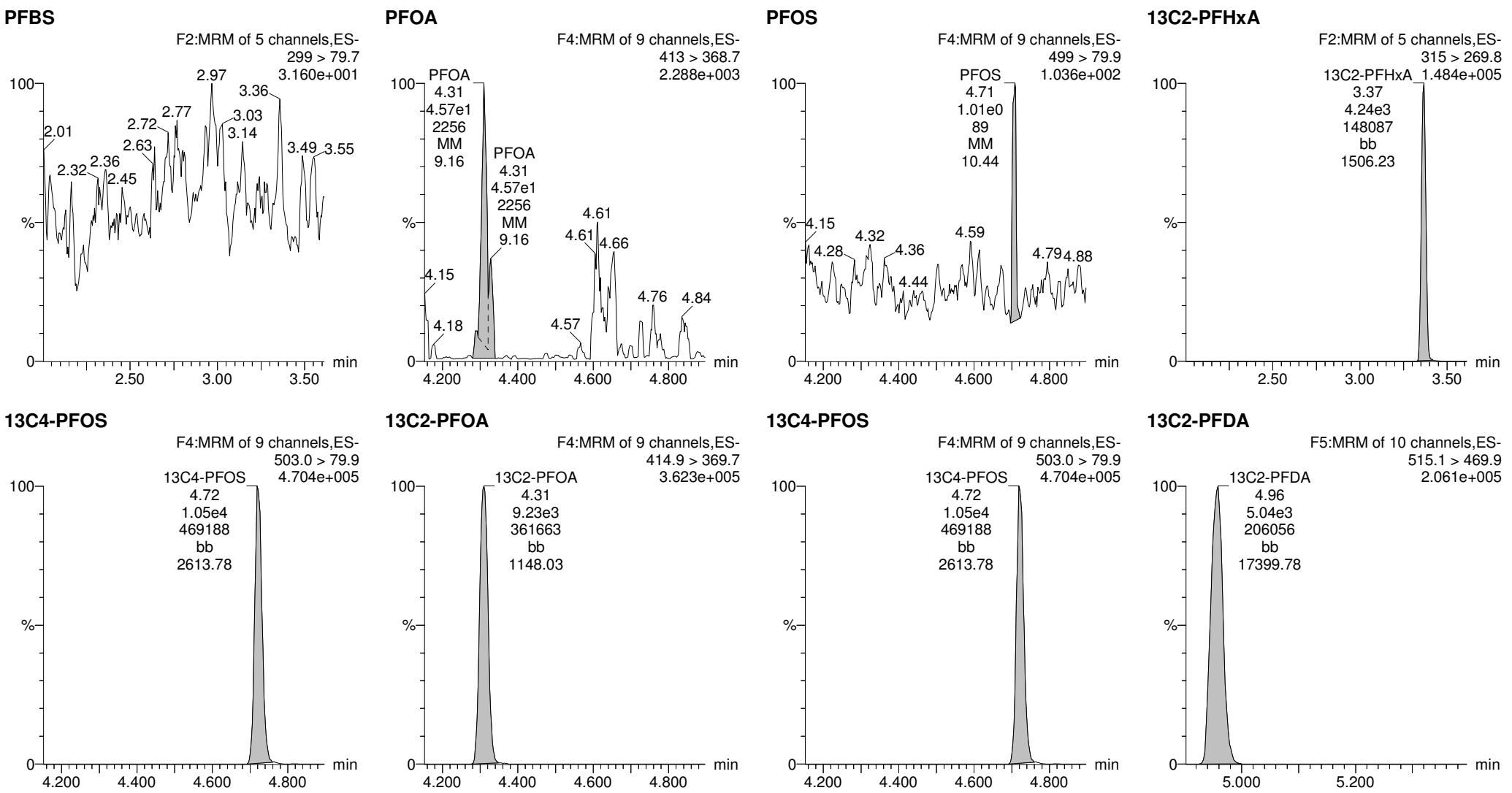
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Printed: Tuesday, December 12, 2017 10:02:26 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_4, Date: 09-Dec-2017, Time: 12:15:10, ID: 1701824-12 CH-AT-2FB35-1117 0.25792, Description: CH-AT-2FB35-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-5.qld

Last Altered: Tuesday, December 12, 2017 10:03:12 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:03:31 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_5, **Date:** 09-Dec-2017, **Time:** 12:27:36, **ID:** 1701824-13 CH-AT-2RW36-1117 0.26093, **Description:** CH-AT-2RW36-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.12e4		0.2609	3.02				
2	2 PFOA	413 > 368.7	5.15e1	8.98e3		0.2609	4.31	4.30	0.0573	0.271	
3	3 PFOS	499 >79.9	1.06e0	1.12e4		0.2609	4.72	4.72	0.00271	0.00862	
4	4 13C2-PFHxA	315 > 269.8	3.92e3	8.98e3	0.443	0.2609	3.37	3.37	4.37	37.8	98.6
5	5 13C2-PFDA	515.1 > 469.9	4.32e3	8.98e3	0.509	0.2609	4.94	4.96	4.81	36.2	94.4
6	6 13C2-PFOA	414.9 > 369.7	8.98e3	8.98e3	1.000	0.2609	4.41	4.31	10.0	38.3	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.12e4	1.12e4	1.000	0.2609	4.81	4.72	28.7	110	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-5.qld

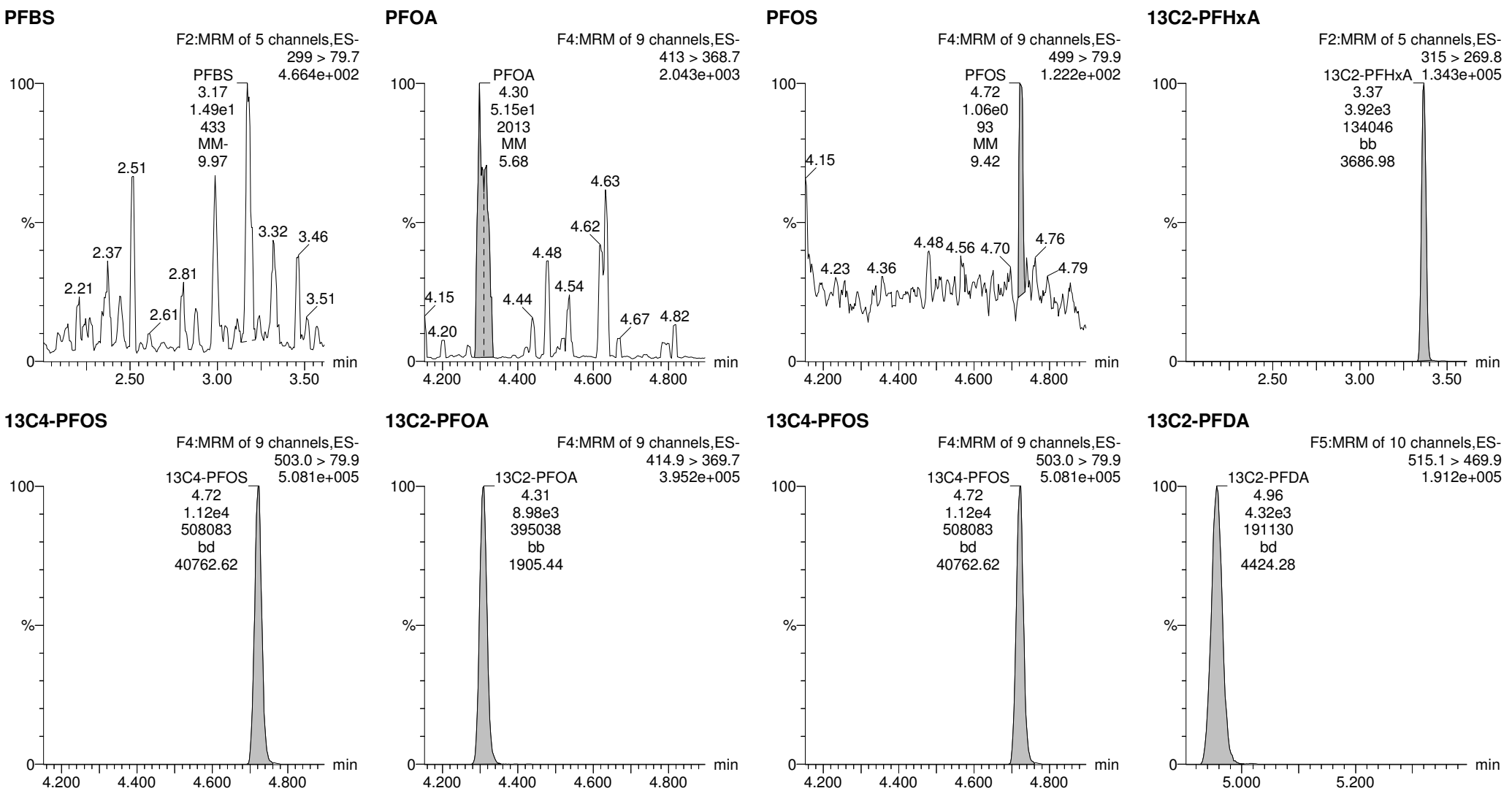
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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_5, Date: 09-Dec-2017, Time: 12:27:36, ID: 1701824-13 CH-AT-2RW36-1117 0.26093, Description: CH-AT-2RW36-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-6.qld

Last Altered: Tuesday, December 12, 2017 10:04:15 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:04:36 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_6, Date: 09-Dec-2017, Time: 12:40:03, ID: 1701824-14 CH-AT-2FB36-1117 0.24528, Description: CH-AT-2FB36-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.10e4		0.2453	3.02				
2	2 PFOA	413 > 368.7	6.56e1	9.08e3		0.2453	4.31	4.31	0.0722	0.363	
3	3 PFOS	499 >79.9		1.10e4		0.2453	4.72				
4	4 13C2-PFHxA	315 > 269.8	4.12e3	9.08e3	0.443	0.2453	3.37	3.37	4.54	41.8	102.4
5	5 13C2-PFDA	515.1 > 469.9	4.44e3	9.08e3	0.509	0.2453	4.94	4.96	4.89	39.1	96.0
6	6 13C2-PFOA	414.9 > 369.7	9.08e3	9.08e3	1.000	0.2453	4.41	4.31	10.0	40.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.10e4	1.10e4	1.000	0.2453	4.81	4.72	28.7	117	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-6.qld

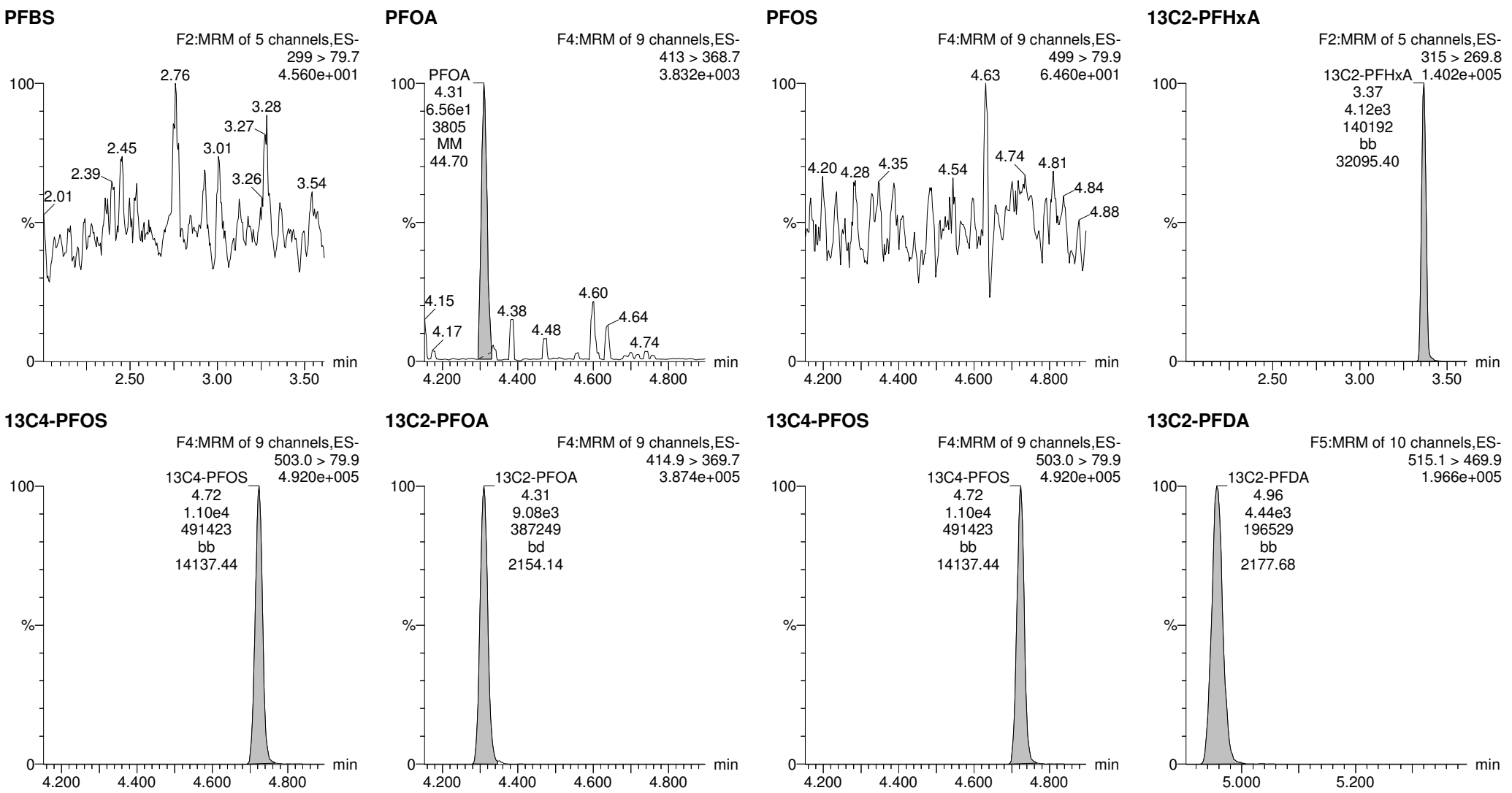
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Printed: Tuesday, December 12, 2017 10:04:36 Pacific Standard Time

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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_6, Date: 09-Dec-2017, Time: 12:40:03, ID: 1701824-14 CH-AT-2FB36-1117 0.24528, Description: CH-AT-2FB36-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-7.qld

Last Altered: Tuesday, December 12, 2017 10:05:06 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:05:27 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_7, Date: 09-Dec-2017, Time: 12:52:30, ID: 1701824-15 CH-AT-2RW37-1117 0.25012, Description: CH-AT-2RW37-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.10e4		0.2501	3.02				
2	2 PFOA	413 > 368.7	9.79e1	1.01e4		0.2501	4.31	4.31	0.0967	0.476	
3	3 PFOS	499 >79.9		1.10e4		0.2501	4.72				
4	4 13C2-PFHxA	315 > 269.8	3.85e3	1.01e4	0.443	0.2501	3.37	3.37	3.81	34.4	85.9
5	5 13C2-PFDA	515.1 > 469.9	4.72e3	1.01e4	0.509	0.2501	4.94	4.96	4.67	36.6	91.6
6	6 13C2-PFOA	414.9 > 369.7	1.01e4	1.01e4	1.000	0.2501	4.41	4.31	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.10e4	1.10e4	1.000	0.2501	4.81	4.72	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-7.qld

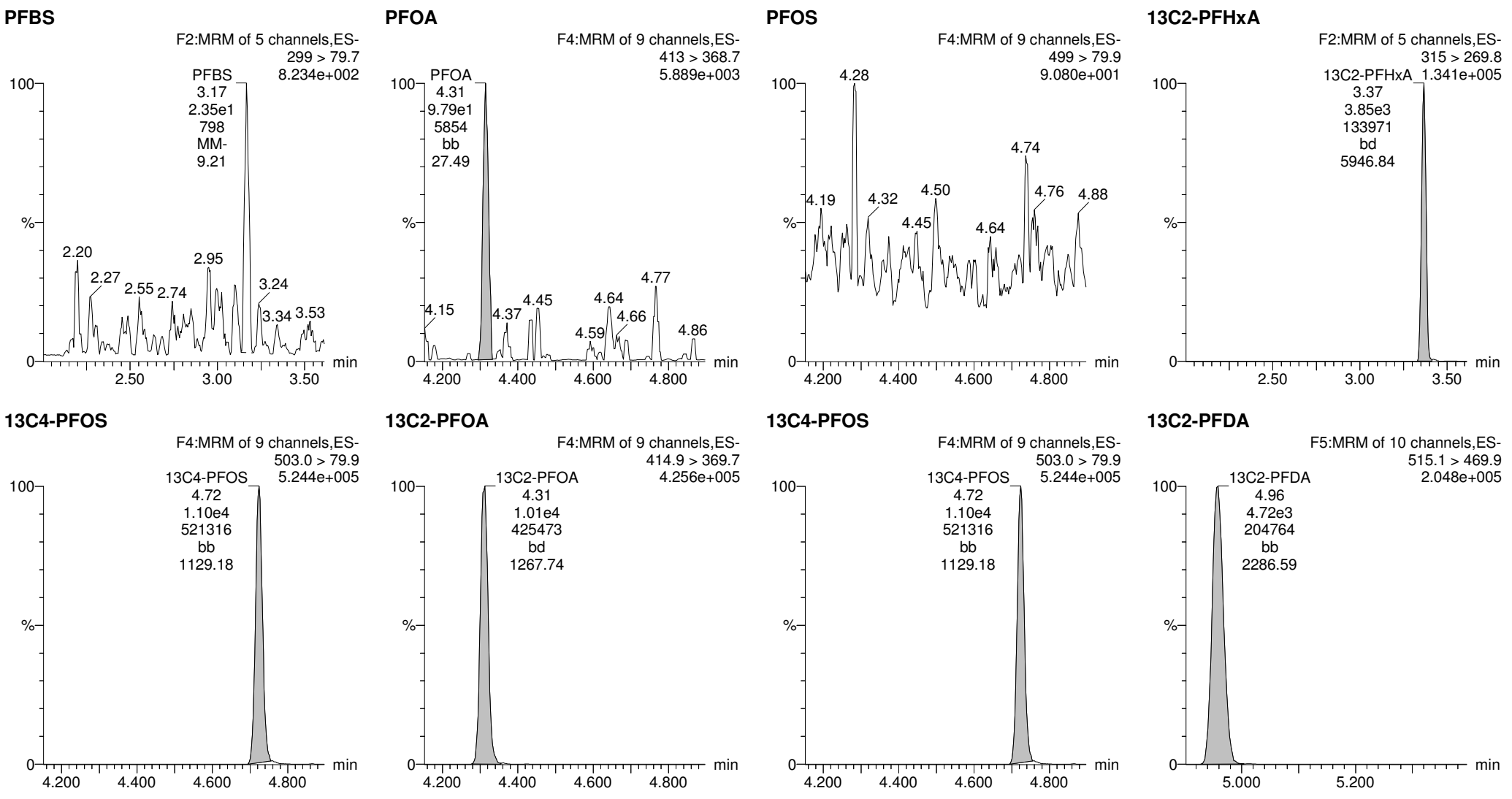
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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_7, Date: 09-Dec-2017, Time: 12:52:30, ID: 1701824-15 CH-AT-2RW37-1117 0.25012, Description: CH-AT-2RW37-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-8B.qld

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Printed: Tuesday, December 12, 2017 13:14:41 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_8, Date: 09-Dec-2017, Time: 13:04:57, ID: 1701824-16 CH-AT-2FB37-1117 0.25022, Description: CH-AT-2FB37-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.08e4		0.2550	3.02				
2	2 PFOA	413 > 368.7	3.96e1	9.30e3		0.2550	4.31	4.31	0.0426	0.206	
3	3 PFOS	499 >79.9	1.65e0	1.08e4		0.2550	4.72	4.72	0.00437	0.0142	
4	4 13C2-PFHxA	315 > 269.8	4.02e3	9.30e3	0.443	0.2550	3.37	3.37	4.32	38.2	97.5
5	5 13C2-PFDA	515.1 > 469.9	4.58e3	9.30e3	0.509	0.2550	4.94	4.96	4.92	37.9	96.7
6	6 13C2-PFOA	414.9 > 369.7	9.30e3	9.30e3	1.000	0.2550	4.41	4.31	10.0	39.2	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	0.2550	4.81	4.72	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-8B.qld

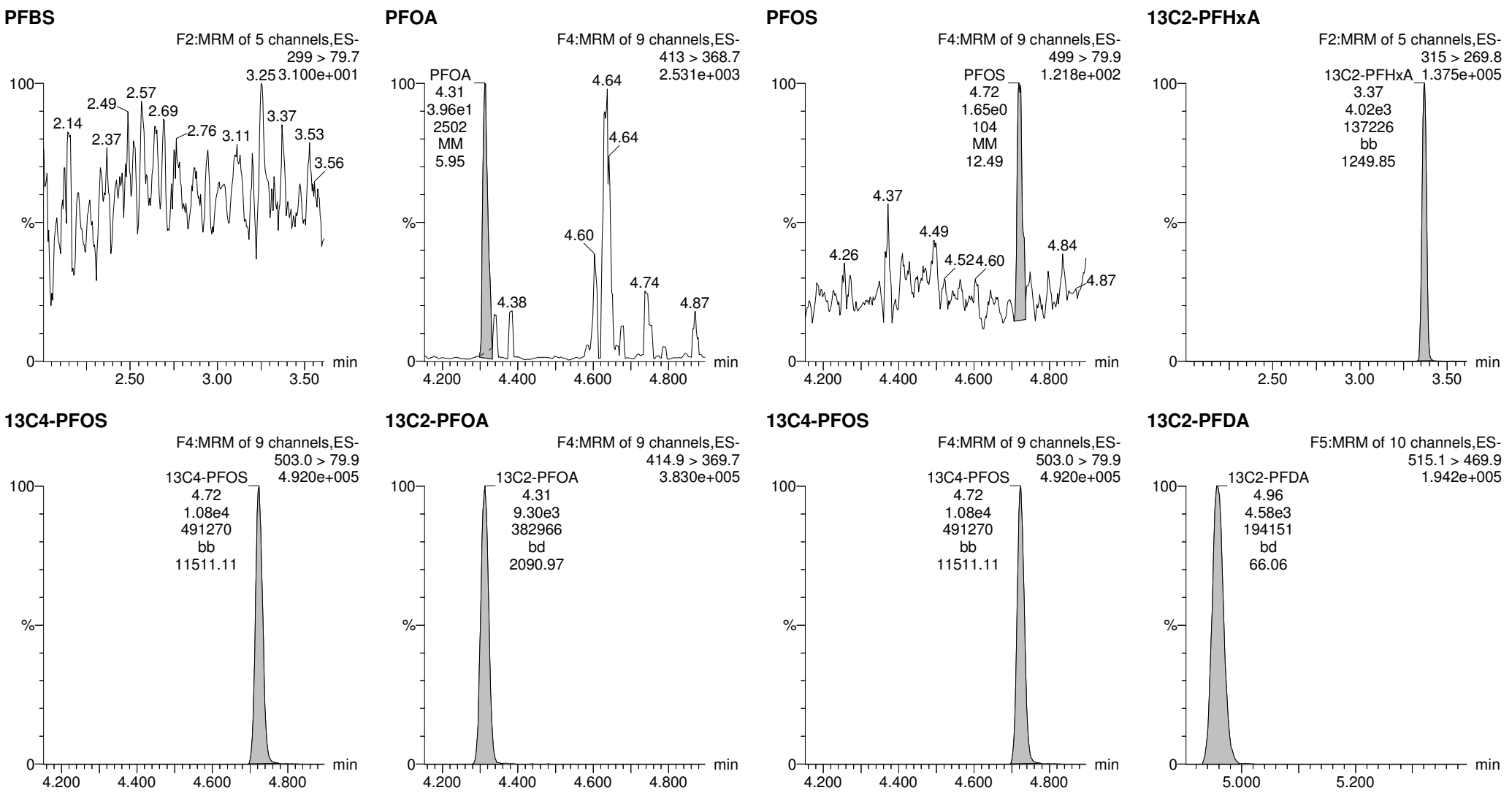
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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_8, Date: 09-Dec-2017, Time: 13:04:57, ID: 1701824-16 CH-AT-2FB37-1117 0.25022, Description: CH-AT-2FB37-1117



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Rev'd: MM 12/12/17

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-9.qld

Last Altered: Tuesday, December 12, 2017 10:07:52 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:08:15 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_9, Date: 09-Dec-2017, Time: 13:17:25, ID: 1701824-17 CH-AT-2RW38-1117 0.25473, Description: CH-AT-2RW38-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.03e4		0.2547	3.02				
2	2 PFOA	413 > 368.7	3.20e1	9.23e3		0.2547	4.31	4.31	0.0347	0.168	
3	3 PFOS	499 >79.9		1.03e4		0.2547	4.72				
4	4 13C2-PFHxA	315 > 269.8	3.98e3	9.23e3	0.443	0.2547	3.37	3.37	4.31	38.2	97.3
5	5 13C2-PFDA	515.1 > 469.9	4.32e3	9.23e3	0.509	0.2547	4.94	4.96	4.68	36.1	92.0
6	6 13C2-PFOA	414.9 > 369.7	9.23e3	9.23e3	1.000	0.2547	4.41	4.31	10.0	39.3	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.03e4	1.03e4	1.000	0.2547	4.81	4.72	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-9.qld

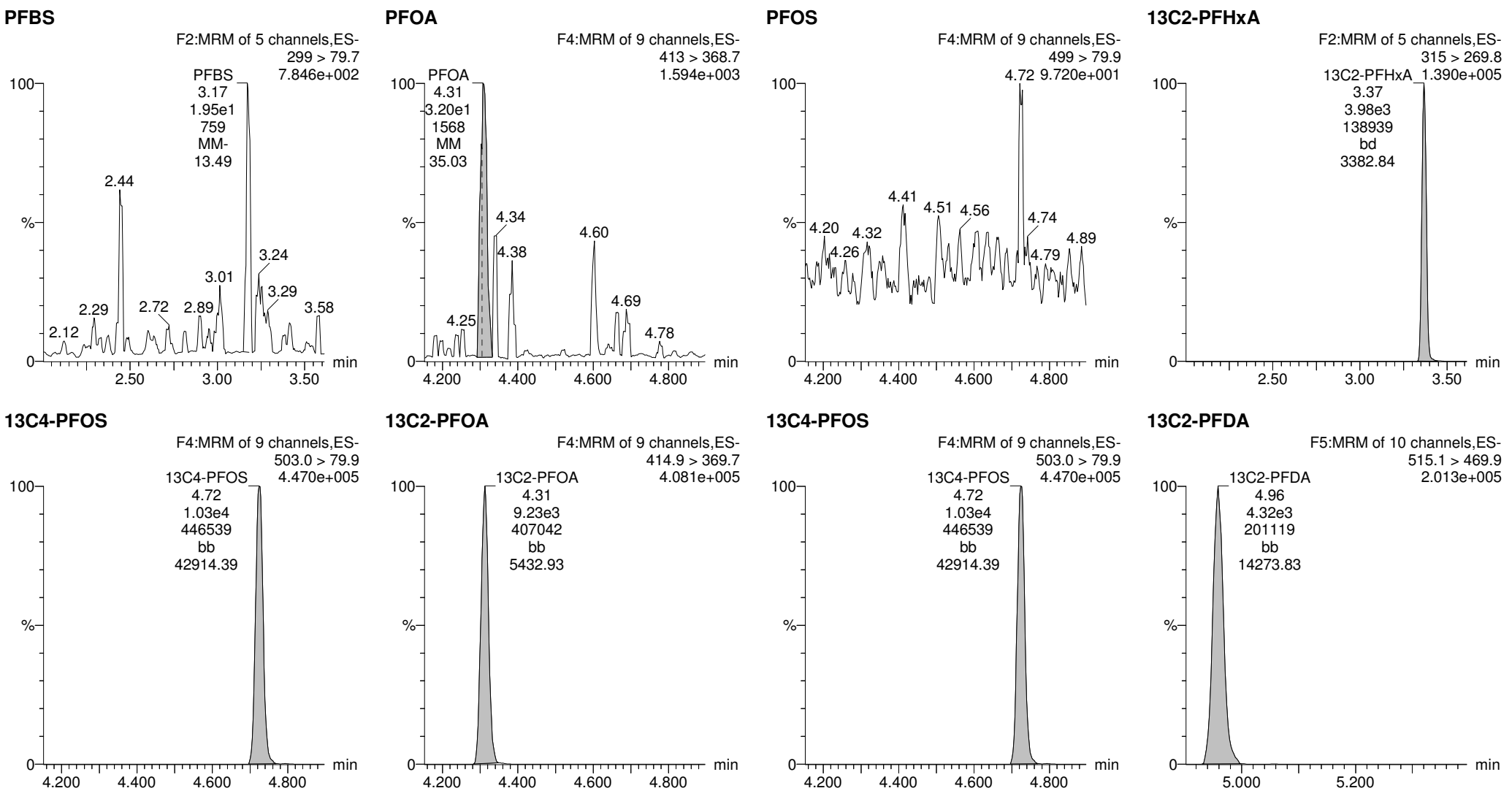
Last Altered: Tuesday, December 12, 2017 10:07:52 Pacific Standard Time

Printed: Tuesday, December 12, 2017 10:08:15 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_9, Date: 09-Dec-2017, Time: 13:17:25, ID: 1701824-17 CH-AT-2RW38-1117 0.25473, Description: CH-AT-2RW38-1117



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-10B.qld

Last Altered: Tuesday, December 12, 2017 13:15:59 Pacific Standard Time

Printed: Tuesday, December 12, 2017 13:16:22 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_10, Date: 09-Dec-2017, Time: 13:29:48, ID: 1701824-18 CH-AT-2FB38-1117 0.25911, Description: CH-AT-2FB38-1117

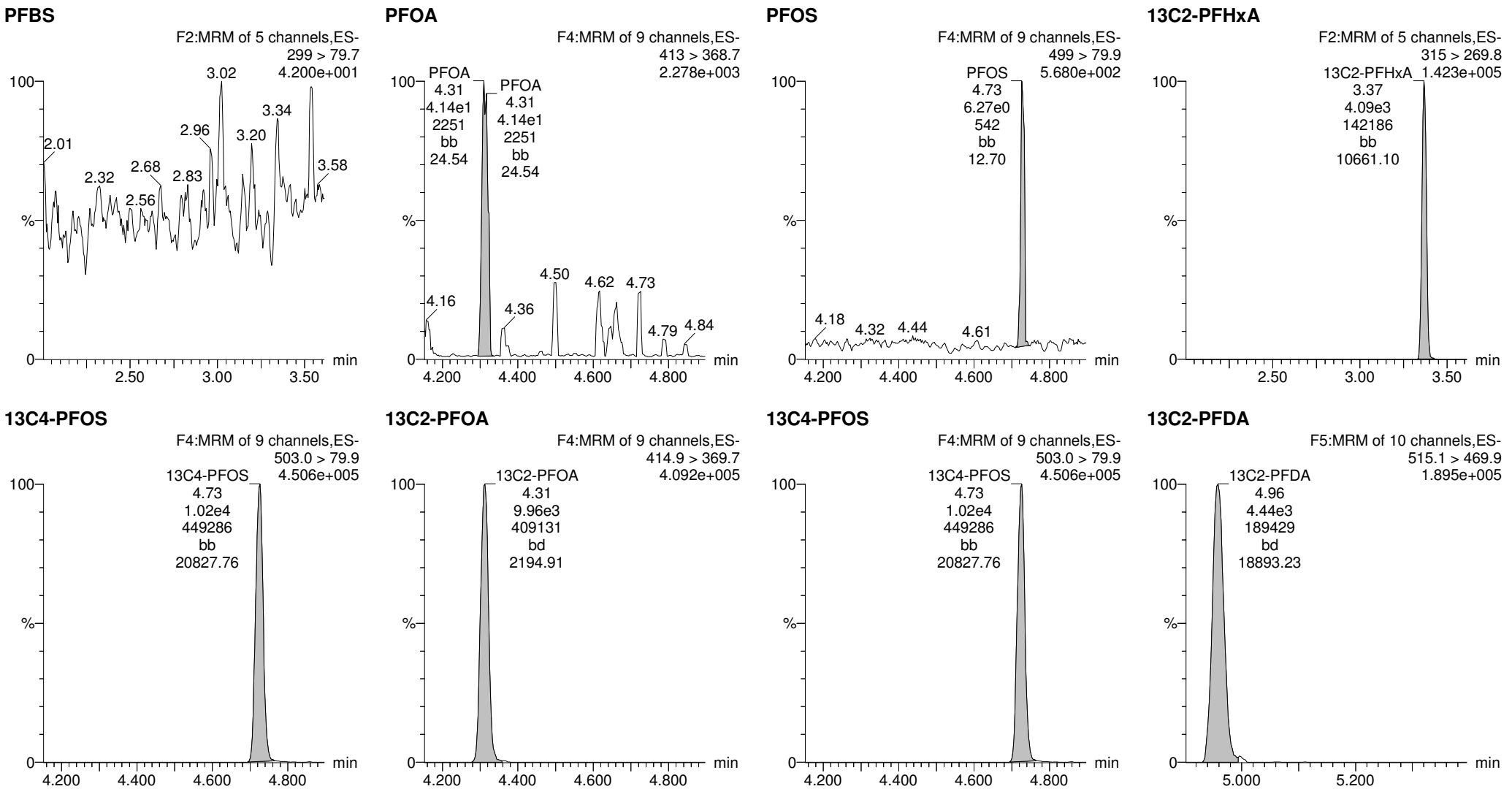
	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.02e4		0.2591	3.03				
2	2 PFOA	413 > 368.7	4.14e1	9.96e3		0.2591	4.31	4.31	0.0415	0.197	
3	3 PFOS	499 >79.9	6.27e0	1.02e4		0.2591	4.73	4.73	0.0176	0.0566	
4	4 13C2-PFHxA	315 > 269.8	4.09e3	9.96e3	0.443	0.2591	3.37	3.37	4.10	35.7	92.6
5	5 13C2-PFDA	515.1 > 469.9	4.44e3	9.96e3	0.509	0.2591	4.94	4.96	4.46	33.8	87.6
6	6 13C2-PFOA	414.9 > 369.7	9.96e3	9.96e3	1.000	0.2591	4.41	4.31	10.0	38.6	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	0.2591	4.81	4.73	28.7	111	100.0

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-10B.qld

Last Altered: Tuesday, December 12, 2017 13:15:59 Pacific Standard Time
Printed: Tuesday, December 12, 2017 13:16:22 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_10, Date: 09-Dec-2017, Time: 13:29:48, ID: 1701824-18 CH-AT-2FB38-1117 0.25911, Description: CH-AT-2FB38-1117



**INJECTION INTERNAL STANDARD (IIS) AREAS,
AND
CONTINUING CALIBRATION VERIFICATIONS CCV)**

Compound 6: 13C2-PFOA

ICAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	ICAL AREA
1 ST171209G1-1 PFC CS-1 537 17K3024	171209G1_Analyte		10	4.31	11221.28	11221.28	12372.36
2 IPA	171209G1_Analyte		10				12372.36
3 1701824-12 CH-AT-2FB35-1117 0.25792	171209G1_Analyte		10	4.31	9230.374	9230.374	12372.36
4 1701824-13 CH-AT-2RW36-1117 0.26093	171209G1_Analyte		10	4.31	8975.831	8975.831	12372.36
5 1701824-14 CH-AT-2FB36-1117 0.24528	171209G1_Analyte		10	4.31	9083.281	9083.281	12372.36
6 1701824-15 CH-AT-2RW37-1117 0.25012	171209G1_Analyte		10	4.31	10123.52	10123.52	12372.36
7 1701824-16 CH-AT-2FB37-1117 0.25022	171209G1_Analyte		10	4.31	9299.059	9299.059	12372.36
8 1701824-17 CH-AT-2RW38-1117 0.25473	171209G1_Analyte		10	4.31	9230.15	9230.15	12372.36
9 1701824-18 CH-AT-2FB38-1117 0.25911	171209G1_Analyte		10	4.31	9963.859	9963.859	12372.36
10 IPA	171209G1_Analyte		10				12372.36
11 B7L0034-BS1 LFB 0.25	171209G1_Analyte		10	4.31	9146.447	9146.447	12372.36
12 B7L0034-BSD1 LFB 0.25	171209G1_Analyte		10	4.31	8838.859	8838.859	12372.36
13 IPA	171209G1_Analyte		10				12372.36
14 B7L0034-BLK1 LRB 0.25	171209G1_Analyte		10	4.31	8039.652	8039.652	12372.36
15 1701844-01 CH-AT-1RW116-1217 0.25237	171209G1_Analyte		10	4.31	8832.188	8832.188	12372.36
16 1701844-02 CH-AT-1FB116-1217 0.25974	171209G1_Analyte		10	4.31	8795.489	8795.489	12372.36
17 1701844-03 CH-AT-1RW117-1217 0.2504	171209G1_Analyte		10	4.31	8706.85	8706.85	12372.36
18 1701844-04 CH-AT-1FB117-1217 0.26149	171209G1_Analyte		10	4.31	9455.278	9455.278	12372.36
19 1701844-05 CH-AT-1RW118-1217 0.25742	171209G1_Analyte		10	4.31	8693.622	8693.622	12372.36
20 1701844-06 CH-AT-1FB118-1217 0.25895	171209G1_Analyte		10	4.31	8908.759	8908.759	12372.36
21 1701844-07 CH-AT-1RW119-1217 0.25049	171209G1_Analyte		10	4.31	8380.444	8380.444	12372.36
22 1701844-08 CH-AT-1FB119-1217 0.25941	171209G1_Analyte		10	4.31	8971.354	8971.354	12372.36
23 1701844-09 CH-AT-1RW120-1217 0.24541	171209G1_Analyte		10	4.31	10028.98	10028.98	12372.36
24 1701844-10 CH-AT-1FB120-1217 0.25787	171209G1_Analyte		10	4.31	9255.936	9255.936	12372.36
25 1701844-11 CH-AT-1RW121-1217 0.24134	171209G1_Analyte		10	4.31	8993.397	8993.397	12372.36
26 1701844-12 CH-AT-1FB121-1217 0.26063	171209G1_Analyte		10	4.31	8987.493	8987.493	12372.36
27 1701844-13 CH-AT-1RW122-1217 0.24865	171209G1_Analyte		10	4.31	8749.588	8749.588	12372.36
28 1701844-14 CH-AT-1FB122-1217 0.26071	171209G1_Analyte		10	4.31	9553.459	9553.459	12372.36
29 IPA	171209G1_Analyte		10				12372.36
30 ST171209G1-2 PFC CS3 17K3027	171209G1_Analyte		10	4.31	10981.69	10981.69	12372.36

Compound 7: 13C4-PFOS

ICAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	ICAL AREA
1 ST171209G1-1 PFC CS-1 537 17K3024	171209G1_Analyte		28.7	4.72	13462.92	13462.92	13322.56
2 IPA	171209G1_Analyte		28.7	4.72	5.905	5.905	13322.56
3 1701824-12 CH-AT-2FB35-1117 0.25792	171209G1_Analyte		28.7	4.72	10480.47	10480.47	13322.56
4 1701824-13 CH-AT-2RW36-1117 0.26093	171209G1_Analyte		28.7	4.72	11199.77	11199.77	13322.56
5 1701824-14 CH-AT-2FB36-1117 0.24528	171209G1_Analyte		28.7	4.72	10959.31	10959.31	13322.56
6 1701824-15 CH-AT-2RW37-1117 0.25012	171209G1_Analyte		28.7	4.72	10981.53	10981.53	13322.56
7 1701824-16 CH-AT-2FB37-1117 0.25022	171209G1_Analyte		28.7	4.72	10819.62	10819.62	13322.56
8 1701824-17 CH-AT-2RW38-1117 0.25473	171209G1_Analyte		28.7	4.72	10267.83	10267.83	13322.56
9 1701824-18 CH-AT-2FB38-1117 0.25911	171209G1_Analyte		28.7	4.73	10209.97	10209.97	13322.56
10 IPA	171209G1_Analyte		28.7				13322.56
11 B7L0034-BS1 LFB 0.25	171209G1_Analyte		28.7	4.72	9875.615	9875.615	13322.56
12 B7L0034-BSD1 LFB 0.25	171209G1_Analyte		28.7	4.73	10308.73	10308.73	13322.56
13 IPA	171209G1_Analyte		28.7				13322.56
14 B7L0034-BLK1 LRB 0.25	171209G1_Analyte		28.7	4.73	8834.43	8834.43	13322.56
15 1701844-01 CH-AT-1RW116-1217 0.25237	171209G1_Analyte		28.7	4.73	10578.54	10578.54	13322.56
16 1701844-02 CH-AT-1FB116-1217 0.25974	171209G1_Analyte		28.7	4.72	10230.06	10230.06	13322.56
17 1701844-03 CH-AT-1RW117-1217 0.2504	171209G1_Analyte		28.7	4.72	9778.84	9778.84	13322.56
18 1701844-04 CH-AT-1FB117-1217 0.26149	171209G1_Analyte		28.7	4.72	10157.83	10157.83	13322.56
19 1701844-05 CH-AT-1RW118-1217 0.25742	171209G1_Analyte		28.7	4.73	10505.35	10505.35	13322.56
20 1701844-06 CH-AT-1FB118-1217 0.25895	171209G1_Analyte		28.7	4.72	9845.127	9845.127	13322.56
21 1701844-07 CH-AT-1RW119-1217 0.25049	171209G1_Analyte		28.7	4.72	9852.461	9852.461	13322.56
22 1701844-08 CH-AT-1FB119-1217 0.25941	171209G1_Analyte		28.7	4.72	9946.396	9946.396	13322.56
23 1701844-09 CH-AT-1RW120-1217 0.24541	171209G1_Analyte		28.7	4.73	10554.43	10554.43	13322.56
24 1701844-10 CH-AT-1FB120-1217 0.25787	171209G1_Analyte		28.7	4.72	9752.95	9752.95	13322.56
25 1701844-11 CH-AT-1RW121-1217 0.24134	171209G1_Analyte		28.7	4.72	10579.61	10579.61	13322.56
26 1701844-12 CH-AT-1FB121-1217 0.26063	171209G1_Analyte		28.7	4.73	9607.18	9607.18	13322.56

27	1701844-13 CH-AT-1RW122-1217 0.24865	171209G1_Analyte	28.7	4.72	10229.33	10229.33	13322.56
28	1701844-14 CH-AT-1FB122-1217 0.26071	171209G1_Analyte	28.7	4.72	10203.73	10203.73	13322.56
29	IPA	171209G1_Analyte	28.7				13322.56
30	ST171209G1-2 PFC CS3 17K3027	171209G1_Analyte	28.7	4.72	12339.33	12339.33	13322.56
31	IPA	171209G1_Analyte	28.7				

Compound 6: 13C2-PFOA

CCAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	CCAL AREA
1	ST171209G1-1 PFC CS-1 537 17K3024	171209G1_Analyte	10	4.31	11221.28	11221.28	11221.283
2	IPA	171209G1_Analyte	10				11221.283
3	1701824-12 CH-AT-2FB35-1117 0.25792	171209G1_Analyte	10	4.31	9230.374	9230.374	11221.283
4	1701824-13 CH-AT-2RW36-1117 0.26093	171209G1_Analyte	10	4.31	8975.831	8975.831	11221.283
5	1701824-14 CH-AT-2FB36-1117 0.24528	171209G1_Analyte	10	4.31	9083.281	9083.281	11221.283
6	1701824-15 CH-AT-2RW37-1117 0.25012	171209G1_Analyte	10	4.31	10123.52	10123.52	11221.283
7	1701824-16 CH-AT-2FB37-1117 0.25022	171209G1_Analyte	10	4.31	9299.059	9299.059	11221.283
8	1701824-17 CH-AT-2RW38-1117 0.25473	171209G1_Analyte	10	4.31	9230.15	9230.15	11221.283
9	1701824-18 CH-AT-2FB38-1117 0.25911	171209G1_Analyte	10	4.31	9963.859	9963.859	11221.283
10	IPA	171209G1_Analyte	10				11221.283
11	B7L0034-BS1 LFB 0.25	171209G1_Analyte	10	4.31	9146.447	9146.447	11221.283
12	B7L0034-BSD1 LFBD 0.25	171209G1_Analyte	10	4.31	8838.859	8838.859	11221.283
13	IPA	171209G1_Analyte	10				11221.283
14	B7L0034-BLK1 LRB 0.25	171209G1_Analyte	10	4.31	8039.652	8039.652	11221.283
15	1701844-01 CH-AT-1RW116-1217 0.25237	171209G1_Analyte	10	4.31	8832.188	8832.188	11221.283
16	1701844-02 CH-AT-1FB116-1217 0.25974	171209G1_Analyte	10	4.31	8795.489	8795.489	11221.283
17	1701844-03 CH-AT-1RW117-1217 0.2504	171209G1_Analyte	10	4.31	8706.85	8706.85	11221.283
18	1701844-04 CH-AT-1FB117-1217 0.26149	171209G1_Analyte	10	4.31	9455.278	9455.278	11221.283
19	1701844-05 CH-AT-1RW118-1217 0.25742	171209G1_Analyte	10	4.31	8693.622	8693.622	11221.283
20	1701844-06 CH-AT-1FB118-1217 0.25895	171209G1_Analyte	10	4.31	8908.759	8908.759	11221.283
21	1701844-07 CH-AT-1RW119-1217 0.25049	171209G1_Analyte	10	4.31	8380.444	8380.444	11221.283
22	1701844-08 CH-AT-1FB119-1217 0.25941	171209G1_Analyte	10	4.31	8971.354	8971.354	11221.283
23	1701844-09 CH-AT-1RW120-1217 0.24541	171209G1_Analyte	10	4.31	10028.98	10028.98	11221.283
24	1701844-10 CH-AT-1FB120-1217 0.25787	171209G1_Analyte	10	4.31	9255.936	9255.936	11221.283

25	1701844-11 CH-AT-1RW121-1217 0.24134	171209G1_Analyte	10	4.31	8993.397	8993.397	11221.283
26	1701844-12 CH-AT-1FB121-1217 0.26063	171209G1_Analyte	10	4.31	8987.493	8987.493	11221.283
27	1701844-13 CH-AT-1RW122-1217 0.24865	171209G1_Analyte	10	4.31	8749.588	8749.588	11221.283
28	1701844-14 CH-AT-1FB122-1217 0.26071	171209G1_Analyte	10	4.31	9553.459	9553.459	11221.283
29	IPA	171209G1_Analyte	10				11221.283
30	ST171209G1-2 PFC CS3 17K3027	171209G1_Analyte	10	4.31	10981.69	10981.69	11221.283
31	IPA	171209G1_Analyte	10				

Compound 7: 13C4-PFOS

CCAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	CCAL AREA
1	ST171209G1-1 PFC CS-1 537 17K3024	171209G1_Analyte	28.7	4.72	13462.92	13462.92	13462.918
2	IPA	171209G1_Analyte	28.7	4.72	5.905	5.905	13462.918
3	1701824-12 CH-AT-2FB35-1117 0.25792	171209G1_Analyte	28.7	4.72	10480.47	10480.47	13462.918
4	1701824-13 CH-AT-2RW36-1117 0.26093	171209G1_Analyte	28.7	4.72	11199.77	11199.77	13462.918
5	1701824-14 CH-AT-2FB36-1117 0.24528	171209G1_Analyte	28.7	4.72	10959.31	10959.31	13462.918
6	1701824-15 CH-AT-2RW37-1117 0.25012	171209G1_Analyte	28.7	4.72	10981.53	10981.53	13462.918
7	1701824-16 CH-AT-2FB37-1117 0.25022	171209G1_Analyte	28.7	4.72	10819.62	10819.62	13462.918
8	1701824-17 CH-AT-2RW38-1117 0.25473	171209G1_Analyte	28.7	4.72	10267.83	10267.83	13462.918
9	1701824-18 CH-AT-2FB38-1117 0.25911	171209G1_Analyte	28.7	4.73	10209.97	10209.97	13462.918
10	IPA	171209G1_Analyte	28.7				13462.918
11	B7L0034-BS1 LFB 0.25	171209G1_Analyte	28.7	4.72	9875.615	9875.615	13462.918
12	B7L0034-BSD1 LFB 0.25	171209G1_Analyte	28.7	4.73	10308.73	10308.73	13462.918
13	IPA	171209G1_Analyte	28.7				13462.918
14	B7L0034-BLK1 LRB 0.25	171209G1_Analyte	28.7	4.73	8834.43	8834.43	13462.918
15	1701844-01 CH-AT-1RW116-1217 0.25237	171209G1_Analyte	28.7	4.73	10578.54	10578.54	13462.918
16	1701844-02 CH-AT-1FB116-1217 0.25974	171209G1_Analyte	28.7	4.72	10230.06	10230.06	13462.918
17	1701844-03 CH-AT-1RW117-1217 0.2504	171209G1_Analyte	28.7	4.72	9778.84	9778.84	13462.918
18	1701844-04 CH-AT-1FB117-1217 0.26149	171209G1_Analyte	28.7	4.72	10157.83	10157.83	13462.918
19	1701844-05 CH-AT-1RW118-1217 0.25742	171209G1_Analyte	28.7	4.73	10505.35	10505.35	13462.918

20	1701844-06 CH-AT-1FB118-1217 0.25895	171209G1_Analyte	28.7	4.72	9845.127	9845.127	13462.918
21	1701844-07 CH-AT-1RW119-1217 0.25049	171209G1_Analyte	28.7	4.72	9852.461	9852.461	13462.918
22	1701844-08 CH-AT-1FB119-1217 0.25941	171209G1_Analyte	28.7	4.72	9946.396	9946.396	13462.918
23	1701844-09 CH-AT-1RW120-1217 0.24541	171209G1_Analyte	28.7	4.73	10554.43	10554.43	13462.918
24	1701844-10 CH-AT-1FB120-1217 0.25787	171209G1_Analyte	28.7	4.72	9752.95	9752.95	13462.918
25	1701844-11 CH-AT-1RW121-1217 0.24134	171209G1_Analyte	28.7	4.72	10579.61	10579.61	13462.918
26	1701844-12 CH-AT-1FB121-1217 0.26063	171209G1_Analyte	28.7	4.73	9607.18	9607.18	13462.918
27	1701844-13 CH-AT-1RW122-1217 0.24865	171209G1_Analyte	28.7	4.72	10229.33	10229.33	13462.918
28	1701844-14 CH-AT-1FB122-1217 0.26071	171209G1_Analyte	28.7	4.72	10203.73	10203.73	13462.918
29	IPA	171209G1_Analyte	28.7				13462.918
30	ST171209G1-2 PFC CS3 17K3027	171209G1_Analyte	28.7	4.72	12339.33	12339.33	13462.918
31	IPA	171209G1_Analyte	28.7				

AREA%

90.69638291
0
74.6047965
72.54744446
73.41591257
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71.44036384
0
64.98074741
71.38644527
71.08982442
70.37339683
76.42259035
70.26648109
72.00533285
67.73520977
72.51125897
81.05953108
74.81140219
72.68942223
72.64170296
70.7188281
77.21614146
0
88.75988898

AREA%

101.0535363
0.044323313
78.66705048
84.06622301
82.26131464
82.42803936
81.21273989
77.07100587
76.63665992
0
74.12700712
77.3779739
0
66.31180494
79.4032153
76.78751681
73.40060769
76.24536125
78.8538314
73.89816222
73.9532117
74.6582939
79.22222906
73.20627567
79.41126931
72.11211659

76.78199235
76.5898521
0
92.6197968

AREA%

100
0
82.25774183
79.98934703
80.94690242
90.21715253
82.86983761
82.25574562
88.79429384
0
81.50981488
78.7687023
0
71.64645968
78.70925277
78.3822046
77.59228602
84.26200462
77.47440288
79.39162572
74.68347425
79.94944963
89.37460182
82.48554109

80.14588884
80.09327454
77.97315155
85.13695805
0
97.86486091

AREA%

100
0.043861219
77.84690511
83.18978842
81.40369718
81.5686837
80.36605437
76.26750011
75.83768244
0
73.35419409
76.57126783
0
65.6204695
78.57539502
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Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-2.qld

Last Altered: Monday, December 11, 2017 11:36:48 Pacific Standard Time

Printed: Monday, December 11, 2017 11:56:06 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_2, Date: 09-Dec-2017, Time: 11:50:18, ID: ST171209G1-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred RT	RT	y Axis Resp	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.78e2	1.35e4		1.0000	3.02	3.01	1.45	1.80	102.0
2	2 PFOA	413 > 368.7	2.13e3	1.12e4		1.0000	4.31	4.31	1.90	2.34	116.9
3	3 PFOS	499 > 79.9	9.69e2	1.35e4		1.0000	4.72	4.73	2.07	1.72	92.9
4	4 13C2-PFHxA	315 > 269.8	4.76e3	1.12e4	0.443	1.0000	3.37	3.37	4.24	9.57	95.7
5	5 13C2-PFDA	515.1 > 469.9	6.62e3	1.12e4	0.509	1.0000	4.94	4.96	5.90	11.6	115.8
6	6 13C2-PFOA	414.9 > 369.7	1.12e4	1.12e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.35e4	1.35e4	1.000	1.0000	4.81	4.72	28.7	28.7	100.0

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JA
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Dataset: Untitled

Last Altered: Monday, December 11, 2017 11:59:32 Pacific Standard Time

Printed: Monday, December 11, 2017 12:00:43 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171209G1_1	IPA	09-Dec-17	11:37:51
2	171209G1_2	ST171209G1-1 PFC CS-1 537 17K3024	09-Dec-17	11:50:18
3	171209G1_3	IPA	09-Dec-17	12:02:43
4	171209G1_4	1701824-12 CH-AT-2FB35-1117 0.25792	09-Dec-17	12:15:10
5	171209G1_5	1701824-13 CH-AT-2RW36-1117 0.26093	09-Dec-17	12:27:36
6	171209G1_6	1701824-14 CH-AT-2FB36-1117 0.24528	09-Dec-17	12:40:03
7	171209G1_7	1701824-15 CH-AT-2RW37-1117 0.25012	09-Dec-17	12:52:30
8	171209G1_8	1701824-16 CH-AT-2FB37-1117 0.25022	09-Dec-17	13:04:57
9	171209G1_9	1701824-17 CH-AT-2RW38-1117 0.25473	09-Dec-17	13:17:25
10	171209G1_10	1701824-18 CH-AT-2FB38-1117 0.25911	09-Dec-17	13:29:48
11	171209G1_11	IPA	09-Dec-17	13:42:13
12	171209G1_12	B7L0034-BS1 LFB 0.25	09-Dec-17	13:54:40
13	171209G1_13	B7L0034-BSD1 LFBD 0.25	09-Dec-17	14:07:06
14	171209G1_14	IPA	09-Dec-17	14:19:31
15	171209G1_15	B7L0034-BLK1 LRB 0.25	09-Dec-17	14:31:58
16	171209G1_16	1701844-01 CH-AT-1RW116-1217 0.25237	09-Dec-17	14:44:24
17	171209G1_17	1701844-02 CH-AT-1FB116-1217 0.25974	09-Dec-17	14:56:50
18	171209G1_18	1701844-03 CH-AT-1RW117-1217 0.2504	09-Dec-17	15:09:17
19	171209G1_19	1701844-04 CH-AT-1FB117-1217 0.26149	09-Dec-17	15:21:45
20	171209G1_20	1701844-05 CH-AT-1RW118-1217 0.25742	09-Dec-17	15:34:09
21	171209G1_21	1701844-06 CH-AT-1FB118-1217 0.25895	09-Dec-17	15:46:34
22	171209G1_22	1701844-07 CH-AT-1RW119-1217 0.25049	09-Dec-17	15:58:59
23	171209G1_23	1701844-08 CH-AT-1FB119-1217 0.25941	09-Dec-17	16:11:25
24	171209G1_24	1701844-09 CH-AT-1RW120-1217 0.24541	09-Dec-17	16:23:50
25	171209G1_25	1701844-10 CH-AT-1FB120-1217 0.25787	09-Dec-17	16:36:17
26	171209G1_26	1701844-11 CH-AT-1RW121-1217 0.24134	09-Dec-17	16:48:44
27	171209G1_27	1701844-12 CH-AT-1FB121-1217 0.26063	09-Dec-17	17:01:12
28	171209G1_28	1701844-13 CH-AT-1RW122-1217 0.24865	09-Dec-17	17:13:35
29	171209G1_29	1701844-14 CH-AT-1FB122-1217 0.26071	09-Dec-17	17:26:00
30	171209G1_30	IPA	09-Dec-17	17:38:25
31	171209G1_31	ST171209G1-2 PFC CS3 17K3027	09-Dec-17	17:50:52
32	171209G1_32	IPA	09-Dec-17	18:03:16

LC Calibration Standards Review Checklist

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Calibration ID:		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST 171209G1-1	L M H	NA ☒	☒	☒	☒	☒	☒	NA ☒
J -2	L M H	☒	☒	☒	☒	☒	☒	☒
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 4/15/17

Run Log Present: ☒

of Samples per Sequence Checked: ☒

Reviewed By: JA

12/11/2017
Initials/Date

Comments:

pg/ml
PFOA @ 2.00 to 50.00
PFBS @ 1.770 to 44.20
PFOS @ 1.850 to 46.20

Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-2.qld

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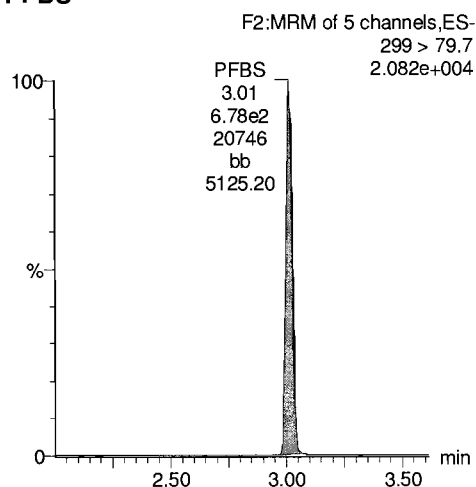
Printed: Monday, December 11, 2017 11:56:06 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

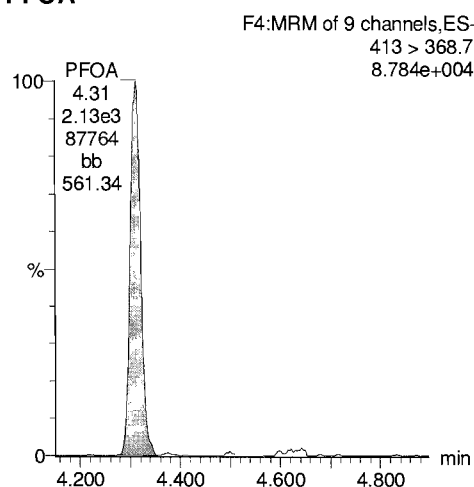
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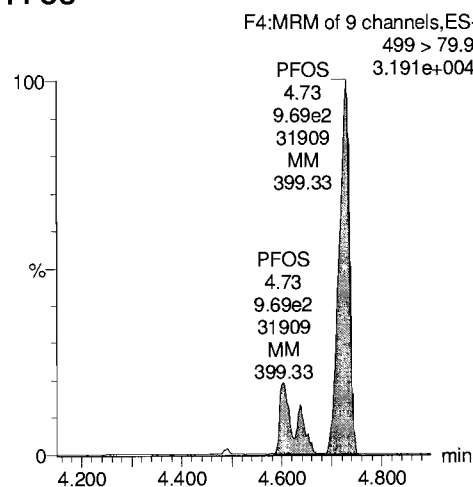
PFBS



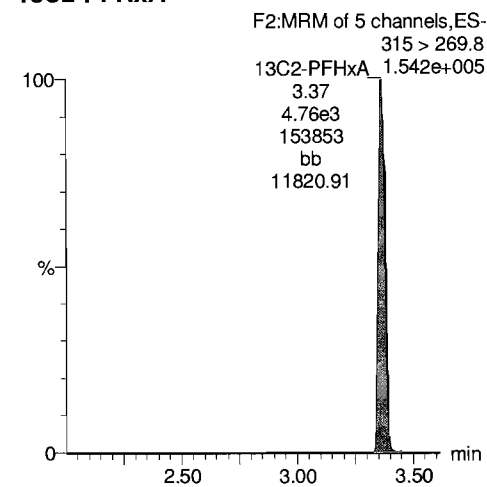
PFOA



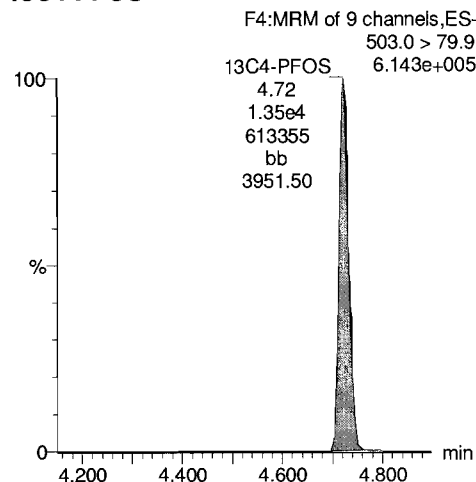
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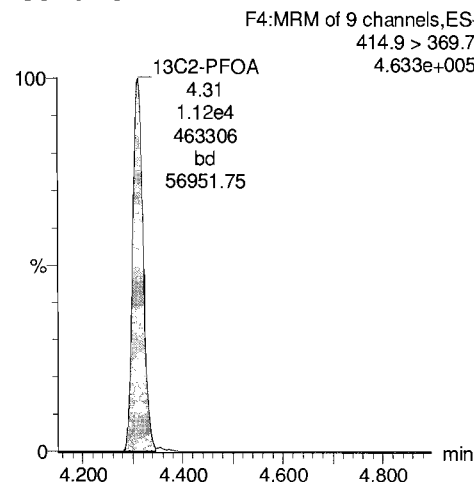
13C2-PFHxA



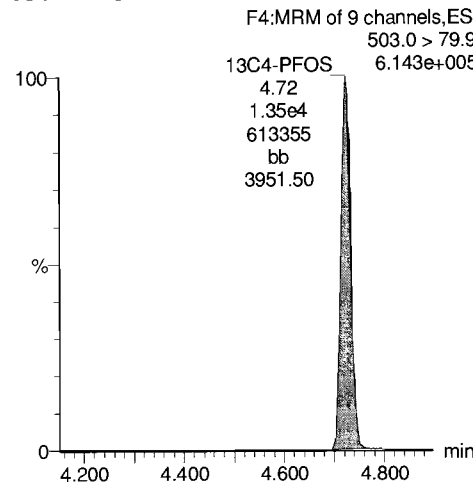
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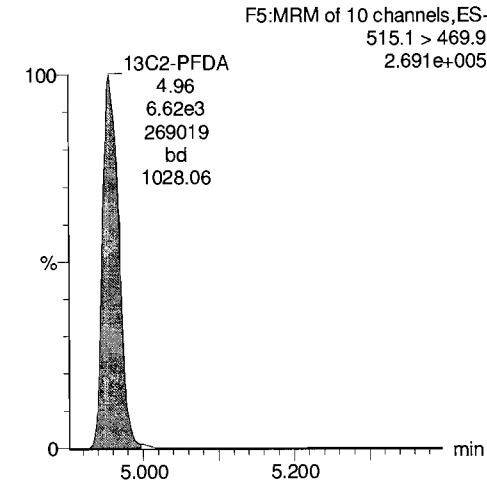
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171209G1\171209G1-31.qld

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Printed: Monday, December 11, 2017 11:58:34 Pacific Standard Time

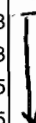
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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171209G1_31, Date: 09-Dec-2017, Time: 17:50:52, ID: ST171209G1-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.52e4	1.23e4		1.0000	3.02	3.01	35.4	44.3	100.1
2	2 PFOA	413 > 368.7	4.36e4	1.10e4		1.0000	4.31	4.31	39.7	48.9	97.8
3	3 PFOS	499 > 79.9	2.36e4	1.23e4		1.0000	4.72	4.73	54.9	45.6	98.8
4	4 13C2-PFHxA	315 > 269.8	5.04e3	1.10e4	0.443	1.0000	3.37	3.37	4.59	10.4	103.5
5	5 13C2-PFDA	515.1 > 469.9	5.62e3	1.10e4	0.509	1.0000	4.94	4.96	5.12	10.1	100.5
6	6 13C2-PFOA	414.9 > 369.7	1.10e4	1.10e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.23e4	1.23e4	1.000	1.0000	4.81	4.72	28.7	28.7	100.0

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Dataset: Untitled

Last Altered: Monday, December 11, 2017 11:59:32 Pacific Standard Time

Printed: Monday, December 11, 2017 12:00:43 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171209G1_1	IPA	09-Dec-17	11:37:51
2	171209G1_2	ST171209G1-1 PFC CS-1 537 17K3024	09-Dec-17	11:50:18
3	171209G1_3	IPA	09-Dec-17	12:02:43
4	171209G1_4	1701824-12 CH-AT-2FB35-1117 0.25792	09-Dec-17	12:15:10
5	171209G1_5	1701824-13 CH-AT-2RW36-1117 0.26093	09-Dec-17	12:27:36
6	171209G1_6	1701824-14 CH-AT-2FB36-1117 0.24528	09-Dec-17	12:40:03
7	171209G1_7	1701824-15 CH-AT-2RW37-1117 0.25012	09-Dec-17	12:52:30
8	171209G1_8	1701824-16 CH-AT-2FB37-1117 0.25022	09-Dec-17	13:04:57
9	171209G1_9	1701824-17 CH-AT-2RW38-1117 0.25473	09-Dec-17	13:17:25
10	171209G1_10	1701824-18 CH-AT-2FB38-1117 0.25911	09-Dec-17	13:29:48
11	171209G1_11	IPA	09-Dec-17	13:42:13
12	171209G1_12	B7L0034-BS1 LFB 0.25	09-Dec-17	13:54:40
13	171209G1_13	B7L0034-BSD1 LFBD 0.25	09-Dec-17	14:07:06
14	171209G1_14	IPA	09-Dec-17	14:19:31
15	171209G1_15	B7L0034-BLK1 LRB 0.25	09-Dec-17	14:31:58
16	171209G1_16	1701844-01 CH-AT-1RW116-1217 0.25237	09-Dec-17	14:44:24
17	171209G1_17	1701844-02 CH-AT-1FB116-1217 0.25974	09-Dec-17	14:56:50
18	171209G1_18	1701844-03 CH-AT-1RW117-1217 0.2504	09-Dec-17	15:09:17
19	171209G1_19	1701844-04 CH-AT-1FB117-1217 0.26149	09-Dec-17	15:21:45
20	171209G1_20	1701844-05 CH-AT-1RW118-1217 0.25742	09-Dec-17	15:34:09
21	171209G1_21	1701844-06 CH-AT-1FB118-1217 0.25895	09-Dec-17	15:46:34
22	171209G1_22	1701844-07 CH-AT-1RW119-1217 0.25049	09-Dec-17	15:58:59
23	171209G1_23	1701844-08 CH-AT-1FB119-1217 0.25941	09-Dec-17	16:11:25
24	171209G1_24	1701844-09 CH-AT-1RW120-1217 0.24541	09-Dec-17	16:23:50
25	171209G1_25	1701844-10 CH-AT-1FB120-1217 0.25787	09-Dec-17	16:36:17
26	171209G1_26	1701844-11 CH-AT-1RW121-1217 0.24134	09-Dec-17	16:48:44
27	171209G1_27	1701844-12 CH-AT-1FB121-1217 0.26063	09-Dec-17	17:01:12
28	171209G1_28	1701844-13 CH-AT-1RW122-1217 0.24865	09-Dec-17	17:13:35
29	171209G1_29	1701844-14 CH-AT-1FB122-1217 0.26071	09-Dec-17	17:26:00
30	171209G1_30	IPA	09-Dec-17	17:38:25
31	171209G1_31	ST171209G1-2 PFC CS3 17K3027	09-Dec-17	17:50:52
32	171209G1_32	IPA	09-Dec-17	18:03:16

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Last Altered: Monday, December 11, 2017 11:58:13 Pacific Standard Time

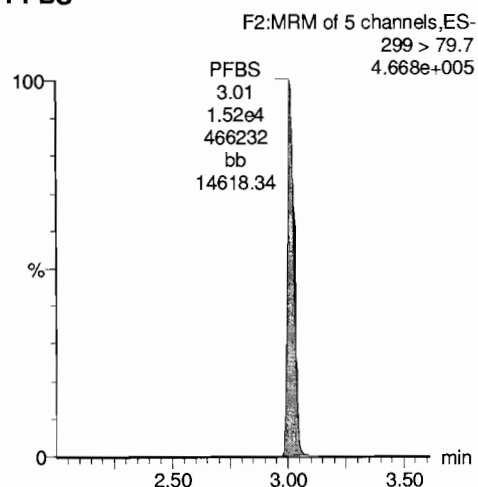
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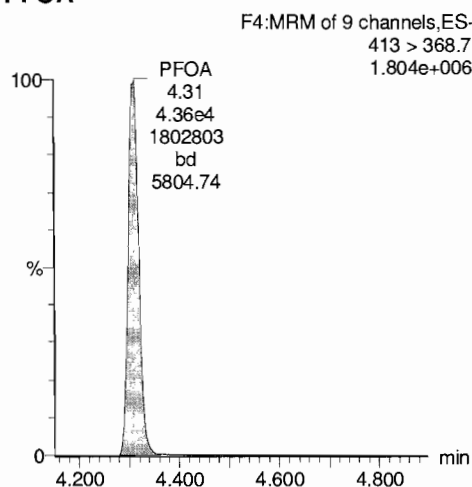
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

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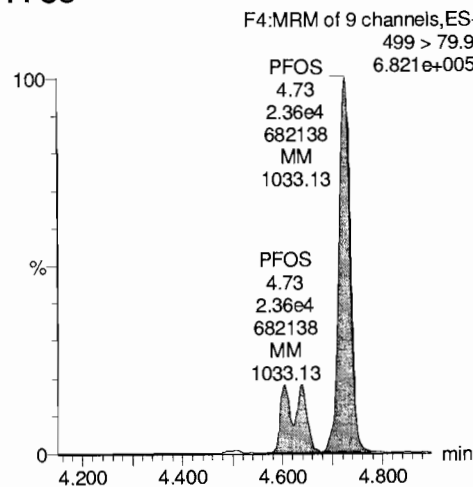
PFBS



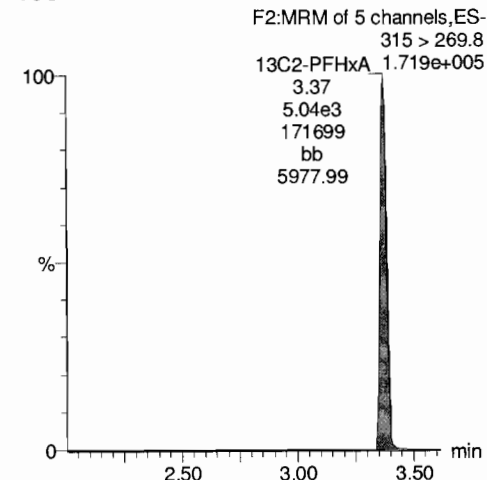
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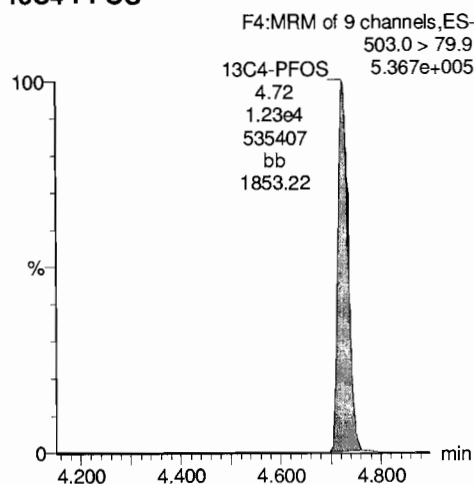
PFOS



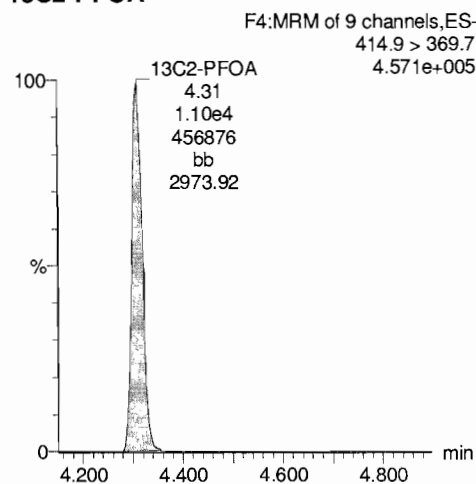
13C2-PFHxA



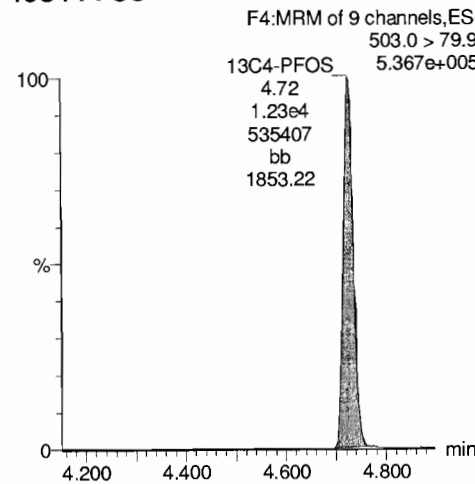
13C4-PFOS



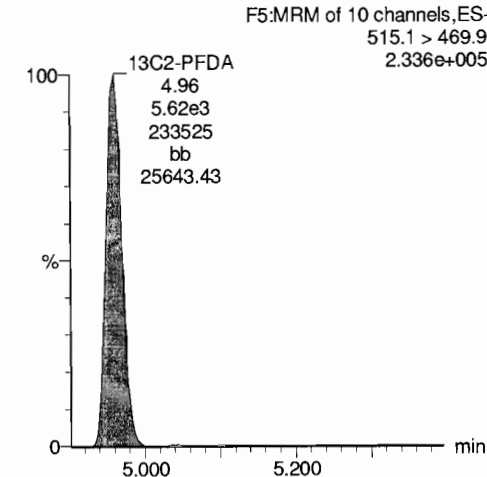
13C2-PFOA



13C4-PFOS



13C2-PFDA



IS AREA

ICAL

Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1 ST171211G1-1 PFC CS-1 537 17L1106	171211G1_Standard		10	4.31	10648.18	10648.18	12372.36	86.06425
2 IPA	171211G1_Analyte		10				12372.36	0
3 1701813-10 CH-AT-2FB24-1117 0.26256	171211G1_Analyte		10	4.31	8312.228	8312.228	12372.36	67.18386
4 1701813-20 CH-AT-2FB29-1117 0.26487	171211G1_Analyte		10	4.31	7956.156	7956.156	12372.36	64.3059
5 B7L0034-BLK1 LRB 0.25	171211G1_Analyte			4.32	9552.299	9552.299	12372.36	77.20678
6 IPA	171211G1_Analyte		10				12372.36	0
7 ST171211G1-2 PFC CS3 17L1107	171211G1_Analyte		10	4.32	10271.11	10271.11	12372.36	83.0166
8 IPA	171211G1_Analyte		10				12372.36	0
9 B7L0026-BS1 LFB 0.25	171211G1_Analyte		10	4.45	9585.333	9585.333	12372.36	77.47378
10 B7L0026-BSD1 LFBD 0.25	171211G1_Analyte		10	4.33	9210.383	9210.383	12372.36	74.44323
11 IPA	171211G1_Analyte		10				12372.36	0
12 B7L0026-BLK1 LRB 0.25	171211G1_Analyte		10	4.31	9234.665	9234.665	12372.36	74.63949
13 1701815-01 CH-AT-1RW98A-1117 0.25004	171211G1_Analyte		10	4.3	8326.052	8326.052	12372.36	67.2956
14 1701815-02 CH-AT-1FB98A-1117 0.22006	171211G1_Analyte		10	4.31	7637.876	7637.876	12372.36	61.73339
15 1701815-03 CH-AT-1RW98B-1117 0.2516	171211G1_Analyte		10	4.31	8947.271	8947.271	12372.36	72.31662
16 1701815-04 CH-AT-1FB98B-1117 0.23954	171211G1_Analyte		10	4.31	8350.234	8350.234	12372.36	67.49105
17 1701815-05 CH-AT-1RW99-1117 0.23773	171211G1_Analyte		10	4.3	9256.336	9256.336	12372.36	74.81465
18 1701815-06 CH-AT-1FB99-1117 0.2595	171211G1_Analyte		10	4.3	9286.055	9286.055	12372.36	75.05485
19 1701815-07 CH-AT-1RW100-1117 0.23268	171211G1_Analyte		10	4.31	8316.702	8316.702	12372.36	67.22003
20 1701815-08 CH-AT-1FB100-1117 0.24391	171211G1_Analyte		10	4.31	7988.084	7988.084	12372.36	64.56396
21 1701815-09 CH-AT-1RW101-1117 0.23904	171211G1_Analyte		10	4.31	8317.732	8317.732	12372.36	67.22835
22 1701815-10 CH-AT-1FB101-1117 0.24933	171211G1_Analyte		10	4.31	9006.493	9006.493	12372.36	72.79529
23 1701815-11 CH-AT-1RW102-1117 0.22328	171211G1_Analyte		10	4.31	8508.34	8508.34	12372.36	68.76895
24 1701815-12 CH-AT-1FB102-1117 0.2476	171211G1_Analyte		10	4.31	8695.296	8695.296	12372.36	70.28002
25 1701815-13 CH-AT-1RW103-1117 0.23828	171211G1_Analyte		10	4.31	8244.526	8244.526	12372.36	66.63666
26 1701815-14 CH-AT-1FB103-1117 0.23541	171211G1_Analyte		10	4.31	8892.392	8892.392	12372.36	71.87306
27 1701815-15 CH-AT-1RW104-1117 0.23862	171211G1_Analyte		10	4.31	8219.301	8219.301	12372.36	66.43278
28 1701815-16 CH-AT-1FB104-1117 0.23966	171211G1_Analyte		10	4.31	8704.008	8704.008	12372.36	70.35044

29	1701815-17 CH-AT-1RW105-1117 0.23516	171211G1_Analyte	10	4.31	7983.67	7983.67	12372.36	64.52828
30	1701815-18 CH-AT-1FB105-1117 0.24394	171211G1_Analyte	10	4.31	7877.485	7877.485	12372.36	63.67004
31	1701815-19 CH-AT-1RW06-1117 0.24687	171211G1_Analyte	10	4.31	8765.659	8765.659	12372.36	70.84874
32	1701815-20 CH-AT-1FB106-1117 0.2407	171211G1_Analyte	10	4.31	8802.219	8802.219	12372.36	71.14423
33	IPA	171211G1_Analyte	10				12372.36	0
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_Analyte	10	4.31	9848.277	9848.277	12372.36	79.59903
35	IPA	171211G1_Analyte	10				12372.36	0
36	B7L0031-BS1 LFB 0.25	171211G1_Analyte	10	4.31	8186.781	8186.781	12372.36	66.16994
37	B7L0031-BLK1 LRB 0.25	171211G1_Analyte	10	4.31	8529.677	8529.677	12372.36	68.9414
38	B7L0031-MS1 LFSM 0.25179	171211G1_Analyte	10	4.31	8559.043	8559.043	12372.36	69.17876
39	B7L0031-MSD1 LFSMD 0.25406	171211G1_Analyte	10	4.31	8965.997	8965.997	12372.36	72.46797
40	1701824-01 CH-AT-2RW30-1117 0.25321	171211G1_Analyte	10	4.31	8423.226	8423.226	12372.36	68.08101
41	1701824-02 CH-AT-2FB30-1117 0.25812	171211G1_Analyte	10	4.31	9602.227	9602.227	12372.36	77.61033
42	1701824-03 CH-AT-2RW31-1117 0.24951	171211G1_Analyte	10	4.31	8853.115	8853.115	12372.36	71.5556
43	1701824-04 CH-AT-2FB31-1117 0.26064	171211G1_Analyte	10	4.31	8967.769	8967.769	12372.36	72.4823
44	1701824-05 CH-AT-2RW32-1117 0.25406	171211G1_Analyte	10	4.31	9193.431	9193.431	12372.36	74.30622
45	1701824-06 CH-AT-2FB32-1117 0.26151	171211G1_Analyte	10	4.31	7981.76	7981.76	12372.36	64.51285
46	1701824-07 CH-AT-2RW33-1117 0.25185	171211G1_Analyte	10	4.31	9044.589	9044.589	12372.36	73.1032
47	1701824-08 CH-AT-2FB33-1117 0.26295	171211G1_Analyte	10	4.31	9010.36	9010.36	12372.36	72.82654
48	1701824-09 CH-AT-2RW34-1117 0.25405	171211G1_Analyte	10	4.31	8092.983	8092.983	12372.36	65.41181
49	1701824-10 CH-AT-2FB34-1117 0.24979	171211G1_Analyte	10	4.31	8616.881	8616.881	12372.36	69.64623
50	1701824-11 CH-AT-2RW35-1117 0.2526	171211G1_Analyte	10	4.31	9370.795	9370.795	12372.36	75.73977
51	IPA	171211G1_Analyte	10	4.31	36.979	36.979	12372.36	0.298884
52	ST171211G1-4 PFC CS-1 537 17L1106	171211G1_Analyte	10	4.31	10270.61	10270.61	12372.36	83.01254

Compound 7: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST171211G1-1 PFC CS-1 537 17L1106	171211G1_Standard	28.7	4.72	11291.68	11291.68	13322.56	84.75613
2	IPA	171211G1_Analyte	28.7				13322.56	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	171211G1_Analyte	28.7	4.73	9371.263	9371.263	13322.56	70.34133
4	1701813-20 CH-AT-2FB29-1117 0.26487	171211G1_Analyte	28.7	4.73	9397.963	9397.963	13322.56	70.54174
5	B7L0034-BLK1 LRB 0.25	171211G1_Analyte		4.73	10397.18	10397.18	13322.56	78.04191
6	IPA	171211G1_Analyte	28.7				13322.56	0

7	ST171211G1-2 PFC CS3 17L1107	171211G1_ Analyte	28.7	4.73	10907.83	10907.83	13322.56	81.87492
8	IPA	171211G1_ Analyte	28.7				13322.56	0
9	B7L0026-BS1 LFB 0.25	171211G1_ Analyte	28.7	4.85	12365.77	12365.77	13322.56	92.81828
10	B7L0026-BSD1 LFBD 0.25	171211G1_ Analyte	28.7	4.74	10586.79	10586.79	13322.56	79.46514
11	IPA	171211G1_ Analyte	28.7				13322.56	0
12	B7L0026-BLK1 LRB 0.25	171211G1_ Analyte	28.7	4.72	10500.5	10500.5	13322.56	78.81748
13	1701815-01 CH-AT-1RW98A-1117 0.25004	171211G1_ Analyte	28.7	4.72	11000.38	11000.38	13322.56	82.56956
14	1701815-02 CH-AT-1FB98A-1117 0.22006	171211G1_ Analyte	28.7	4.72	10287.23	10287.23	13322.56	77.21664
15	1701815-03 CH-AT-1RW98B-1117 0.2516	171211G1_ Analyte	28.7	4.72	10470.8	10470.8	13322.56	78.59455
16	1701815-04 CH-AT-1FB98B-1117 0.23954	171211G1_ Analyte	28.7	4.72	10804.7	10804.7	13322.56	81.10081
17	1701815-05 CH-AT-1RW99-1117 0.23773	171211G1_ Analyte	28.7	4.72	10032.33	10032.33	13322.56	75.30331
18	1701815-06 CH-AT-1FB99-1117 0.2595	171211G1_ Analyte	28.7	4.72	9927.741	9927.741	13322.56	74.51829
19	1701815-07 CH-AT-1RW100-1117 0.23268	171211G1_ Analyte	28.7	4.72	10382.62	10382.62	13322.56	77.93265
20	1701815-08 CH-AT-1FB100-1117 0.24391	171211G1_ Analyte	28.7	4.72	10305.04	10305.04	13322.56	77.35033
21	1701815-09 CH-AT-1RW101-1117 0.23904	171211G1_ Analyte	28.7	4.72	10096.49	10096.49	13322.56	75.78492
22	1701815-10 CH-AT-1FB101-1117 0.24933	171211G1_ Analyte	28.7	4.72	10040.16	10040.16	13322.56	75.36213
23	1701815-11 CH-AT-1RW102-1117 0.22328	171211G1_ Analyte	28.7	4.72	9820.836	9820.836	13322.56	73.71586
24	1701815-12 CH-AT-1FB102-1117 0.2476	171211G1_ Analyte	28.7	4.72	10801.07	10801.07	13322.56	81.07352
25	1701815-13 CH-AT-1RW103-1117 0.23828	171211G1_ Analyte	28.7	4.72	10776.49	10776.49	13322.56	80.88908
26	1701815-14 CH-AT-1FB103-1117 0.23541	171211G1_ Analyte	28.7	4.72	9948.378	9948.378	13322.56	74.6732
27	1701815-15 CH-AT-1RW104-1117 0.23862	171211G1_ Analyte	28.7	4.72	9714.996	9714.996	13322.56	72.92142
28	1701815-16 CH-AT-1FB104-1117 0.23966	171211G1_ Analyte	28.7	4.72	9831.933	9831.933	13322.56	73.79915
29	1701815-17 CH-AT-1RW105-1117 0.23516	171211G1_ Analyte	28.7	4.72	9633.847	9633.847	13322.56	72.31231
30	1701815-18 CH-AT-1FB105-1117 0.24394	171211G1_ Analyte	28.7	4.72	9718.045	9718.045	13322.56	72.9443
31	1701815-19 CH-AT-1RW06-1117 0.24687	171211G1_ Analyte	28.7	4.72	10571.5	10571.5	13322.56	79.35037
32	1701815-20 CH-AT-1FB106-1117 0.2407	171211G1_ Analyte	28.7	4.72	9607.334	9607.334	13322.56	72.1133
33	IPA	171211G1_ Analyte	28.7				13322.56	0
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_ Analyte	28.7	4.73	10803.79	10803.79	13322.56	81.09395
35	IPA	171211G1_ Analyte	28.7				13322.56	0
36	B7L0031-BS1 LFB 0.25	171211G1_ Analyte	28.7	4.72	10011.69	10011.69	13322.56	75.14841
37	B7L0031-BLK1 LRB 0.25	171211G1_ Analyte	28.7	4.72	11086.52	11086.52	13322.56	83.21614
38	B7L0031-MS1 LFSM 0.25179	171211G1_ Analyte	28.7	4.72	9989.033	9989.033	13322.56	74.97836
39	B7L0031-MSD1 LFSMD 0.25406	171211G1_ Analyte	28.7	4.72	10820.7	10820.7	13322.56	81.22087
40	1701824-01 CH-AT-2RW30-1117 0.25321	171211G1_ Analyte	28.7	4.72	10539.2	10539.2	13322.56	79.10795

41	1701824-02 CH-AT-2FB30-1117 0.25812	171211G1_Analyte	28.7	4.72	10809.77	10809.77	13322.56	81.13887
42	1701824-03 CH-AT-2RW31-1117 0.24951	171211G1_Analyte	28.7	4.73	10167.68	10167.68	13322.56	76.31928
43	1701824-04 CH-AT-2FB31-1117 0.26064	171211G1_Analyte	28.7	4.73	11046.8	11046.8	13322.56	82.918
44	1701824-05 CH-AT-2RW32-1117 0.25406	171211G1_Analyte	28.7	4.73	10745.59	10745.59	13322.56	80.65712
45	1701824-06 CH-AT-2FB32-1117 0.26151	171211G1_Analyte	28.7	4.72	10167	10167	13322.56	76.3142
46	1701824-07 CH-AT-2RW33-1117 0.25185	171211G1_Analyte	28.7	4.72	10946.39	10946.39	13322.56	82.16431
47	1701824-08 CH-AT-2FB33-1117 0.26295	171211G1_Analyte	28.7	4.72	9724.39	9724.39	13322.56	72.99193
48	1701824-09 CH-AT-2RW34-1117 0.25405	171211G1_Analyte	28.7	4.72	9558.749	9558.749	13322.56	71.74862
49	1701824-10 CH-AT-2FB34-1117 0.24979	171211G1_Analyte	28.7	4.72	10927.25	10927.25	13322.56	82.02067
50	1701824-11 CH-AT-2RW35-1117 0.2526	171211G1_Analyte	28.7	4.72	11701.68	11701.68	13322.56	87.83358
51	IPA	171211G1_Analyte	28.7	4.72	44.289	44.289	13322.56	0.332436
52	ST171211G1-4 PFC CS-1 537 17L1106	171211G1_Analyte	28.7	4.73	12765.67	12765.67	13322.56	95.81994

Ccals

Compound 6: 13C2-PFOA

ST171211G1-1 PFC CS-1 537 17L1106

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST171211G1-1 PFC CS-1 537 17L1106	171211G1_Standard	10	4.31	10648.18	10648.18	10648.18	100
2	IPA	171211G1_Analyte	10				10648.18	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	171211G1_Analyte	10	4.31	8312.228	8312.228	10648.18	78.06245
4	1701813-20 CH-AT-2FB29-1117 0.26487	171211G1_Analyte	10	4.31	7956.156	7956.156	10648.18	74.71848
5	B7L0034-BLK1 LRB 0.25	171211G1_Analyte		4.32	9552.299	9552.299	10648.18	89.7083
6	IPA	171211G1_Analyte	10				10648.18	0
7	ST171211G1-2 PFC CS3 17L1107	171211G1_Analyte	10	4.32	10271.11	10271.11	10648.18	96.45887

ST171211G1-2 PFC CS3 17L1107

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
7	ST171211G1-2 PFC CS3 17L1107	171211G1_Analyte	10	4.32	10271.11	10271.11	10271.11	100
8	IPA	171211G1_Analyte	10				10271.11	0
9	B7L0026-BS1 LFB 0.25	171211G1_Analyte	10	4.45	9585.333	9585.333	10271.11	93.32323
10	B7L0026-BSD1 LFBD 0.25	171211G1_Analyte	10	4.33	9210.383	9210.383	10271.11	89.6727
11	IPA	171211G1_Analyte	10				10271.11	0
12	B7L0026-BLK1 LRB 0.25	171211G1_Analyte	10	4.31	9234.665	9234.665	10271.11	89.90911

13	1701815-01 CH-AT-1RW98A-1117 0.25004	171211G1_Analyte	10	4.3	8326.052	8326.052	10271.11	81.06282
14	1701815-02 CH-AT-1FB98A-1117 0.22006	171211G1_Analyte	10	4.31	7637.876	7637.876	10271.11	74.36271
15	1701815-03 CH-AT-1RW98B-1117 0.2516	171211G1_Analyte	10	4.31	8947.271	8947.271	10271.11	87.11103
16	1701815-04 CH-AT-1FB98B-1117 0.23954	171211G1_Analyte	10	4.31	8350.234	8350.234	10271.11	81.29825
17	1701815-05 CH-AT-1RW99-1117 0.23773	171211G1_Analyte	10	4.3	9256.336	9256.336	10271.11	90.1201
18	1701815-06 CH-AT-1FB99-1117 0.2595	171211G1_Analyte	10	4.3	9286.055	9286.055	10271.11	90.40945
19	1701815-07 CH-AT-1RW100-1117 0.23268	171211G1_Analyte	10	4.31	8316.702	8316.702	10271.11	80.97179
20	1701815-08 CH-AT-1FB100-1117 0.24391	171211G1_Analyte	10	4.31	7988.084	7988.084	10271.11	77.77235
21	1701815-09 CH-AT-1RW101-1117 0.23904	171211G1_Analyte	10	4.31	8317.732	8317.732	10271.11	80.98181
22	1701815-10 CH-AT-1FB101-1117 0.24933	171211G1_Analyte	10	4.31	9006.493	9006.493	10271.11	87.68762
23	1701815-11 CH-AT-1RW102-1117 0.22328	171211G1_Analyte	10	4.31	8508.34	8508.34	10271.11	82.83758
24	1701815-12 CH-AT-1FB102-1117 0.2476	171211G1_Analyte	10	4.31	8695.296	8695.296	10271.11	84.65779
25	1701815-13 CH-AT-1RW103-1117 0.23828	171211G1_Analyte	10	4.31	8244.526	8244.526	10271.11	80.26908
26	1701815-14 CH-AT-1FB103-1117 0.23541	171211G1_Analyte	10	4.31	8892.392	8892.392	10271.11	86.57673
27	1701815-15 CH-AT-1RW104-1117 0.23862	171211G1_Analyte	10	4.31	8219.301	8219.301	10271.11	80.02349
28	1701815-16 CH-AT-1FB104-1117 0.23966	171211G1_Analyte	10	4.31	8704.008	8704.008	10271.11	84.74261
29	1701815-17 CH-AT-1RW105-1117 0.23516	171211G1_Analyte	10	4.31	7983.67	7983.67	10271.11	77.72937
30	1701815-18 CH-AT-1FB105-1117 0.24394	171211G1_Analyte	10	4.31	7877.485	7877.485	10271.11	76.69555
31	1701815-19 CH-AT-1RW06-1117 0.24687	171211G1_Analyte	10	4.31	8765.659	8765.659	10271.11	85.34285
32	1701815-20 CH-AT-1FB106-1117 0.2407	171211G1_Analyte	10	4.31	8802.219	8802.219	10271.11	85.6988
33	IPA	171211G1_Analyte	10				10271.11	0
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_Analyte	10	4.31	9848.277	9848.277	10271.11	95.88327

ST171211G1-3 PFC CS5 537 17K3029

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_Analyte	10	4.31	9848.277	9848.277	9848.277	100
35	IPA	171211G1_Analyte	10				9848.277	0
36	B7L0031-BS1 LFB 0.25	171211G1_Analyte	10	4.31	8186.781	8186.781	9848.277	83.12907
37	B7L0031-BLK1 LRB 0.25	171211G1_Analyte	10	4.31	8529.677	8529.677	9848.277	86.61086
38	B7L0031-MS1 LFSM 0.25179	171211G1_Analyte	10	4.31	8559.043	8559.043	9848.277	86.90904
39	B7L0031-MSD1 LFSMD 0.25406	171211G1_Analyte	10	4.31	8965.997	8965.997	9848.277	91.04128
40	1701824-01 CH-AT-2RW30-1117 0.25321	171211G1_Analyte	10	4.31	8423.226	8423.226	9848.277	85.52995
41	1701824-02 CH-AT-2FB30-1117 0.25812	171211G1_Analyte	10	4.31	9602.227	9602.227	9848.277	97.50159

42	1701824-03 CH-AT-2RW31-1117 0.24951	171211G1_Analyte	10	4.31	8853.115	8853.115	9848.277	89.89506
43	1701824-04 CH-AT-2FB31-1117 0.26064	171211G1_Analyte	10	4.31	8967.769	8967.769	9848.277	91.05927
44	1701824-05 CH-AT-2RW32-1117 0.25406	171211G1_Analyte	10	4.31	9193.431	9193.431	9848.277	93.35065
45	1701824-06 CH-AT-2FB32-1117 0.26151	171211G1_Analyte	10	4.31	7981.76	7981.76	9848.277	81.04727
46	1701824-07 CH-AT-2RW33-1117 0.25185	171211G1_Analyte	10	4.31	9044.589	9044.589	9848.277	91.8393
47	1701824-08 CH-AT-2FB33-1117 0.26295	171211G1_Analyte	10	4.31	9010.36	9010.36	9848.277	91.49174
48	1701824-09 CH-AT-2RW34-1117 0.25405	171211G1_Analyte	10	4.31	8092.983	8092.983	9848.277	82.17664
49	1701824-10 CH-AT-2FB34-1117 0.24979	171211G1_Analyte	10	4.31	8616.881	8616.881	9848.277	87.49633
50	1701824-11 CH-AT-2RW35-1117 0.2526	171211G1_Analyte	10	4.31	9370.795	9370.795	9848.277	95.15162
51	IPA	171211G1_Analyte	10	4.31	36.979	36.979	9848.277	0.375487
52	ST171211G1-4 PFC CS-1 537 17L1106	171211G1_Analyte	10	4.31	10270.61	10270.61	9848.277	104.2884

Compound 7: 13C4-PFOS

ST171211G1-1 PFC CS-1 537 17L1106

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST171211G1-1 PFC CS-1 537 17L1106	171211G1_Standard	28.7	4.72	11291.68	11291.68	11291.68	100
2	IPA	171211G1_Analyte	28.7				11291.68	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	171211G1_Analyte	28.7	4.73	9371.263	9371.263	11291.68	82.99262
4	1701813-20 CH-AT-2FB29-1117 0.26487	171211G1_Analyte	28.7	4.73	9397.963	9397.963	11291.68	83.22908
5	B7L0034-BLK1 LRB 0.25	171211G1_Analyte		4.73	10397.18	10397.18	11291.68	92.0782
6	IPA	171211G1_Analyte	28.7				11291.68	0
7	ST171211G1-2 PFC CS3 17L1107	171211G1_Analyte	28.7	4.73	10907.83	10907.83	11291.68	96.6006

ST171211G1-2 PFC CS3 17L1107

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
7	ST171211G1-2 PFC CS3 17L1107	171211G1_Analyte	28.7	4.73	10907.83	10907.83	10907.83	100
8	IPA	171211G1_Analyte	28.7				10907.83	0
9	B7L0026-BS1 LFB 0.25	171211G1_Analyte	28.7	4.85	12365.77	12365.77	10907.83	113.3659
10	B7L0026-BSD1 LFBD 0.25	171211G1_Analyte	28.7	4.74	10586.79	10586.79	10907.83	97.05675
11	IPA	171211G1_Analyte	28.7				10907.83	0
12	B7L0026-BLK1 LRB 0.25	171211G1_Analyte	28.7	4.72	10500.5	10500.5	10907.83	96.26572
13	1701815-01 CH-AT-1RW98A-1117 0.25004	171211G1_Analyte	28.7	4.72	11000.38	11000.38	10907.83	100.8484
14	1701815-02 CH-AT-1FB98A-1117 0.22006	171211G1_Analyte	28.7	4.72	10287.23	10287.23	10907.83	94.31048

15	1701815-03 CH-AT-1RW98B-1117 0.2516	171211G1_ Analyte	28.7	4.72	10470.8	10470.8	10907.83	95.99344
16	1701815-04 CH-AT-1FB98B-1117 0.23954	171211G1_ Analyte	28.7	4.72	10804.7	10804.7	10907.83	99.05451
17	1701815-05 CH-AT-1RW99-1117 0.23773	171211G1_ Analyte	28.7	4.72	10032.33	10032.33	10907.83	91.97359
18	1701815-06 CH-AT-1FB99-1117 0.2595	171211G1_ Analyte	28.7	4.72	9927.741	9927.741	10907.83	91.0148
19	1701815-07 CH-AT-1RW100-1117 0.23268	171211G1_ Analyte	28.7	4.72	10382.62	10382.62	10907.83	95.185
20	1701815-08 CH-AT-1FB100-1117 0.24391	171211G1_ Analyte	28.7	4.72	10305.04	10305.04	10907.83	94.47378
21	1701815-09 CH-AT-1RW101-1117 0.23904	171211G1_ Analyte	28.7	4.72	10096.49	10096.49	10907.83	92.56182
22	1701815-10 CH-AT-1FB101-1117 0.24933	171211G1_ Analyte	28.7	4.72	10040.16	10040.16	10907.83	92.04544
23	1701815-11 CH-AT-1RW102-1117 0.22328	171211G1_ Analyte	28.7	4.72	9820.836	9820.836	10907.83	90.03472
24	1701815-12 CH-AT-1FB102-1117 0.2476	171211G1_ Analyte	28.7	4.72	10801.07	10801.07	10907.83	99.02119
25	1701815-13 CH-AT-1RW103-1117 0.23828	171211G1_ Analyte	28.7	4.72	10776.49	10776.49	10907.83	98.79591
26	1701815-14 CH-AT-1FB103-1117 0.23541	171211G1_ Analyte	28.7	4.72	9948.378	9948.378	10907.83	91.20399
27	1701815-15 CH-AT-1RW104-1117 0.23862	171211G1_ Analyte	28.7	4.72	9714.996	9714.996	10907.83	89.06441
28	1701815-16 CH-AT-1FB104-1117 0.23966	171211G1_ Analyte	28.7	4.72	9831.933	9831.933	10907.83	90.13645
29	1701815-17 CH-AT-1RW105-1117 0.23516	171211G1_ Analyte	28.7	4.72	9633.847	9633.847	10907.83	88.32046
30	1701815-18 CH-AT-1FB105-1117 0.24394	171211G1_ Analyte	28.7	4.72	9718.045	9718.045	10907.83	89.09236
31	1701815-19 CH-AT-1RW06-1117 0.24687	171211G1_ Analyte	28.7	4.72	10571.5	10571.5	10907.83	96.91657
32	1701815-20 CH-AT-1FB106-1117 0.2407	171211G1_ Analyte	28.7	4.72	9607.334	9607.334	10907.83	88.07739
33	IPA	171211G1_ Analyte	28.7				10907.83	0
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_ Analyte	28.7	4.73	10803.79	10803.79	10907.83	99.04614

ST171211G1-3 PFC CS5 537 17K3029

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
34	ST171211G1-3 PFC CS5 537 17K3029	171211G1_ Analyte	28.7	4.73	10803.79	10803.79	10803.79	100
35	IPA	171211G1_ Analyte	28.7				10803.79	0
36	B7L0031-BS1 LFB 0.25	171211G1_ Analyte	28.7	4.72	10011.69	10011.69	10803.79	92.66832
37	B7L0031-BLK1 LRB 0.25	171211G1_ Analyte	28.7	4.72	11086.52	11086.52	10803.79	102.617
38	B7L0031-MS1 LFSM 0.25179	171211G1_ Analyte	28.7	4.72	9989.033	9989.033	10803.79	92.45863
39	B7L0031-MSD1 LFSMD 0.25406	171211G1_ Analyte	28.7	4.72	10820.7	10820.7	10803.79	100.1565
40	1701824-01 CH-AT-2RW30-1117 0.25321	171211G1_ Analyte	28.7	4.72	10539.2	10539.2	10803.79	97.55098
41	1701824-02 CH-AT-2FB30-1117 0.25812	171211G1_ Analyte	28.7	4.72	10809.77	10809.77	10803.79	100.0554
42	1701824-03 CH-AT-2RW31-1117 0.24951	171211G1_ Analyte	28.7	4.73	10167.68	10167.68	10803.79	94.11218
43	1701824-04 CH-AT-2FB31-1117 0.26064	171211G1_ Analyte	28.7	4.73	11046.8	11046.8	10803.79	102.2493

44	1701824-05 CH-AT-2RW32-1117 0.25406	171211G1_ Analyte	28.7	4.73	10745.59	10745.59	10803.79	99.46133
45	1701824-06 CH-AT-2FB32-1117 0.26151	171211G1_ Analyte	28.7	4.72	10167	10167	10803.79	94.10591
46	1701824-07 CH-AT-2RW33-1117 0.25185	171211G1_ Analyte	28.7	4.72	10946.39	10946.39	10803.79	101.3199
47	1701824-08 CH-AT-2FB33-1117 0.26295	171211G1_ Analyte	28.7	4.72	9724.39	9724.39	10803.79	90.00909
48	1701824-09 CH-AT-2RW34-1117 0.25405	171211G1_ Analyte	28.7	4.72	9558.749	9558.749	10803.79	88.47591
49	1701824-10 CH-AT-2FB34-1117 0.24979	171211G1_ Analyte	28.7	4.72	10927.25	10927.25	10803.79	101.1428
50	1701824-11 CH-AT-2RW35-1117 0.2526	171211G1_ Analyte	28.7	4.72	11701.68	11701.68	10803.79	108.3109
51	IPA	171211G1_ Analyte	28.7	4.72	44.289	44.289	10803.79	0.40994
52	ST171211G1-4 PFC CS-1 537 17L1106	171211G1_ Analyte	28.7	4.73	12765.67	12765.67	10803.79	118.1592

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-2.qld

Last Altered: Monday, December 11, 2017 14:28:59 Pacific Standard Time

Printed: Monday, December 11, 2017 14:29:22 Pacific Standard Time

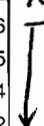
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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_2, Date: 11-Dec-2017, Time: 11:51:01, ID: ST171211G1-1 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

	#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	299 > 79.7	6.09e2	1.13e4		1.0000	3.02	3.01	1.55	1.93	109.2
2	2	PFOA	413 > 368.7	1.64e3	1.06e4		1.0000	4.31	4.31	1.54	1.89	94.6
3	3	PFOS	499 > 79.9	9.32e2	1.13e4		1.0000	4.72	4.72	2.37	1.97	106.5
4	4	13C2-PFHxA	315 > 269.8	4.41e3	1.06e4	0.443	1.0000	3.37	3.37	4.14	9.34	93.4
5	5	13C2-PFDA	515.1 > 469.9	5.81e3	1.06e4	0.509	1.0000	4.94	4.95	5.46	10.7	107.2
6	6	13C2-PFOA	414.9 > 369.7	1.06e4	1.06e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7	13C4-PFOS	503.0 > 79.9	1.13e4	1.13e4	1.000	1.0000	4.81	4.72	28.7	28.7	100.0

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Last Altered: Monday, December 11, 2017 14:18:34 Pacific Standard Time

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Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

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1	171211G1_1	IPA	11-Dec-17	11:38:33
2	171211G1_2	ST171211G1-1 PFC CS-1 537 17L1106	11-Dec-17	11:51:01
3	171211G1_3	IPA	11-Dec-17	12:03:25
4	171211G1_4	1701813-10 CH-AT-2FB24-1117 0.26256	11-Dec-17	12:15:55
5	171211G1_5	1701813-20 CH-AT-2FB29-1117 0.26487	11-Dec-17	12:28:21
6	171211G1_6	B7L0034-BLK1 LRB 0.25	11-Dec-17	12:40:48
7	171211G1_7	IPA	11-Dec-17	12:53:17
8	171211G1_8	ST171211G1-2 PFC CS3 17L1107	11-Dec-17	13:05:44
9	171211G1_9	IPA	11-Dec-17	13:18:08
10	171211G1_10	B7L0026-BS1 LFB 0.25		
11	171211G1_11	B7L0026-BSD1 LFBD 0.25		
12	171211G1_12	IPA		
13	171211G1_13	B7L0026-BLK1 LRB 0.25		
14	171211G1_14	1701815-01 CH-AT-1RW98A-1117 0.25004		
15	171211G1_15	1701815-02 CH-AT-1FB98A-1117 0.22006		
16	171211G1_16	1701815-03 CH-AT-1RW98B-1117 0.2516		
17	171211G1_17	1701815-04 CH-AT-1FB98B-1117 0.23954		
18	171211G1_18	1701815-05 CH-AT-1RW99-1117 0.23773		
19	171211G1_19	1701815-06 CH-AT-1FB99-1117 0.2595		
20	171211G1_20	1701815-07 CH-AT-1RW100-1117 0.23268		
21	171211G1_21	1701815-08 CH-AT-1FB100-1117 0.24391		
22	171211G1_22	1701815-09 CH-AT-1RW101-1117 0.23904		
23	171211G1_23	1701815-10 CH-AT-1FB101-1117 0.24933		
24	171211G1_24	1701815-11 CH-AT-1RW102-1117 0.22328		
25	171211G1_25	1701815-12 CH-AT-1FB102-1117 0.2476		
26	171211G1_26	1701815-13 CH-AT-1RW103-1117 0.23828		
27	171211G1_27	1701815-14 CH-AT-1FB103-1117 0.23541		
28	171211G1_28	1701815-15 CH-AT-1RW104-1117 0.23862		
29	171211G1_29	1701815-16 CH-AT-1FB104-1117 0.23966		
30	171211G1_30	1701815-17 CH-AT-1RW105-1117 0.23516		
31	171211G1_31	1701815-18 CH-AT-1FB105-1117 0.24394		
32	171211G1_32	1701815-19 CH-AT-1RW06-1117 0.24687		

LC Calibration Standards Review Checklist

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Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST 171211G1-1 LMH	☒	☒	☒	☒	☒	☒	☒
-2 LMH	☒	☒	☒	☒	☒	☒	☒
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐
LMH	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 4/15/17

Run Log Present: ☒

of Samples per Sequence Checked: ☒

Reviewed By:

JA 12/11/2017
Initials/Date

Comments:

CURVE
PFBS 1.770 pg/ml - 44.2 pg/ml
PFOA 2.00 T - 50.00
PFOS 1.85 T - 46.20

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Last Altered: Monday, December 11, 2017 14:28:59 Pacific Standard Time

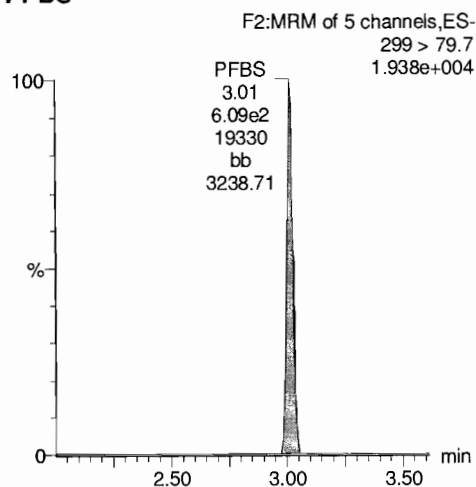
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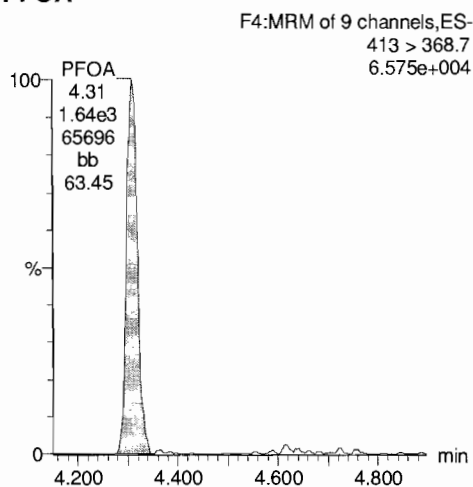
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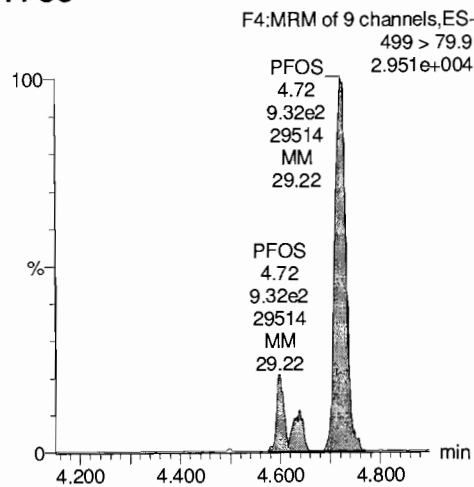
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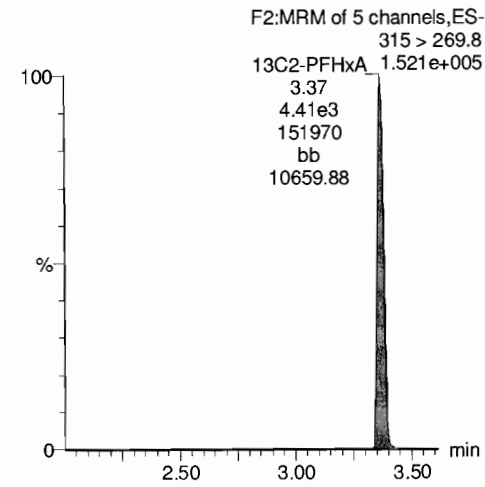
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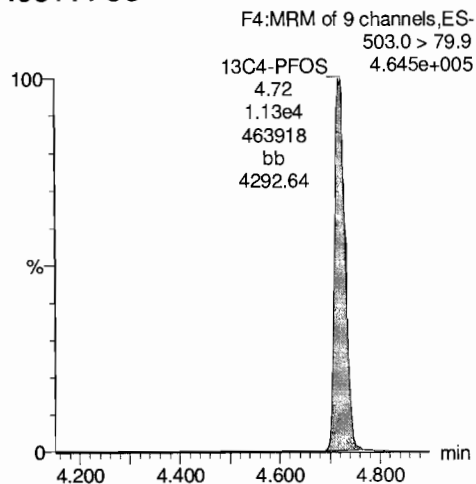
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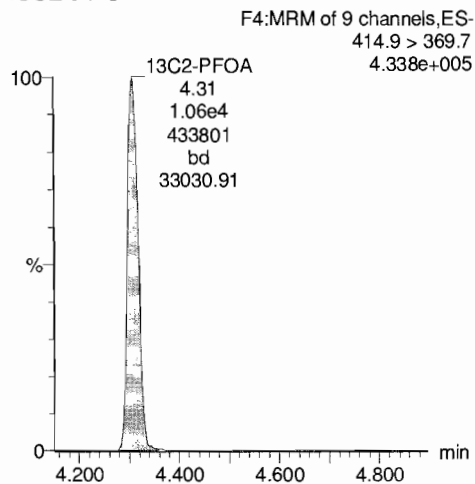
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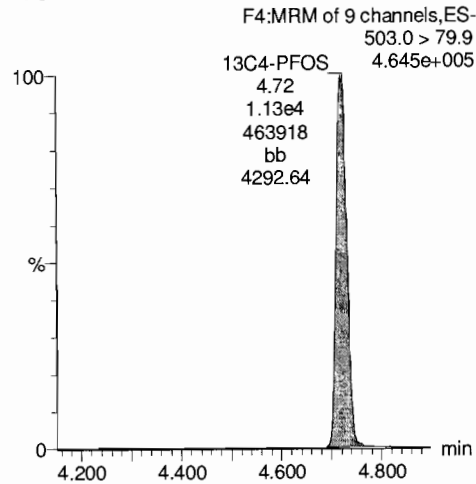
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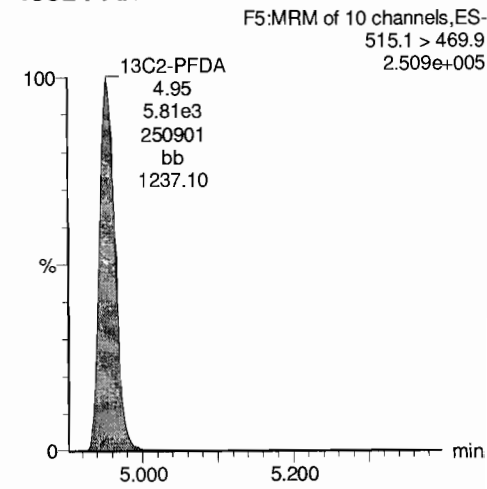
13C2-PFOA



13C4-PFOS



13C2-PFDA



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Printed: Tuesday, December 12, 2017 09:18:03 Pacific Standard Time

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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_35, Date: 11-Dec-2017, Time: 20:58:19, ID: ST171211G1-3 PFC CS5 537 17K3029, Description: PFC CS5 537 17K3029

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.66e4	1.08e4		1.0000	3.03	3.01	70.6	88.2	99.8
2	2 PFOA	413 > 368.7	7.23e4	9.85e3		1.0000	4.31	4.31	73.4	90.4	90.4
3	3 PFOS	499 > 79.9	4.19e4	1.08e4		1.0000	4.73	4.73	111	92.6	100.2
4	4 13C2-PFHxA	315 > 269.8	4.68e3	9.85e3	0.443	1.0000	3.37	3.37	4.75	10.7	107.2
5	5 13C2-PFDA	515.1 > 469.9	4.46e3	9.85e3	0.509	1.0000	4.94	4.96	4.52	8.89	88.9
6	6 13C2-PFOA	414.9 > 369.7	9.85e3	9.85e3	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

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Dataset: Untitled

Last Altered: Tuesday, December 12, 2017 09:25:15 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:26:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

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3	171211G1_3	IPA	11-Dec-17	12:03:25
4	171211G1_4	1701813-10 CH-AT-2FB24-1117 0.26256	11-Dec-17	12:15:55
5	171211G1_5	1701813-20 CH-AT-2FB29-1117 0.26487	11-Dec-17	12:28:21
6	171211G1_6	B7L0034-BLK1 LRB 0.25	11-Dec-17	12:40:48
7	171211G1_7	IPA	11-Dec-17	12:53:17
8	171211G1_8	ST171211G1-2 PFC CS3 17L1107	11-Dec-17	13:05:44
9	171211G1_9	IPA	11-Dec-17	13:18:08
10	171211G1_10	B7L0026-BS1 LFB 0.25	11-Dec-17	15:46:44
11	171211G1_11	B7L0026-BS1 LFB 0.25	11-Dec-17	16:00:04
12	171211G1_12	IPA	11-Dec-17	16:12:32
13	171211G1_13	B7L0026-BLK1 LRB 0.25	11-Dec-17	16:25:00
14	171211G1_14	1701815-01 CH-AT-1RW98A-1117 0.25004	11-Dec-17	16:37:24
15	171211G1_15	1701815-02 CH-AT-1FB98A-1117 0.22006	11-Dec-17	16:49:48
16	171211G1_16	1701815-03 CH-AT-1RW98B-1117 0.2516	11-Dec-17	17:02:12
17	171211G1_17	1701815-04 CH-AT-1FB98B-1117 0.23954	11-Dec-17	17:14:38
18	171211G1_18	1701815-05 CH-AT-1RW99-1117 0.23773	11-Dec-17	17:27:04
19	171211G1_19	1701815-06 CH-AT-1FB99-1117 0.2595	11-Dec-17	17:39:30
20	171211G1_20	1701815-07 CH-AT-1RW100-1117 0.23268	11-Dec-17	17:51:58
21	171211G1_21	1701815-08 CH-AT-1FB100-1117 0.24391	11-Dec-17	18:04:27
22	171211G1_22	1701815-09 CH-AT-1RW101-1117 0.23904	11-Dec-17	18:16:50
23	171211G1_23	1701815-10 CH-AT-1FB101-1117 0.24933	11-Dec-17	18:29:14
24	171211G1_24	1701815-11 CH-AT-1RW102-1117 0.22328	11-Dec-17	18:41:38
25	171211G1_25	1701815-12 CH-AT-1FB102-1117 0.2476	11-Dec-17	18:54:03
26	171211G1_26	1701815-13 CH-AT-1RW103-1117 0.23828	11-Dec-17	19:06:28
27	171211G1_27	1701815-14 CH-AT-1FB103-1117 0.23541	11-Dec-17	19:18:55
28	171211G1_28	1701815-15 CH-AT-1RW104-1117 0.23862	11-Dec-17	19:31:21
29	171211G1_29	1701815-16 CH-AT-1FB104-1117 0.23966	11-Dec-17	19:43:50
30	171211G1_30	1701815-17 CH-AT-1RW105-1117 0.23516	11-Dec-17	19:56:13
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Dataset: Untitled

Last Altered: Tuesday, December 12, 2017 09:25:15 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:26:40 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	171211G1_32	1701815-19 CH-AT-1RW06-1117 0.24687	11-Dec-17	20:21:01
33	171211G1_33	1701815-20 CH-AT-1FB106-1117 0.2407	11-Dec-17	20:33:27
34	171211G1_34	IPA	11-Dec-17	20:45:52
35	171211G1_35	ST171211G1-3 PFC CS5 537 17K3029	11-Dec-17	20:58:19
36	171211G1_36	IPA	11-Dec-17	21:10:45
37	171211G1_37	B7L0031-BS1 LFB 0.25	11-Dec-17	21:23:12
38	171211G1_38	B7L0031-BLK1 LRB 0.25	11-Dec-17	21:35:39
39	171211G1_39	B7L0031-MS1 LFSM 0.25179	11-Dec-17	21:48:05
40	171211G1_40	B7L0031-MSD1 LFSMD 0.25406	11-Dec-17	22:00:32
41	171211G1_41	1701824-01 CH-AT-2RW30-1117 0.25321	11-Dec-17	22:12:55
42	171211G1_42	1701824-02 CH-AT-2FB30-1117 0.25812	11-Dec-17	22:25:20
43	171211G1_43	1701824-03 CH-AT-2RW31-1117 0.24951	11-Dec-17	22:37:44
44	171211G1_44	1701824-04 CH-AT-2FB31-1117 0.26064	11-Dec-17	22:50:09
45	171211G1_45	1701824-05 CH-AT-2RW32-1117 0.25406	11-Dec-17	23:02:34
46	171211G1_46	1701824-06 CH-AT-2FB32-1117 0.26151	11-Dec-17	23:15:00
47	171211G1_47	1701824-07 CH-AT-2RW33-1117 0.25185	11-Dec-17	23:27:26
48	171211G1_48	1701824-08 CH-AT-2FB33-1117 0.26295	11-Dec-17	23:39:55
49	171211G1_49	1701824-09 CH-AT-2RW34-1117 0.25405	11-Dec-17	23:52:18
50	171211G1_50	1701824-10 CH-AT-2FB34-1117 0.24979	12-Dec-17	00:04:41
51	171211G1_51	1701824-11 CH-AT-2RW35-1117 0.2526	12-Dec-17	00:17:06
52	171211G1_52	IPA	12-Dec-17	00:29:32
53	171211G1_53	ST171211G1-4 PFC CS-1 537 17L1106	12-Dec-17	00:41:58
54	171211G1_54	IPA	12-Dec-17	00:54:22

61

Full Mass Cal. Date: ~~12/12/17~~ 4/5/17

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JA 12/12/2017
Initials/Date

DW-L3

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-35.qld

Last Altered: Tuesday, December 12, 2017 09:17:47 Pacific Standard Time

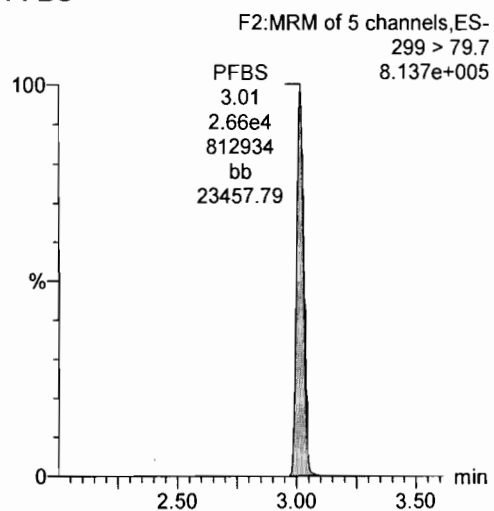
Printed: Tuesday, December 12, 2017 09:18:03 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

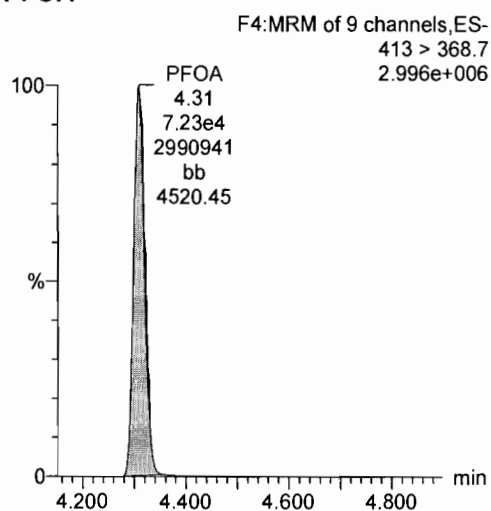
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

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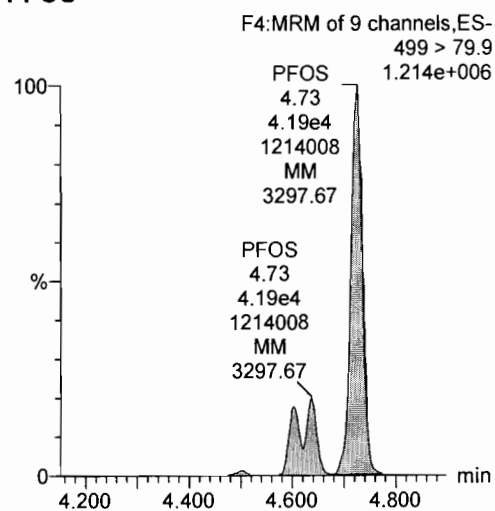
PFBS



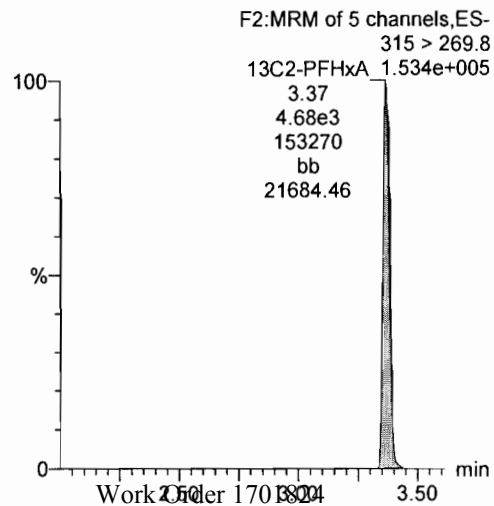
PFOA



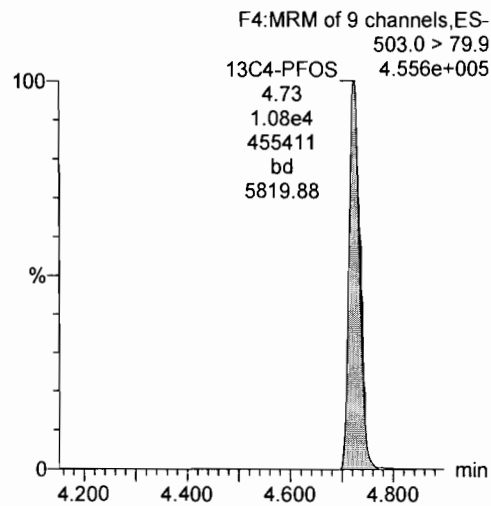
PFOS



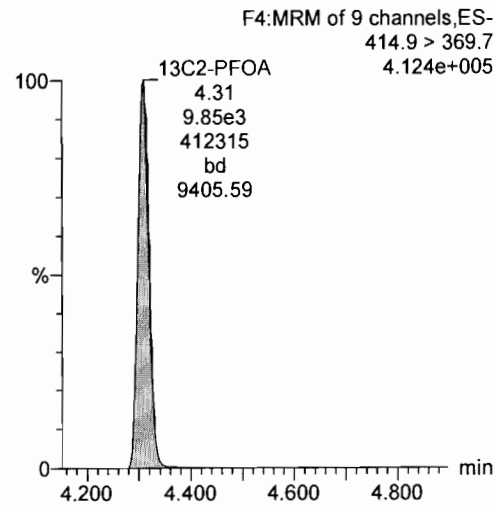
13C2-PFHxA



13C4-PFOS



13C2-PFOA



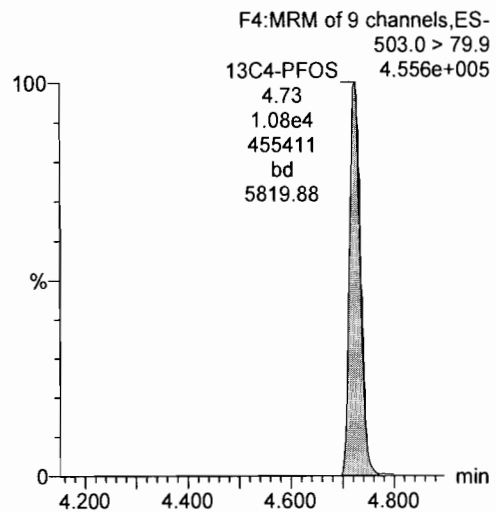
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Last Altered: Tuesday, December 12, 2017 09:17:47 Pacific Standard Time

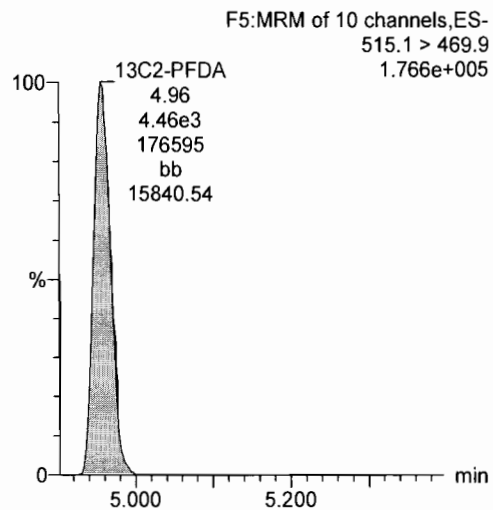
Printed: Tuesday, December 12, 2017 09:18:03 Pacific Standard Time

Name: 171211G1_35, Date: 11-Dec-2017, Time: 20:58:19, ID: ST171211G1-3 PFC CS5 537 17K3029, Description: PFC CS5 537 17K3029

13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-53.qld

Last Altered: Tuesday, December 12, 2017 09:23:55 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:24:13 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_53, Date: 12-Dec-2017, Time: 00:41:58, ID: ST171211G1-4 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.41e2	1.28e4		1.0000	3.03	3.02	1.22	1.52	85.9
2	2 PFOA	413 > 368.7	1.73e3	1.03e4		1.0000	4.31	4.31	1.69	2.08	103.9
3	3 PFOS	499 > 79.9	9.39e2	1.28e4		1.0000	4.73	4.73	2.11	1.76	94.9
4	4 13C2-PFHxA	315 > 269.8	4.78e3	1.03e4	0.443	1.0000	3.37	3.38	4.65	10.5	105.1
5	5 13C2-PFDA	515.1 > 469.9	4.98e3	1.03e4	0.509	1.0000	4.94	4.97	4.84	9.51	95.1
6	6 13C2-PFOA	414.9 > 369.7	1.03e4	1.03e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.28e4	1.28e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

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12/12/2017

Dataset: Untitled

Last Altered: Tuesday, December 12, 2017 09:25:15 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:26:40 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171211G1_1	IPA	11-Dec-17	11:38:33
2	171211G1_2	ST171211G1-1 PFC CS-1 537 17L1106	11-Dec-17	11:51:01
3	171211G1_3	IPA	11-Dec-17	12:03:25
4	171211G1_4	1701813-10 CH-AT-2FB24-1117 0.26256	11-Dec-17	12:15:55
5	171211G1_5	1701813-20 CH-AT-2FB29-1117 0.26487	11-Dec-17	12:28:21
6	171211G1_6	B7L0034-BLK1 LRB 0.25	11-Dec-17	12:40:48
7	171211G1_7	IPA	11-Dec-17	12:53:17
8	171211G1_8	ST171211G1-2 PFC CS3 17L1107	11-Dec-17	13:05:44
9	171211G1_9	IPA	11-Dec-17	13:18:08
10	171211G1_10	B7L0026-BS1 LFB 0.25	11-Dec-17	15:46:44
11	171211G1_11	B7L0026-BSD1 LFBD 0.25	11-Dec-17	16:00:04
12	171211G1_12	IPA	11-Dec-17	16:12:32
13	171211G1_13	B7L0026-BLK1 LRB 0.25	11-Dec-17	16:25:00
14	171211G1_14	1701815-01 CH-AT-1RW98A-1117 0.25004	11-Dec-17	16:37:24
15	171211G1_15	1701815-02 CH-AT-1FB98A-1117 0.22006	11-Dec-17	16:49:48
16	171211G1_16	1701815-03 CH-AT-1RW98B-1117 0.2516	11-Dec-17	17:02:12
17	171211G1_17	1701815-04 CH-AT-1FB98B-1117 0.23954	11-Dec-17	17:14:38
18	171211G1_18	1701815-05 CH-AT-1RW99-1117 0.23773	11-Dec-17	17:27:04
19	171211G1_19	1701815-06 CH-AT-1FB99-1117 0.2595	11-Dec-17	17:39:30
20	171211G1_20	1701815-07 CH-AT-1RW100-1117 0.23268	11-Dec-17	17:51:58
21	171211G1_21	1701815-08 CH-AT-1FB100-1117 0.24391	11-Dec-17	18:04:27
22	171211G1_22	1701815-09 CH-AT-1RW101-1117 0.23904	11-Dec-17	18:16:50
23	171211G1_23	1701815-10 CH-AT-1FB101-1117 0.24933	11-Dec-17	18:29:14
24	171211G1_24	1701815-11 CH-AT-1RW102-1117 0.22328	11-Dec-17	18:41:38
25	171211G1_25	1701815-12 CH-AT-1FB102-1117 0.2476	11-Dec-17	18:54:03
26	171211G1_26	1701815-13 CH-AT-1RW103-1117 0.23828	11-Dec-17	19:06:28
27	171211G1_27	1701815-14 CH-AT-1FB103-1117 0.23541	11-Dec-17	19:18:55
28	171211G1_28	1701815-15 CH-AT-1RW104-1117 0.23862	11-Dec-17	19:31:21
29	171211G1_29	1701815-16 CH-AT-1FB104-1117 0.23966	11-Dec-17	19:43:50
30	171211G1_30	1701815-17 CH-AT-1RW105-1117 0.23516	11-Dec-17	19:56:13
31	171211G1_31	1701815-18 CH-AT-1FB105-1117 0.24394	11-Dec-17	20:08:36

Dataset: Untitled

Last Altered: Tuesday, December 12, 2017 09:25:15 Pacific Standard Time

Printed: Tuesday, December 12, 2017 09:26:40 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	171211G1_32	1701815-19 CH-AT-1RW06-1117 0.24687	11-Dec-17	20:21:01
33	171211G1_33	1701815-20 CH-AT-1FB106-1117 0.2407	11-Dec-17	20:33:27
34	171211G1_34	IPA	11-Dec-17	20:45:52
35	171211G1_35	ST171211G1-3 PFC CS5 537 17K3029	11-Dec-17	20:58:19
36	171211G1_36	IPA	11-Dec-17	21:10:45
37	171211G1_37	B7L0031-BS1 LFB 0.25	11-Dec-17	21:23:12
38	171211G1_38	B7L0031-BLK1 LRB 0.25	11-Dec-17	21:35:39
39	171211G1_39	B7L0031-MS1 LFSM 0.25179	11-Dec-17	21:48:05
40	171211G1_40	B7L0031-MSD1 LFSMD 0.25406	11-Dec-17	22:00:32
41	171211G1_41	1701824-01 CH-AT-2RW30-1117 0.25321	11-Dec-17	22:12:55
42	171211G1_42	1701824-02 CH-AT-2FB30-1117 0.25812	11-Dec-17	22:25:20
43	171211G1_43	1701824-03 CH-AT-2RW31-1117 0.24951	11-Dec-17	22:37:44
44	171211G1_44	1701824-04 CH-AT-2FB31-1117 0.26064	11-Dec-17	22:50:09
45	171211G1_45	1701824-05 CH-AT-2RW32-1117 0.25406	11-Dec-17	23:02:34
46	171211G1_46	1701824-06 CH-AT-2FB32-1117 0.26151	11-Dec-17	23:15:00
47	171211G1_47	1701824-07 CH-AT-2RW33-1117 0.25185	11-Dec-17	23:27:26
48	171211G1_48	1701824-08 CH-AT-2FB33-1117 0.26295	11-Dec-17	23:39:55
49	171211G1_49	1701824-09 CH-AT-2RW34-1117 0.25405	11-Dec-17	23:52:18
50	171211G1_50	1701824-10 CH-AT-2FB34-1117 0.24979	12-Dec-17	00:04:41
51	171211G1_51	1701824-11 CH-AT-2RW35-1117 0.2526	12-Dec-17	00:17:06
52	171211G1_52	IPA	12-Dec-17	00:29:32
53	171211G1_53	ST171211G1-4 PFC CS-1 537 17L1106	12-Dec-17	00:41:58
54	171211G1_54	IPA	12-Dec-17	00:54:22

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-53.qld

Last Altered: Tuesday, December 12, 2017 09:23:55 Pacific Standard Time

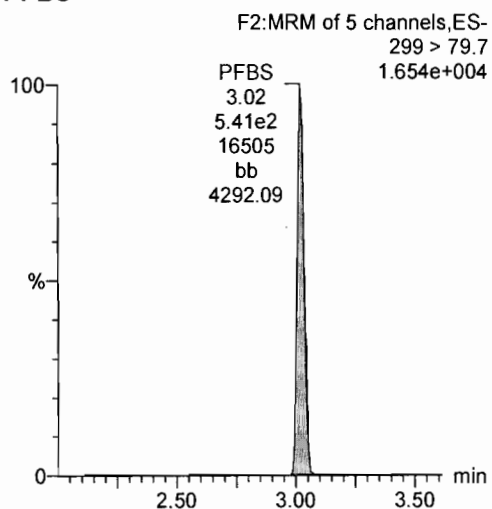
Printed: Tuesday, December 12, 2017 09:24:13 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

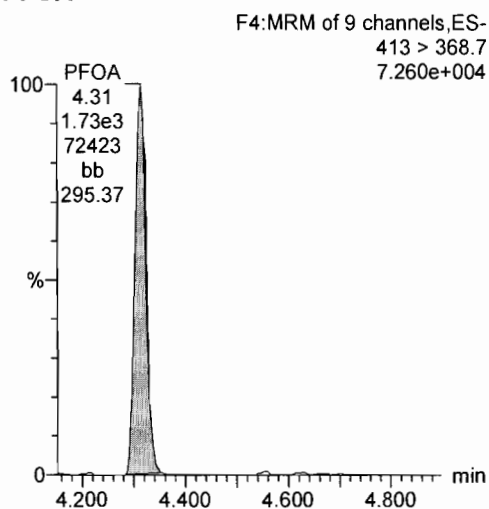
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1_53, Date: 12-Dec-2017, Time: 00:41:58, ID: ST171211G1-4 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

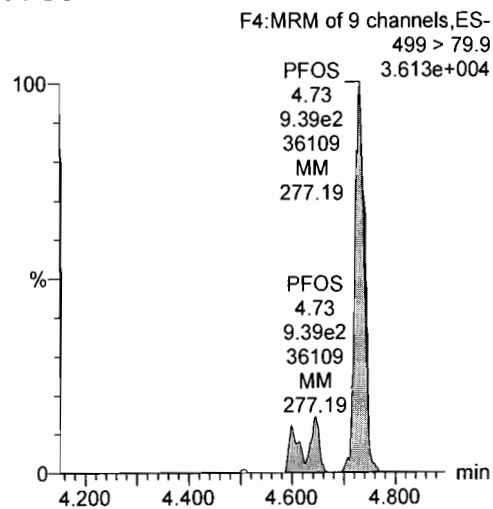
PFBS



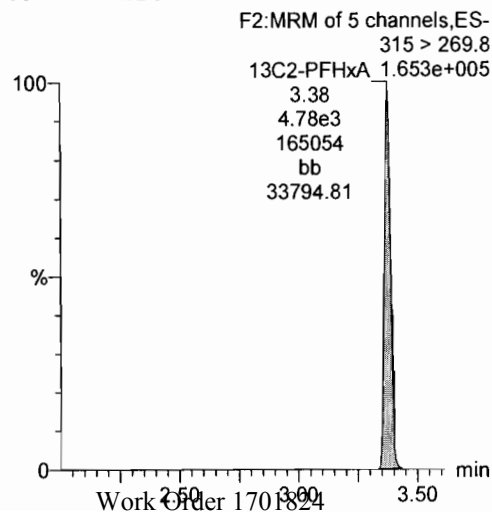
PFOA



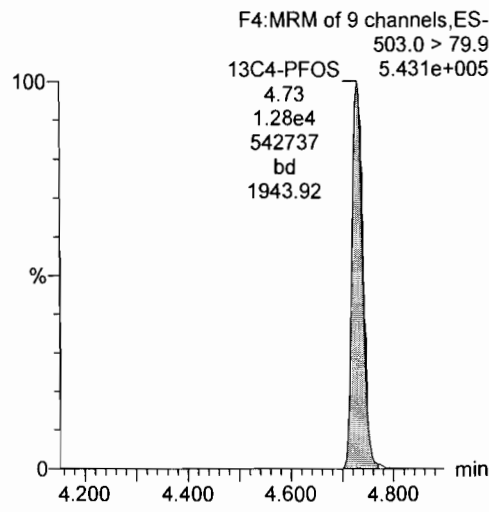
PFOS



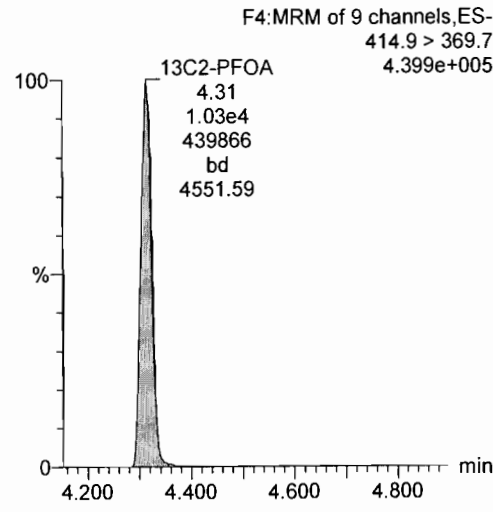
13C2-PFHxA



13C4-PFOS



13C2-PFOA



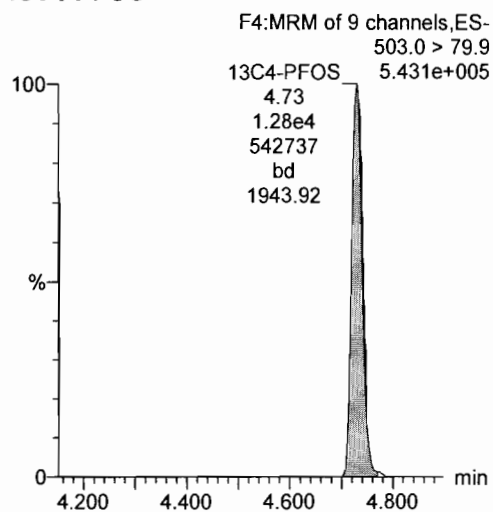
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Last Altered: Tuesday, December 12, 2017 09:23:55 Pacific Standard Time

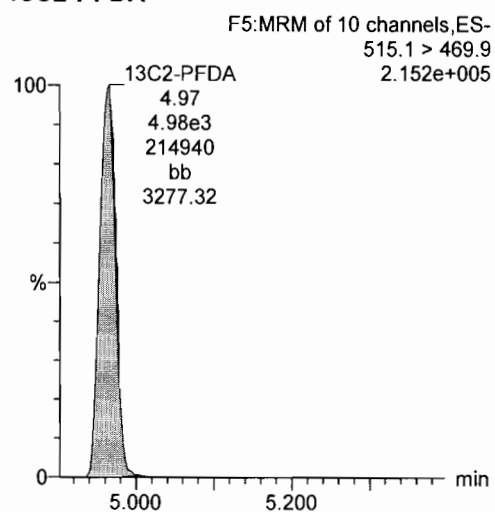
Printed: Tuesday, December 12, 2017 09:24:13 Pacific Standard Time

Name: 171211G1_53, Date: 12-Dec-2017, Time: 00:41:58, ID: ST171211G1-4 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

13C4-PFOS



13C2-PFDA



INITIAL CALIBRATION (ICAL)
INCLUDING ASSOCIATED
INITIAL CALIBRATION VERIFICATION (ICV)

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time
Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15
Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

Coefficient of Determination: $R^2 = 0.994837$

Calibration curve: $0.800672 * x$

Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

AM 12/11/17

JMA. 12/11/2017

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.443	3.02	134.074	11857.967	0.325	0.4	-8.4	NO	0.995	NO	MMX
2	2 171208G2_3	Standard	0.885	3.01	428.832	15349.467	0.802	1.0	13.2	NO	0.995	NO	bbX
3	3 171208G2_4	Standard	1.770	3.01	759.007	14402.649	1.512	1.9	6.7	NO	0.995	NO	bb
4	4 171208G2_5	Standard	4.420	3.01	1983.680	14516.459	3.922	4.9	10.8	NO	0.995	NO	MM
5	5 171208G2_6	Standard	8.850	3.01	2903.323	11953.820	6.971	8.7	-1.6	NO	0.995	NO	bb
6	6 171208G2_7	Standard	22.100	3.01	8898.488	13445.892	18.994	23.7	7.3	NO	0.995	NO	bb
7	7 171208G2_8	Standard	44.200	3.01	14447.786	12293.957	33.728	42.1	-4.7	NO	0.995	NO	bb
8	8 171208G2_9	Standard	66.300	3.01	21148.451	10786.034	56.273	70.3	6.0	NO	0.995	NO	bbX
9	9 171208G2_10	Standard	88.400	3.01	29888.051	12003.273	71.463	89.3	1.0	NO	0.995	NO	bbX

Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997893$

Calibration curve: $0.811837 * x$

Response type: Internal Std (Ref 6), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.500	4.33	504.601	11571.904	0.436	0.5	7.4	NO	0.998	NO	bbX
2	2 171208G2_3	Standard	1.000	4.31	1289.415	14038.166	0.919	1.1	13.1	NO	0.998	NO	bbX
3	3 171208G2_4	Standard	2.000	4.31	2044.709	12600.569	1.623	2.0	-0.1	NO	0.998	NO	bb
4	4 171208G2_5	Standard	5.000	4.31	5935.702	13262.253	4.476	5.5	10.3	NO	0.998	NO	bd
5	5 171208G2_6	Standard	10.000	4.31	8915.754	12044.611	7.402	9.1	-8.8	NO	0.998	NO	bd
6	6 171208G2_7	Standard	25.000	4.31	25977.795	12740.901	20.389	25.1	0.5	NO	0.998	NO	bd
7	7 171208G2_8	Standard	50.000	4.31	45749.875	11213.454	40.799	50.3	0.5	NO	0.998	NO	bd
8	8 171208G2_9	Standard	75.000	4.31	60947.063	9546.963	63.839	78.6	4.8	NO	0.998	NO	bdX
9	9 171208G2_10	Standard	100.000	4.31	85445.031	11090.062	77.046	94.9	-5.1	NO	0.998	NO	bbX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time
Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

Compound name: PFOS

Coefficient of Determination: $R^2 = 0.998516$

Calibration curve: $1.20278 * x$

Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.464	4.73	185.089	11857.967	0.448	0.4	-19.7	NO	0.999	NO	MMX
2	2 171208G2_3	Standard	0.925	4.73	617.089	15349.467	1.154	1.0	3.7	NO	0.999	NO	MMX
3	3 171208G2_4	Standard	1.850	4.72	889.150	14402.649	1.772	1.5	-20.4	NO	0.999	NO	MM
4	4 171208G2_5	Standard	4.625	4.73	2773.974	14516.459	5.484	4.6	-1.4	NO	0.999	NO	MM
5	5 171208G2_6	Standard	9.250	4.73	4524.466	11953.820	10.863	9.0	-2.4	NO	0.999	NO	MM
6	6 171208G2_7	Standard	23.100	4.73	13079.806	13445.892	27.919	23.2	0.5	NO	0.999	NO	MM
7	7 171208G2_8	Standard	46.200	4.72	24086.246	12293.957	56.229	46.7	1.2	NO	0.999	NO	MM
8	8 171208G2_9	Standard	69.300	4.72	33750.160	10786.034	89.804	74.7	7.7	NO	0.999	NO	MMX
9	9 171208G2_10	Standard	92.400	4.72	47716.457	12003.273	114.091	94.9	2.7	NO	0.999	NO	MMX

Compound name: 13C2-PFHxA

Response Factor: 0.44294

RRF SD: 0.0227764, Relative SD: 5.14209

Response type: Internal Std (Ref 6), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	3.38	4801.410	11571.904	4.149	9.4	-6.3	NO		NO	bbX
2	2 171208G2_3	Standard	10.000	3.37	6735.231	14038.166	4.798	10.8	8.3	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	3.36	5697.994	12600.569	4.522	10.2	2.1	NO		NO	bb
4	4 171208G2_5	Standard	10.000	3.37	6341.437	13262.253	4.782	10.8	8.0	NO		NO	bb
5	5 171208G2_6	Standard	10.000	3.36	5086.919	12044.611	4.223	9.5	-4.7	NO		NO	bd
6	6 171208G2_7	Standard	10.000	3.36	5434.637	12740.901	4.266	9.6	-3.7	NO		NO	bb
7	7 171208G2_8	Standard	10.000	3.36	4882.918	11213.454	4.355	9.8	-1.7	NO		NO	bb
8	8 171208G2_9	Standard	10.000	3.36	4706.410	9546.963	4.930	11.1	11.3	NO		NO	bdX
9	9 171208G2_10	Standard	10.000	3.36	4749.668	11090.062	4.283	9.7	-3.3	NO		NO	bdX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time
Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

Compound name: 13C2-PFDA

Response Factor: 0.509254

RRF SD: 0.0328522, Relative SD: 6.45105

Response type: Internal Std (Ref 6), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	4.97	5579.112	11571.904	4.821	9.5	-5.3	NO		NO	bdX
2	2 171208G2_3	Standard	10.000	4.96	8625.498	14038.166	6.144	12.1	20.7	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	4.96	6581.716	12600.569	5.223	10.3	2.6	NO		NO	bb
4	4 171208G2_5	Standard	10.000	4.96	7244.836	13262.253	5.463	10.7	7.3	NO		NO	bb
5	5 171208G2_6	Standard	10.000	4.96	5507.656	12044.611	4.573	9.0	-10.2	NO		NO	bb
6	6 171208G2_7	Standard	10.000	4.96	6576.478	12740.901	5.162	10.1	1.4	NO		NO	bb
7	7 171208G2_8	Standard	10.000	4.96	5654.003	11213.454	5.042	9.9	-1.0	NO		NO	bb
8	8 171208G2_9	Standard	10.000	4.96	5376.028	9546.963	5.631	11.1	10.6	NO		NO	bbX
9	9 171208G2_10	Standard	10.000	4.96	5314.285	11090.062	4.792	9.4	-5.9	NO		NO	bbX

Compound name: 13C2-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 6), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	4.33	11571.904	11571.904	10.000	10.0	0.0	NO		NO	bbX
2	2 171208G2_3	Standard	10.000	4.31	14038.166	14038.166	10.000	10.0	0.0	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	4.31	12600.569	12600.569	10.000	10.0	0.0	NO		NO	bb
4	4 171208G2_5	Standard	10.000	4.31	13262.253	13262.253	10.000	10.0	0.0	NO		NO	bb
5	5 171208G2_6	Standard	10.000	4.31	12044.611	12044.611	10.000	10.0	0.0	NO		NO	bd
6	6 171208G2_7	Standard	10.000	4.31	12740.901	12740.901	10.000	10.0	0.0	NO		NO	bd
7	7 171208G2_8	Standard	10.000	4.31	11213.454	11213.454	10.000	10.0	0.0	NO		NO	bb
8	8 171208G2_9	Standard	10.000	4.31	9546.963	9546.963	10.000	10.0	0.0	NO		NO	bbX
9	9 171208G2_10	Standard	10.000	4.31	11090.062	11090.062	10.000	10.0	0.0	NO		NO	bdX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time
Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	28.700	4.74	11857.967	11857.967	28.700	28.7	0.0	NO		NO	bdX
2	2 171208G2_3	Standard	28.700	4.73	15349.467	15349.467	28.700	28.7	0.0	NO		NO	bbX
3	3 171208G2_4	Standard	28.700	4.72	14402.649	14402.649	28.700	28.7	0.0	NO		NO	bd
4	4 171208G2_5	Standard	28.700	4.73	14516.459	14516.459	28.700	28.7	0.0	NO		NO	bd
5	5 171208G2_6	Standard	28.700	4.72	11953.820	11953.820	28.700	28.7	0.0	NO		NO	MM
6	6 171208G2_7	Standard	28.700	4.72	13445.892	13445.892	28.700	28.7	0.0	NO		NO	bb
7	7 171208G2_8	Standard	28.700	4.72	12293.957	12293.957	28.700	28.7	0.0	NO		NO	bd
8	8 171208G2_9	Standard	28.700	4.72	10786.034	10786.034	28.700	28.7	0.0	NO		NO	bbX
9	9 171208G2_10	Standard	28.700	4.72	12003.273	12003.273	28.700	28.7	0.0	NO		NO	bbX

Dataset: Untitled

Last Altered: Monday, December 11, 2017 10:39:34 Pacific Standard Time

Printed: Monday, December 11, 2017 10:40:25 Pacific Standard Time

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Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

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1	171208G2_1	IPA	08-Dec-17	15:56:48
2	171208G2_2	ST171208G2-1 PFC CS-3 537 17K3022	08-Dec-17	16:09:15
3	171208G2_3	ST171208G2-2 PFC CS-2 537 17K3023	08-Dec-17	16:21:40
4	171208G2_4	ST171208G2-3 PFC CS-1 537 17K3024	08-Dec-17	16:34:04
5	171208G2_5	ST171208G2-4 PFC CS0 537 17K3025	08-Dec-17	16:46:29
6	171208G2_6	ST171208G2-5 PFC CS1 537 17K3026	08-Dec-17	16:58:55
7	171208G2_7	ST171208G2-6 PFC CS2 537 17K3033	08-Dec-17	17:11:21
8	171208G2_8	ST171208G2-7 PFC CS3 537 17K3027	08-Dec-17	17:23:47
9	171208G2_9	ST171208G2-8 PFC CS4 537 17K3028	08-Dec-17	17:36:15
10	171208G2_10	ST171208G2-9 PFC CS5 537 17K3029	08-Dec-17	17:48:42
11	171208G2_11	IPA	08-Dec-17	18:01:06
12	171208G2_12	ICV171208G2-1 PFC ICV 537 17K3030	08-Dec-17	18:13:34
13	171208G2_13	IPA	08-Dec-17	18:25:58

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

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Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

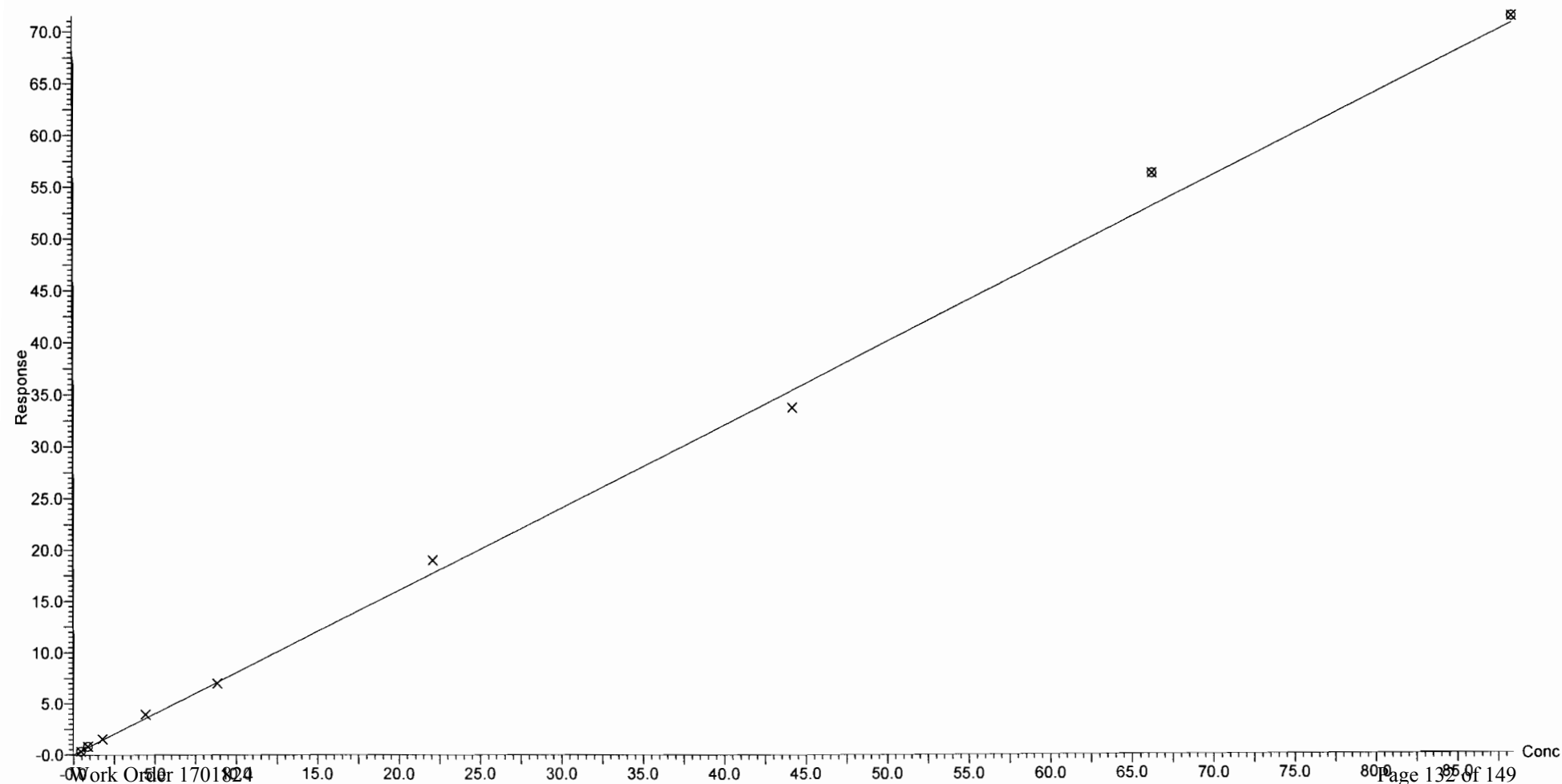
Compound name: PFBS

Coefficient of Determination: $R^2 = 0.994837$

Calibration curve: $0.800672 * x$

Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

Printed: Monday, December 11, 2017 10:36:23 Pacific Standard Time

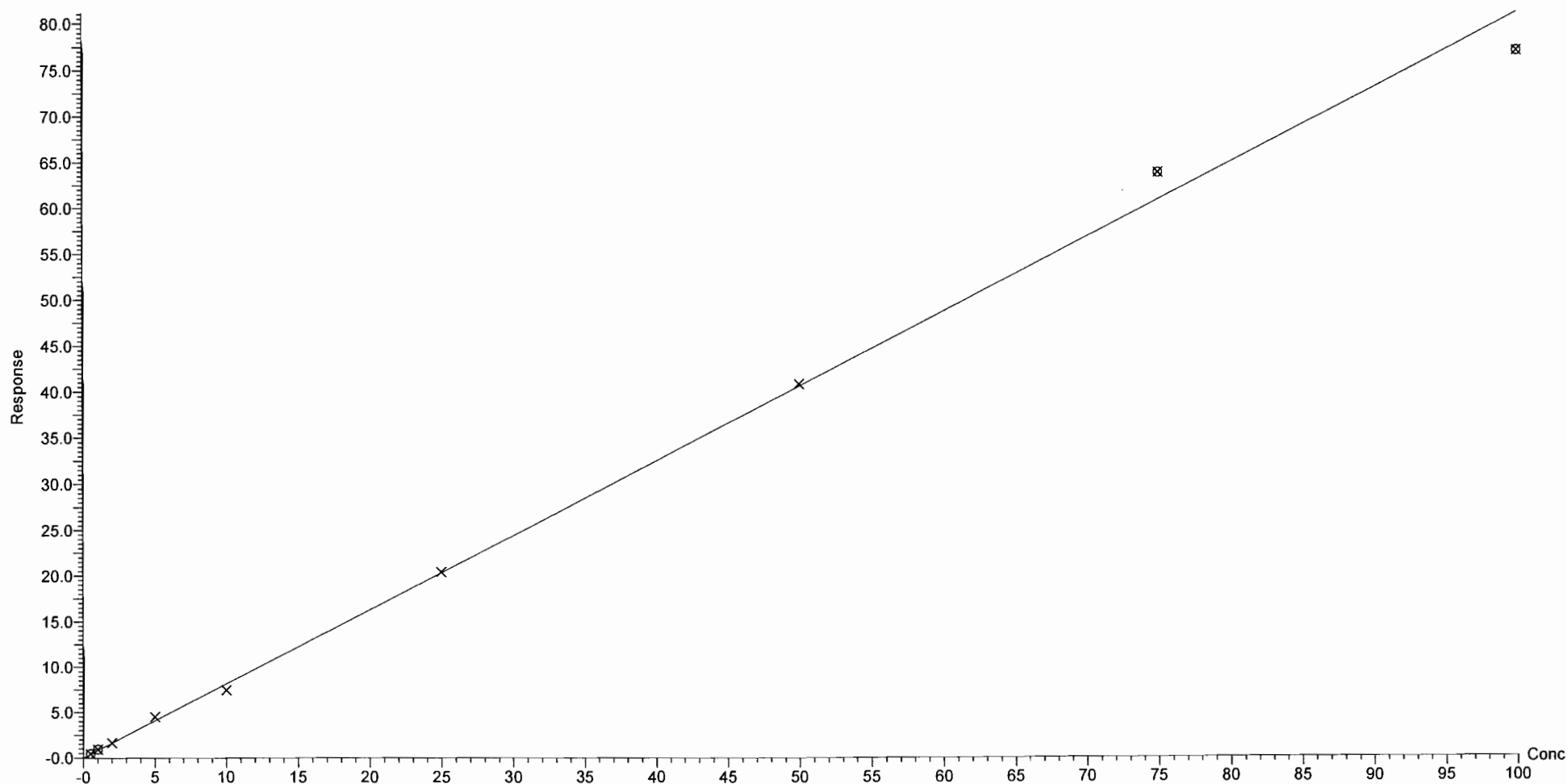
Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997893$

Calibration curve: $0.811837 * x$

Response type: Internal Std (Ref 6), Area * (IS Conc. / IS Area)

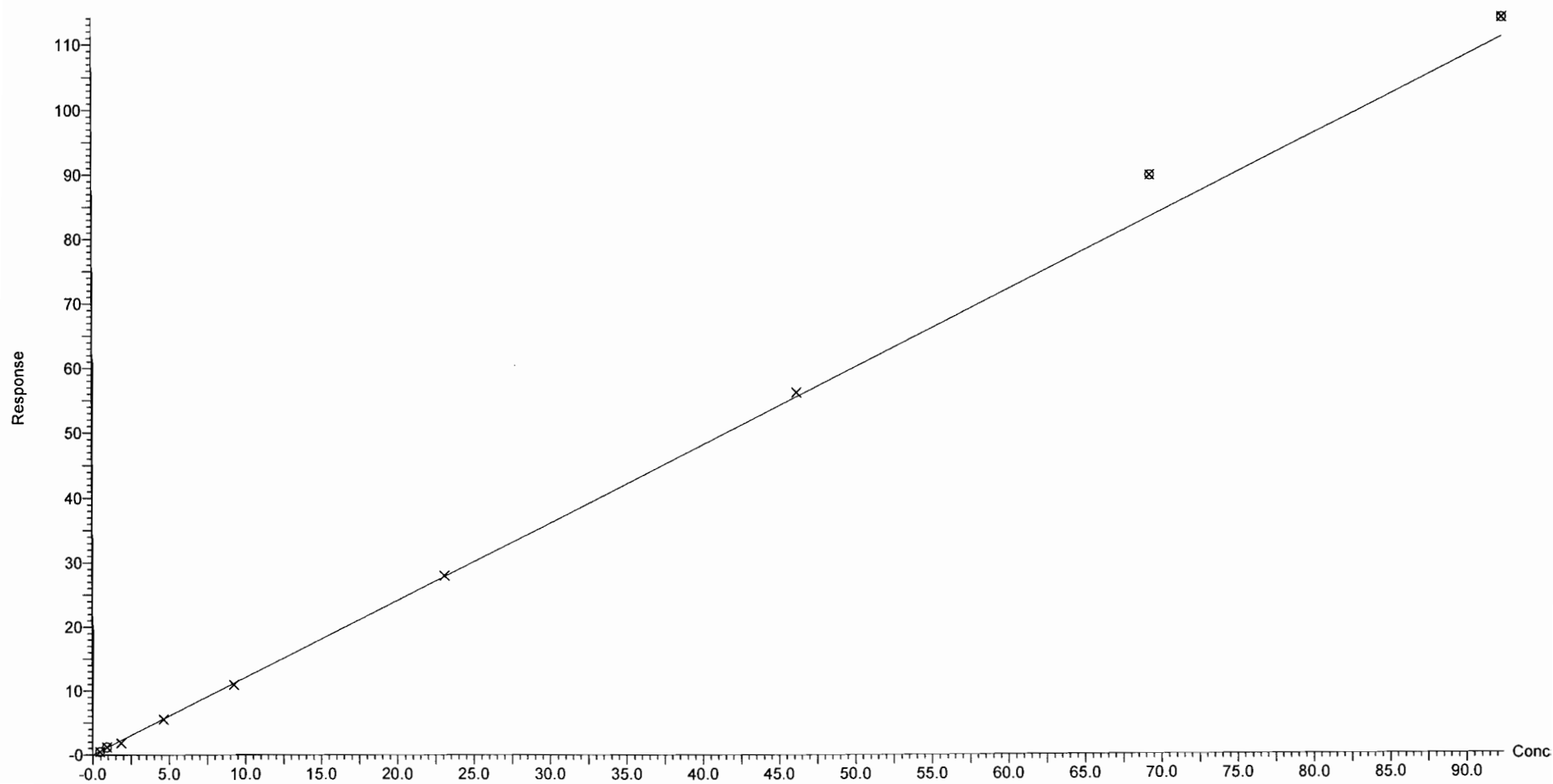
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time
Printed: Monday, December 11, 2017 10:36:23 Pacific Standard Time

Compound name: PFOS
Coefficient of Determination: $R^2 = 0.998516$
Calibration curve: $1.20278 * x$
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

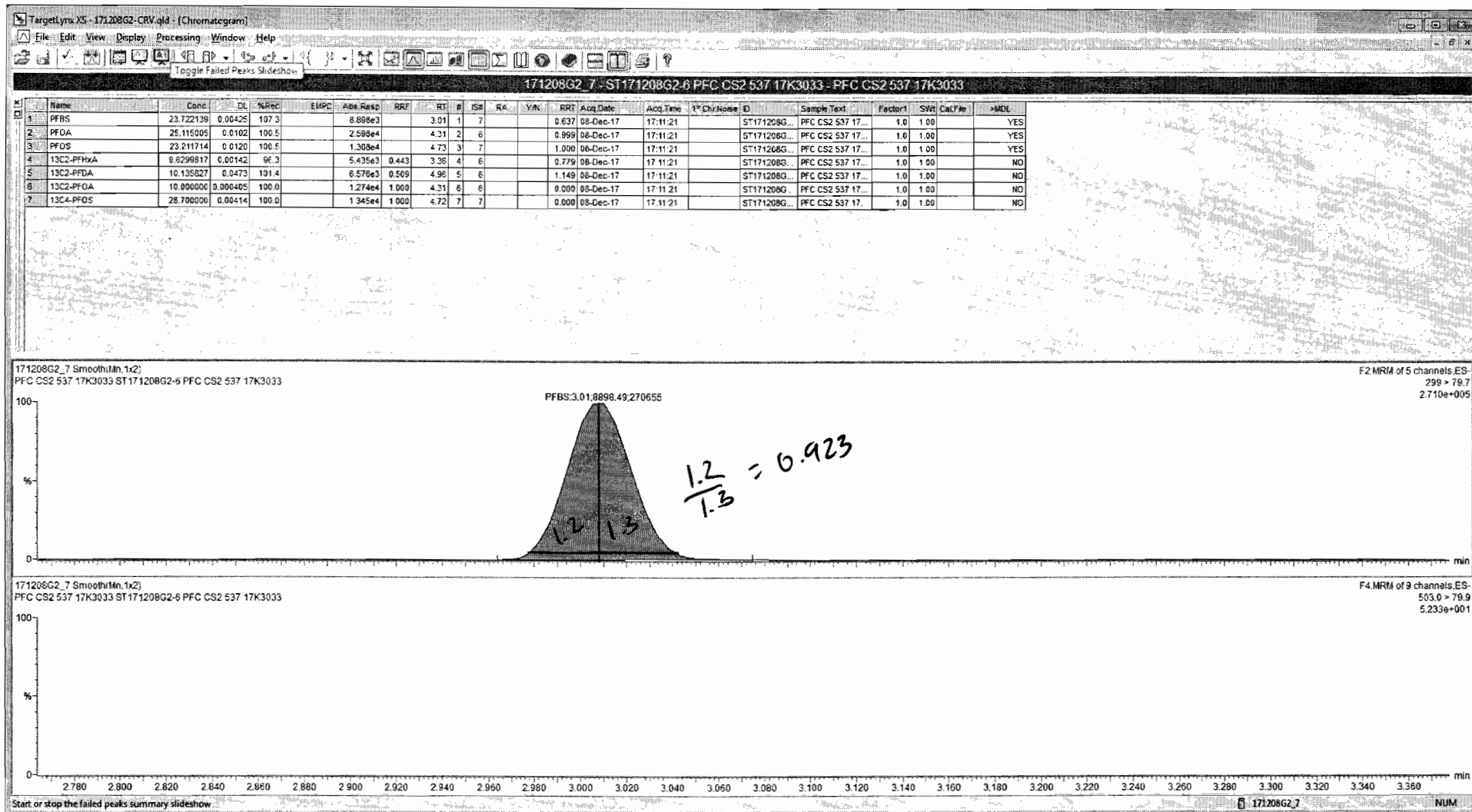


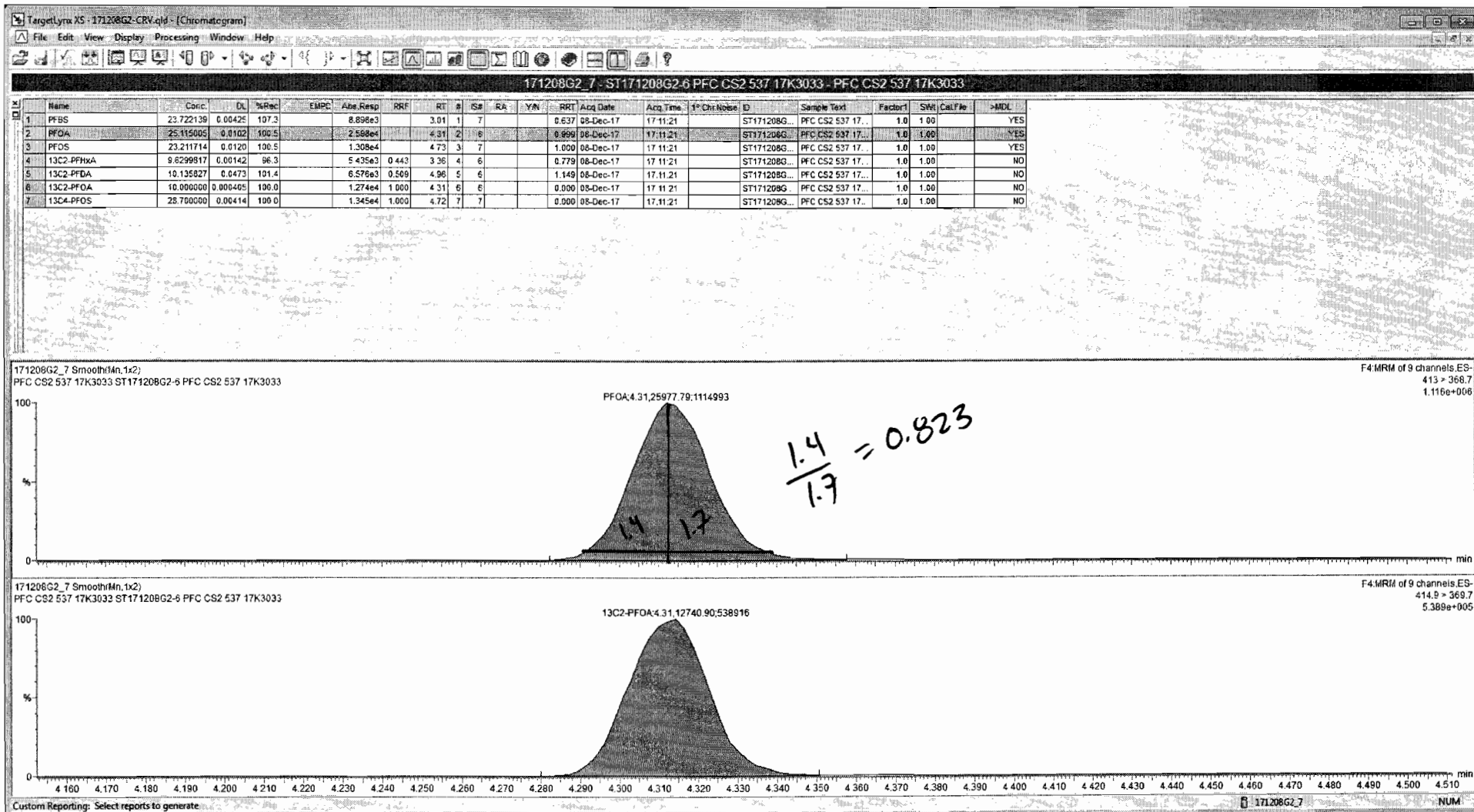
Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1 ST171208G2-1 PFC CS-3 537 17K3022	171208G2_Standard		10	4.33	11571.9	11571.9	bbX
2 ST171208G2-2 PFC CS-2 537 17K3023	171208G2_Standard		10	4.31	14038.17	14038.17	bbX
3 ST171208G2-3 PFC CS-1 537 17K3024	171208G2_Standard		10	4.31	12600.57	12600.57	bb
4 ST171208G2-4 PFC CS0 537 17K3025	171208G2_Standard		10	4.31	13262.25	13262.25	bb
5 ST171208G2-5 PFC CS1 537 17K3026	171208G2_Standard		10	4.31	12044.61	12044.61	bd
6 ST171208G2-6 PFC CS2 537 17K3033	171208G2_Standard		10	4.31	12740.9	12740.9	bd
7 ST171208G2-7 PFC CS3 537 17K3027	171208G2_Standard		10	4.31	11213.45	11213.45	bb
8 ST171208G2-8 PFC CS4 537 17K3028	171208G2_Standard		10	4.31	9546.963	9546.963	bbX
9 ST171208G2-9 PFC CS5 537 17K3029	171208G2_Standard		10	4.31	11090.06	11090.06	bdX
					average		RPD
					12372.36		16.74148984

Compound 7: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1 ST171208G2-1 PFC CS-3 537 17K3022	171208G2_Standard		28.7	4.74	11857.97	11857.97	bdX
2 ST171208G2-2 PFC CS-2 537 17K3023	171208G2_Standard		28.7	4.73	15349.47	15349.47	bbX
3 ST171208G2-3 PFC CS-1 537 17K3024	171208G2_Standard		28.7	4.72	14402.65	14402.65	bd
4 ST171208G2-4 PFC CS0 537 17K3025	171208G2_Standard		28.7	4.73	14516.46	14516.46	bd
5 ST171208G2-5 PFC CS1 537 17K3026	171208G2_Standard		28.7	4.72	11953.82	11953.82	MM
6 ST171208G2-6 PFC CS2 537 17K3033	171208G2_Standard		28.7	4.72	13445.89	13445.89	bb
7 ST171208G2-7 PFC CS3 537 17K3027	171208G2_Standard		28.7	4.72	12293.96	12293.96	bd
8 ST171208G2-8 PFC CS4 537 17K3028	171208G2_Standard		28.7	4.72	10786.03	10786.03	bbX
9 ST171208G2-9 PFC CS5 537 17K3029	171208G2_Standard		28.7	4.72	12003.27	12003.27	bbX
					average		RPD
					13322.56		19.36238753





Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

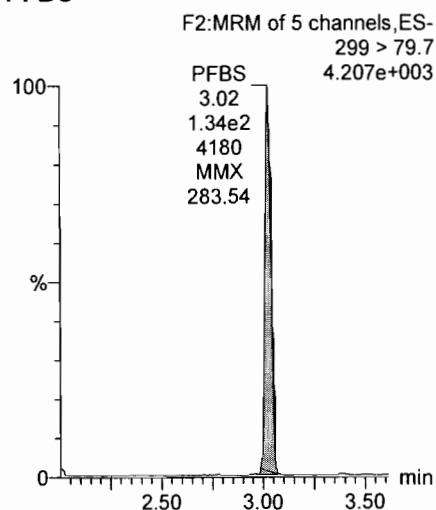
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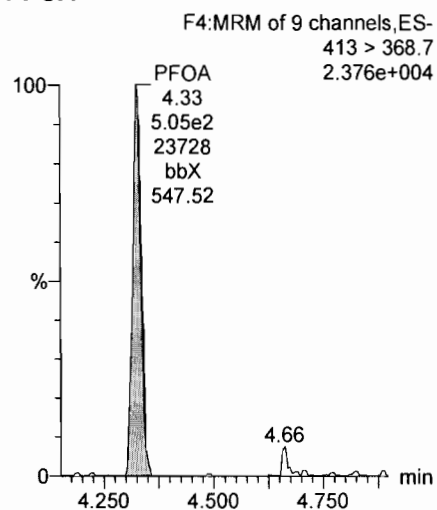
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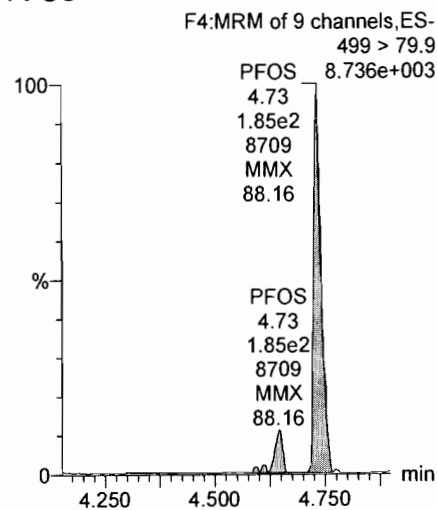
PFBS



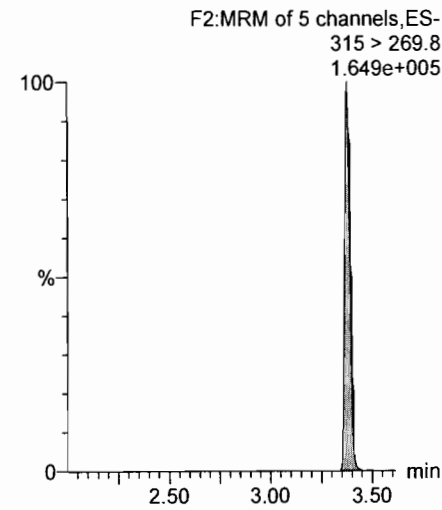
PFOA



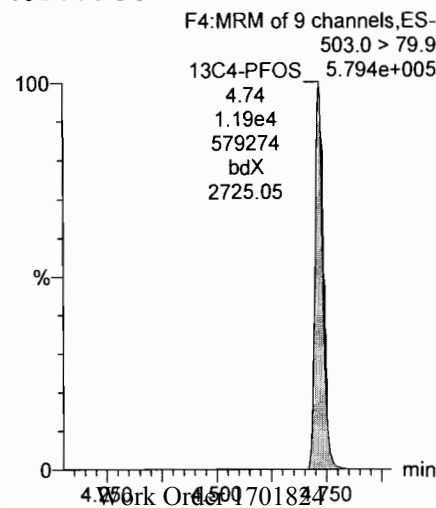
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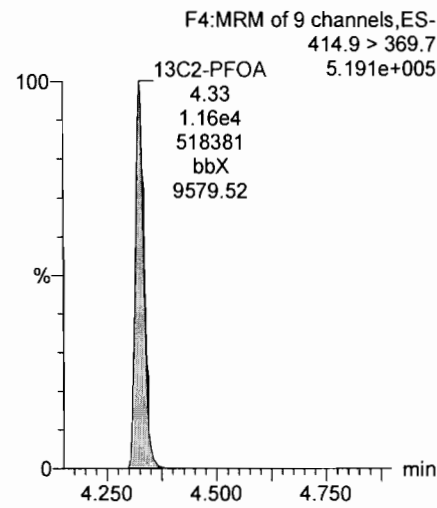
13C2-PFHxA



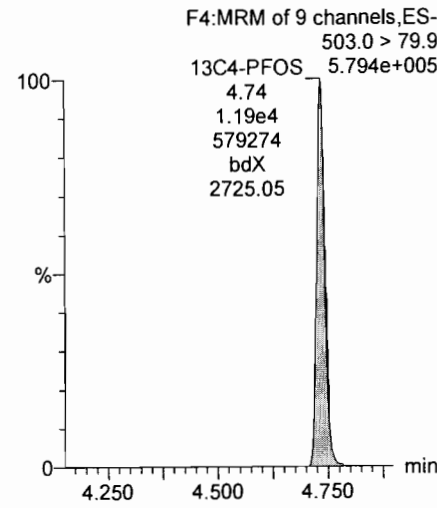
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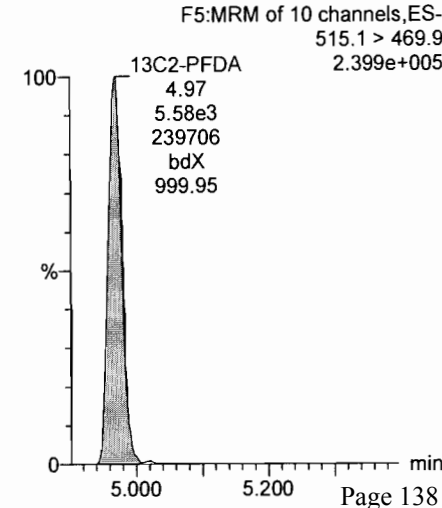
13C2-PFOA



13C4-PFOS



13C2-PFDA



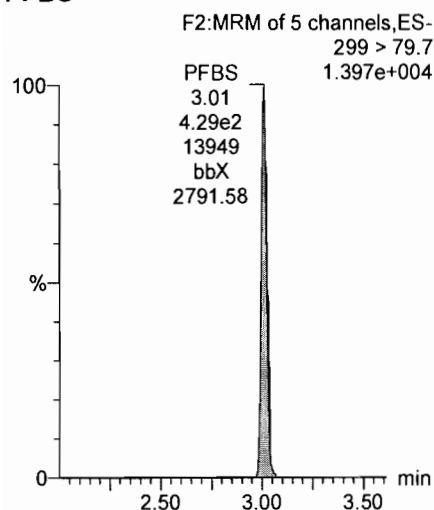
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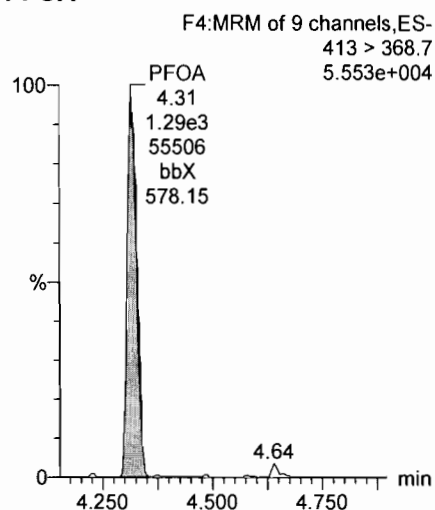
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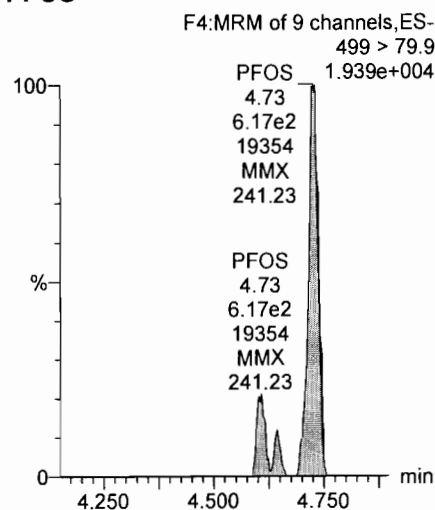
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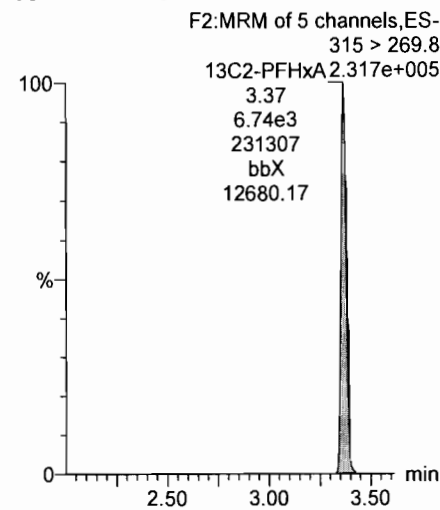
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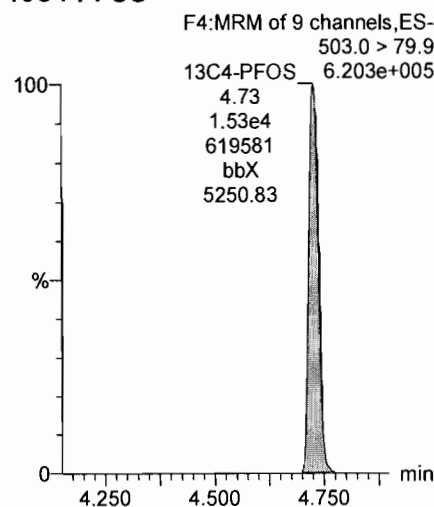
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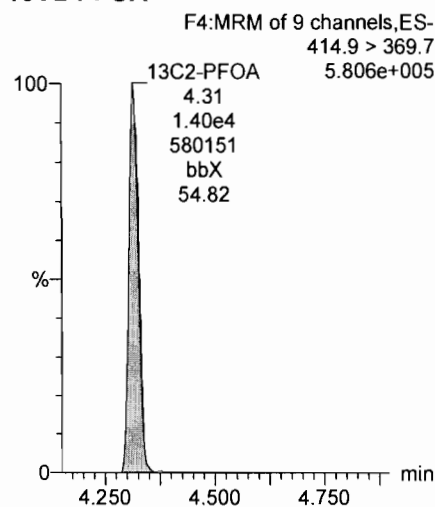
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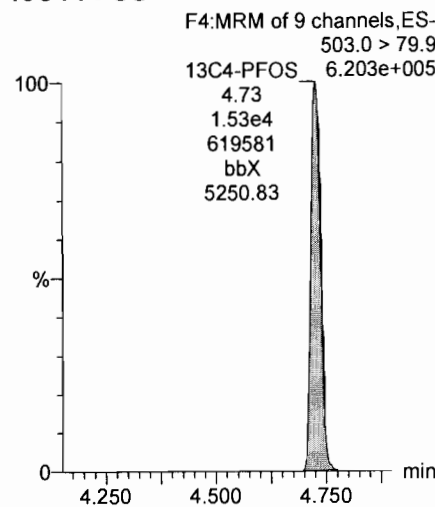
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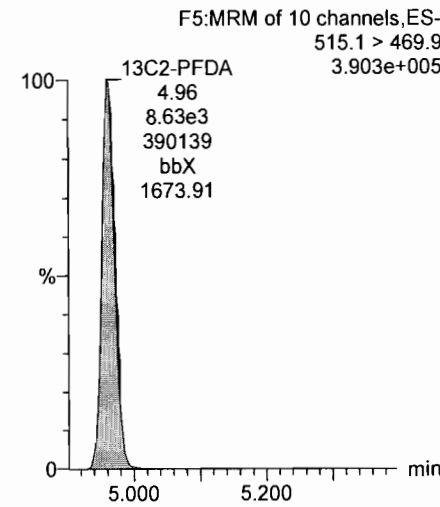
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13C4-PFOS



13C2-PFDA



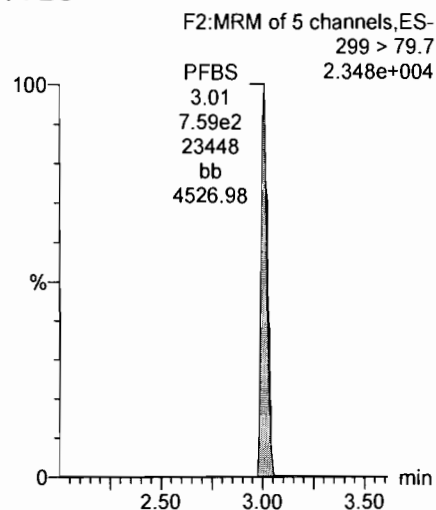
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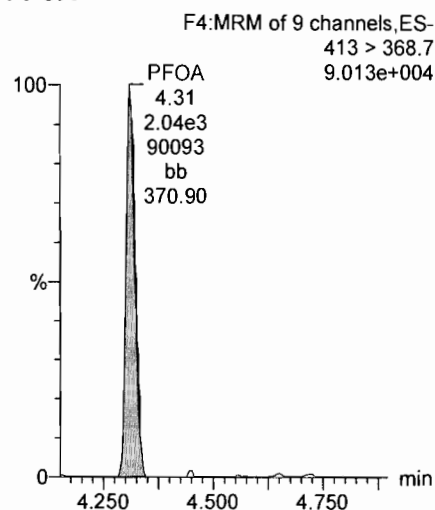
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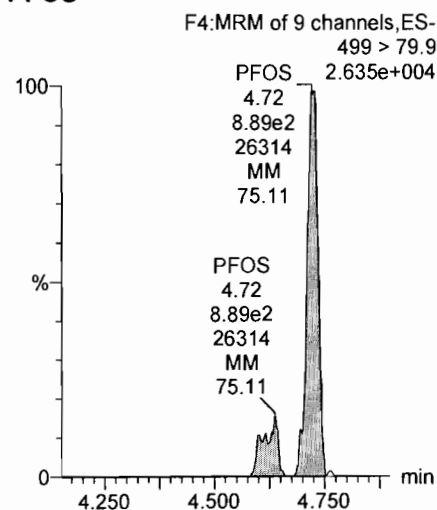
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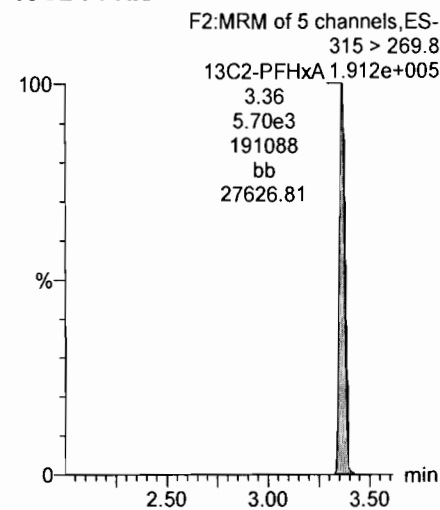
PFOA



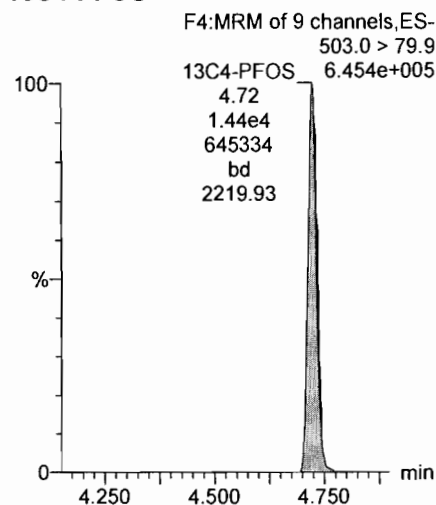
PFOS



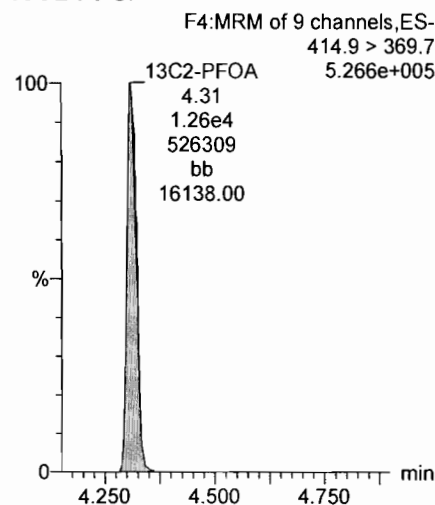
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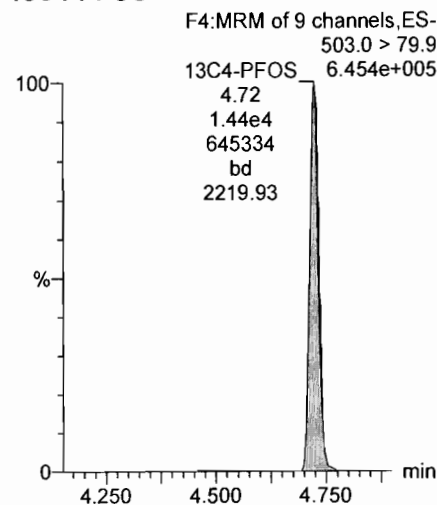
13C4-PFOS



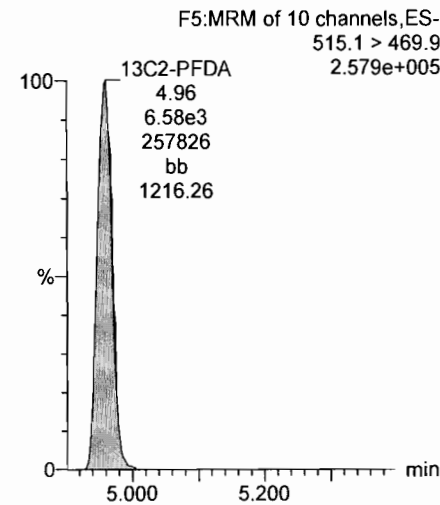
13C2-PFOA



13C4-PFOS



13C2-PFDA



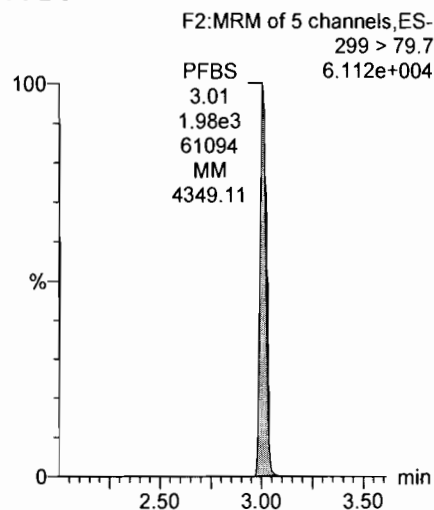
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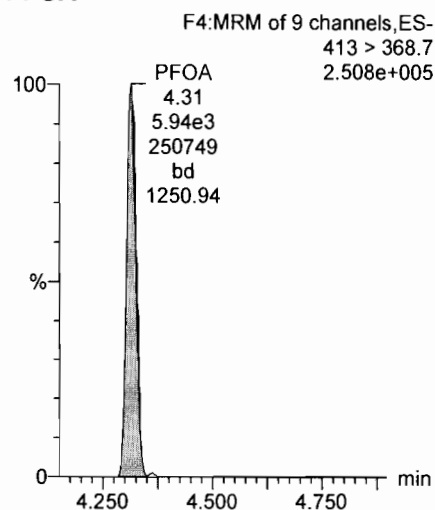
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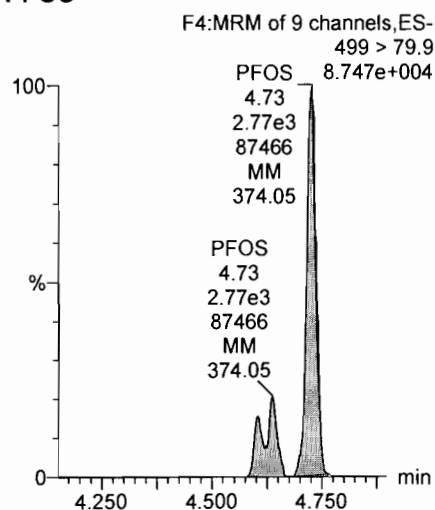
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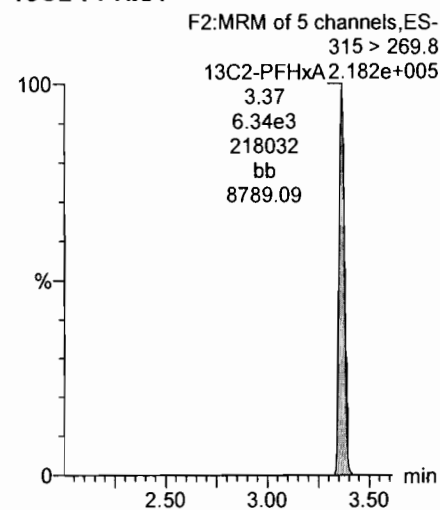
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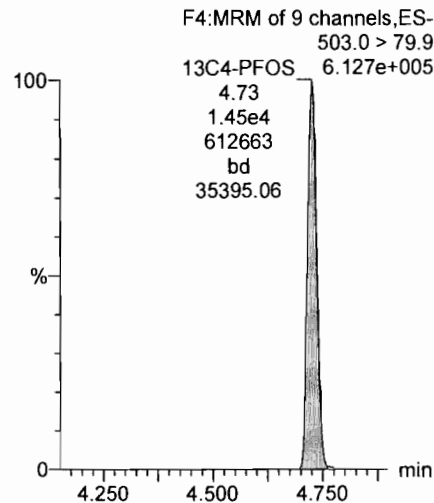
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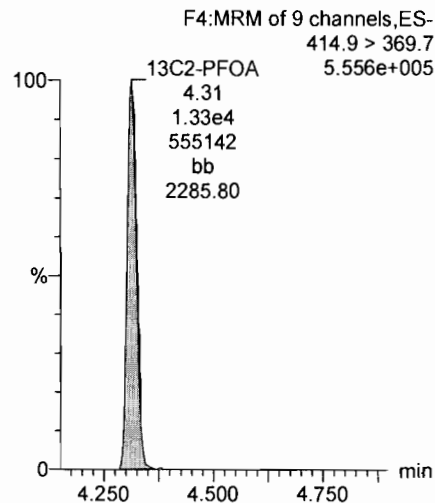
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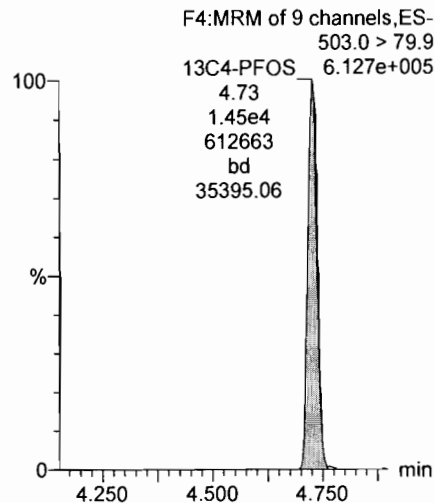
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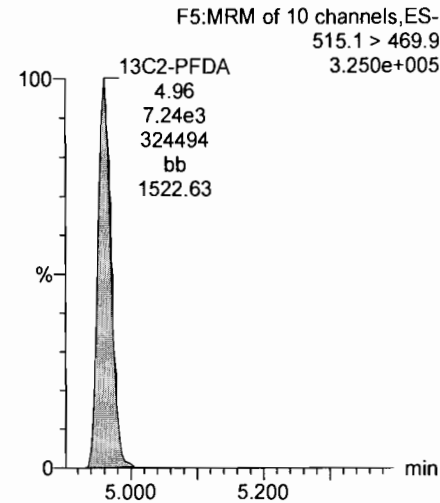
13C2-PFOA



13C4-PFOS



13C2-PFDA



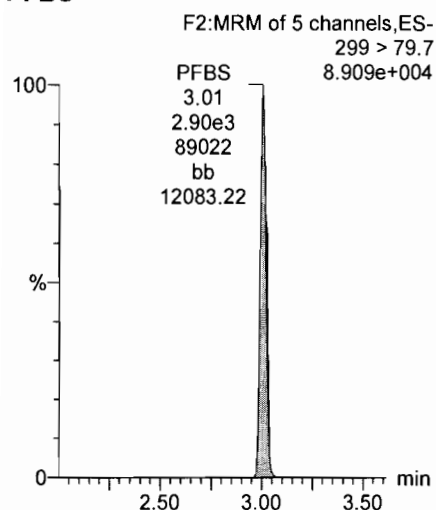
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Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

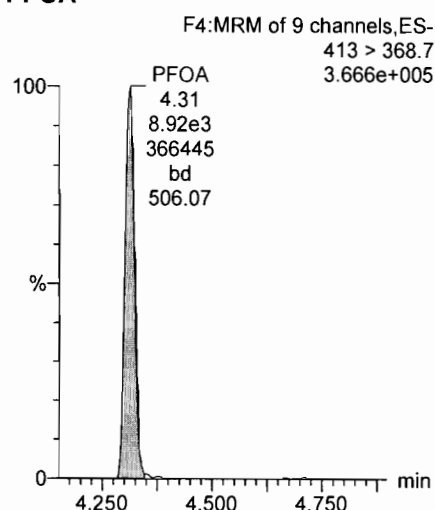
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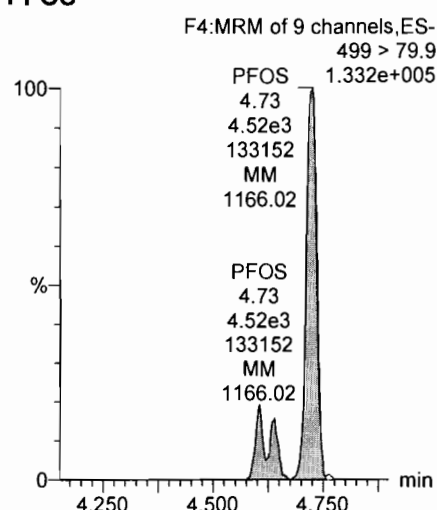
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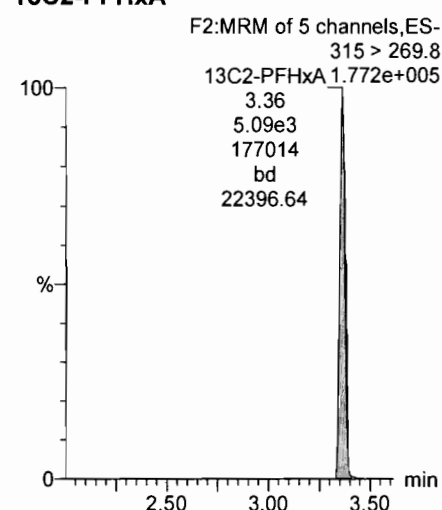
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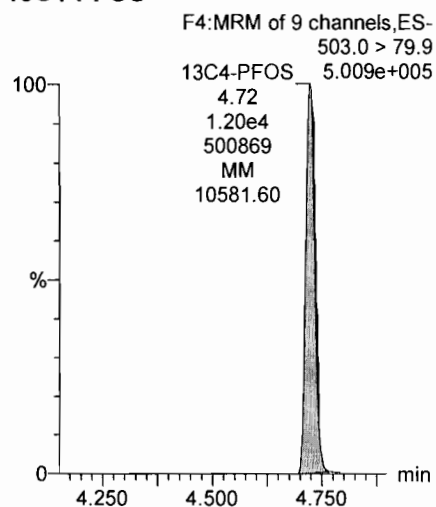
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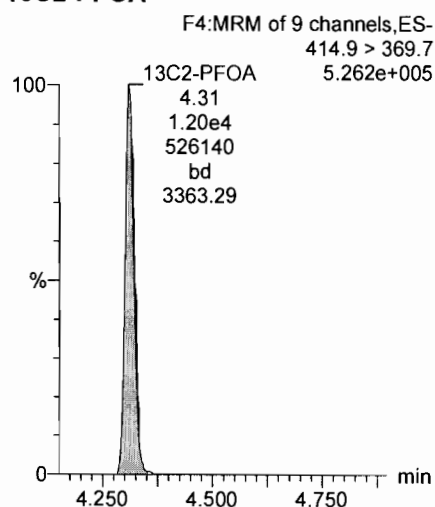
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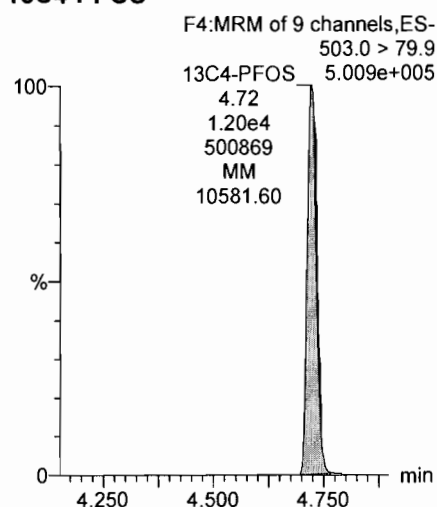
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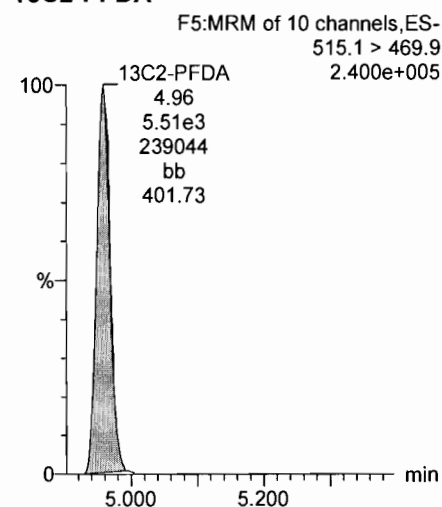
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13C4-PFOS



13C2-PFDA



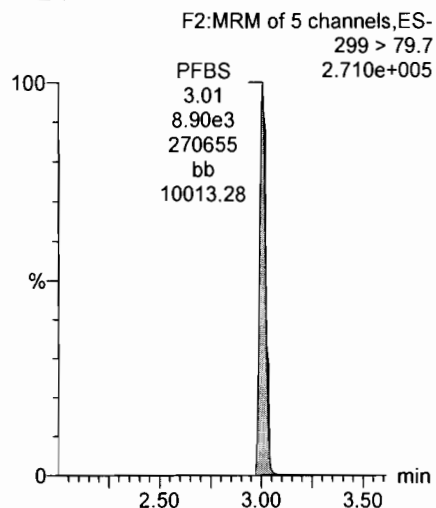
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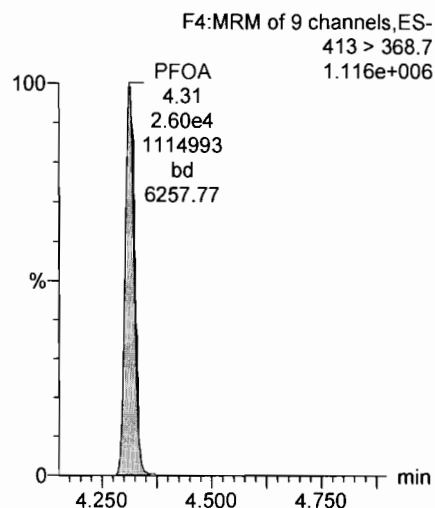
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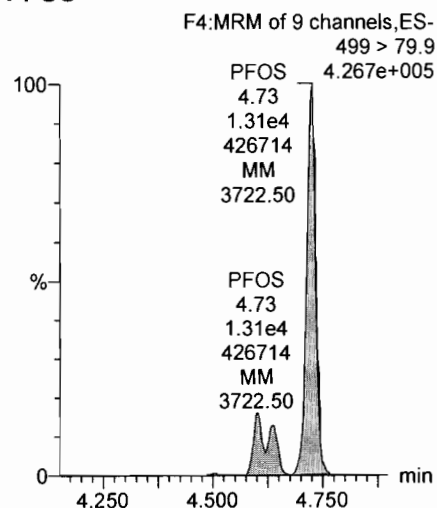
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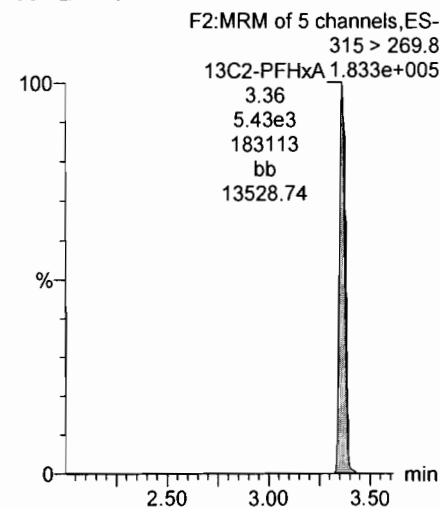
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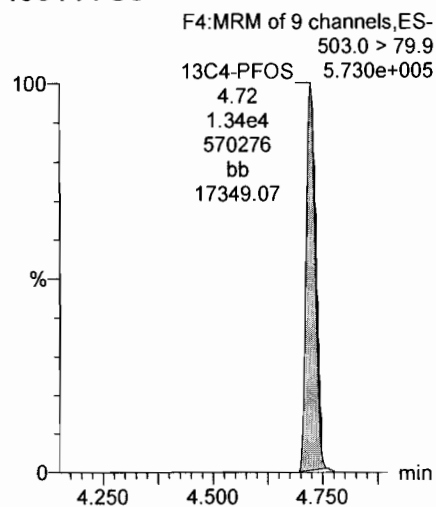
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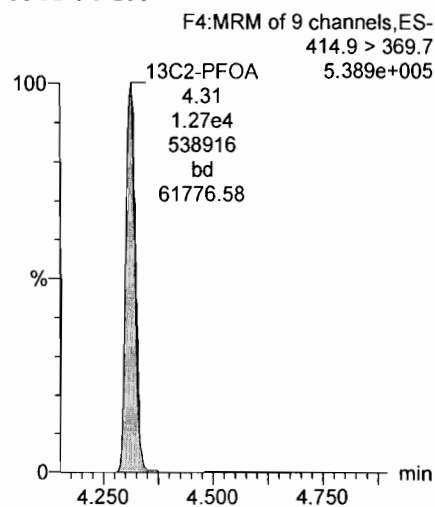
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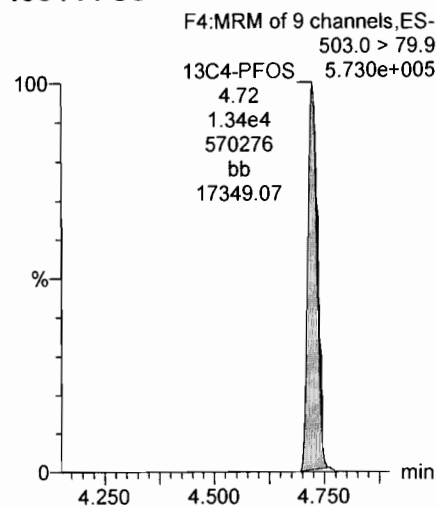
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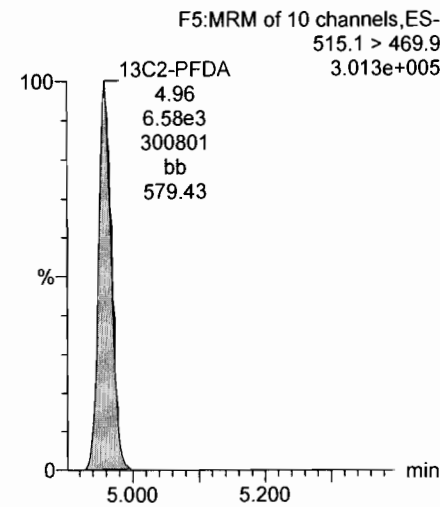
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13C4-PFOS



13C2-PFDA



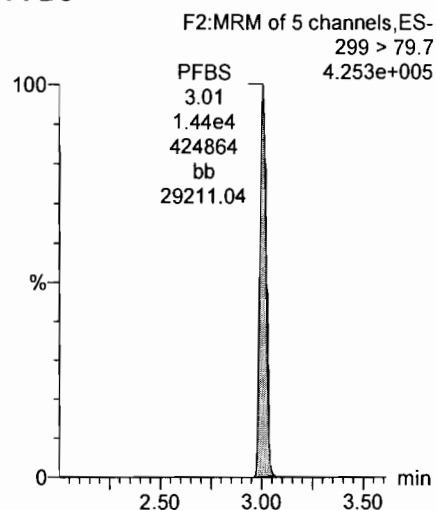
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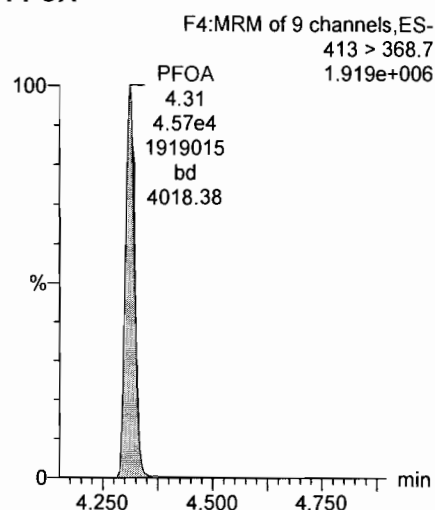
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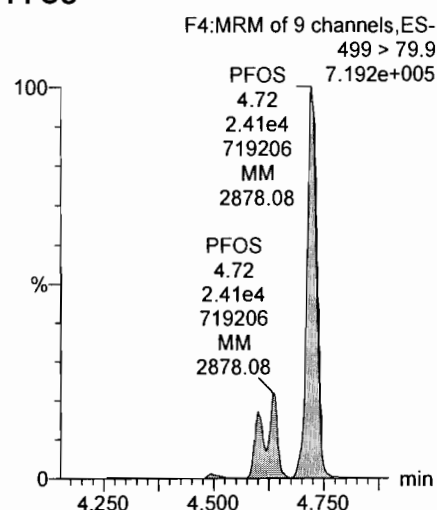
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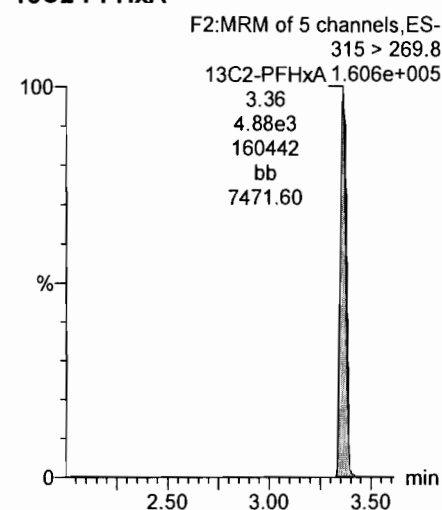
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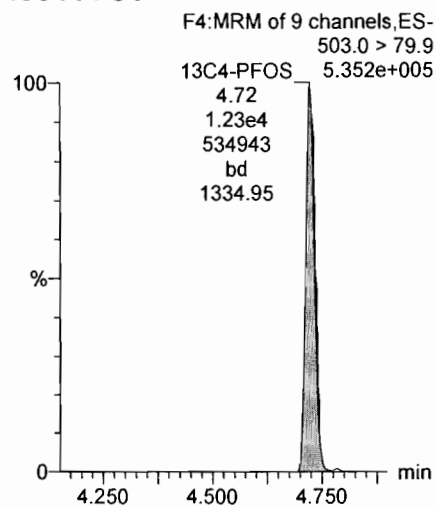
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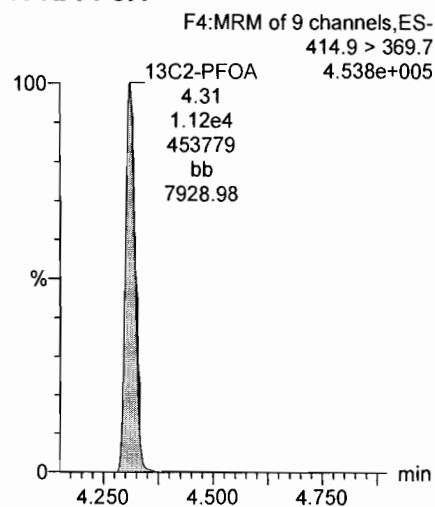
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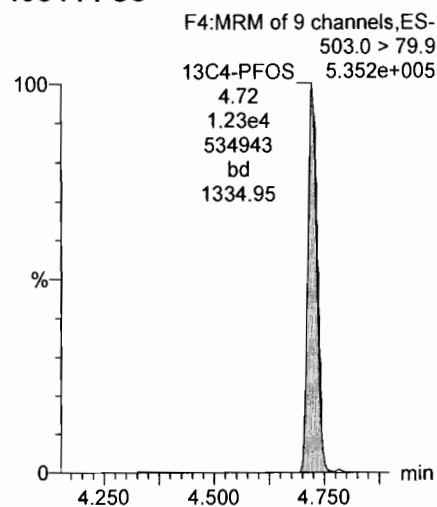
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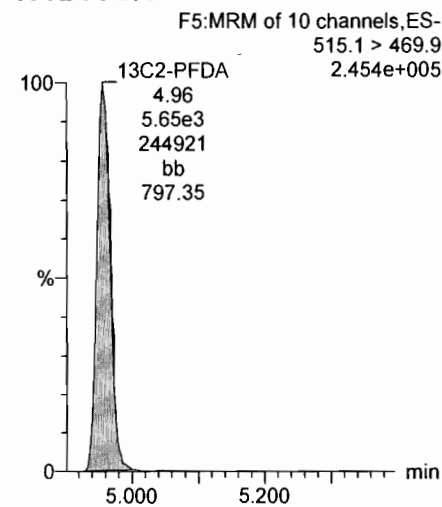
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13C4-PFOS



13C2-PFDA



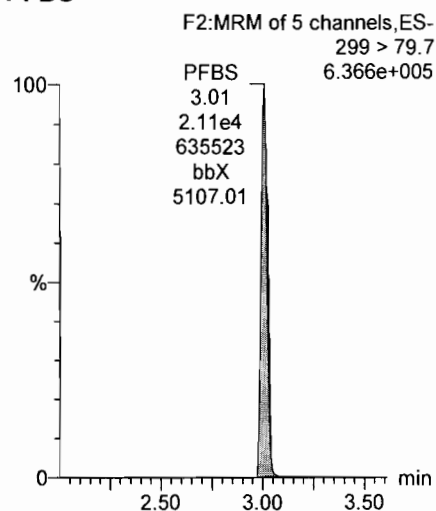
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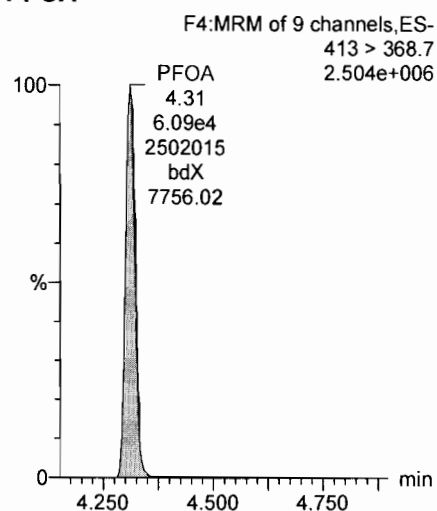
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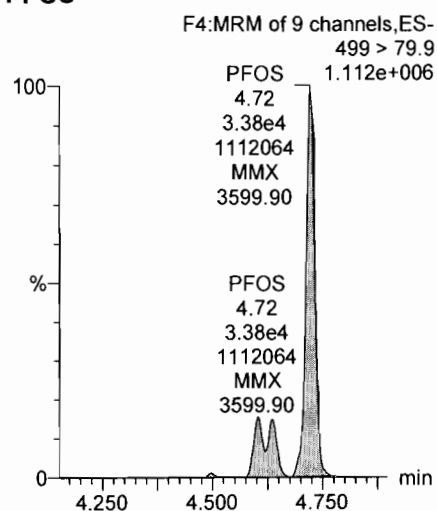
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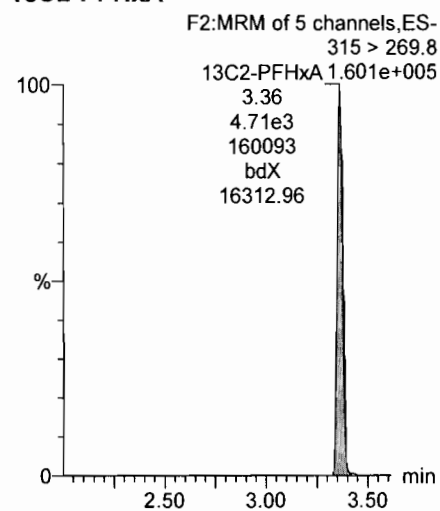
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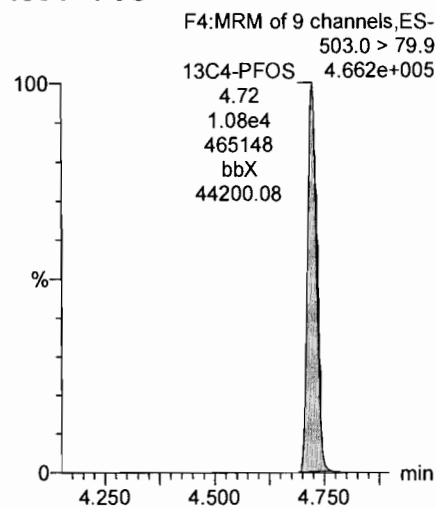
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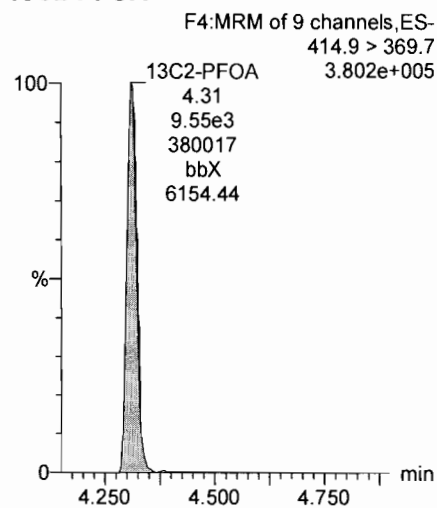
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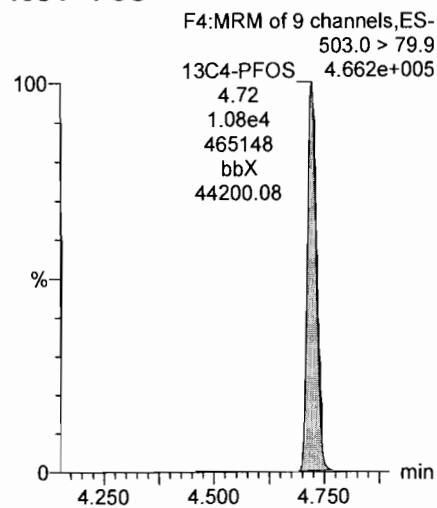
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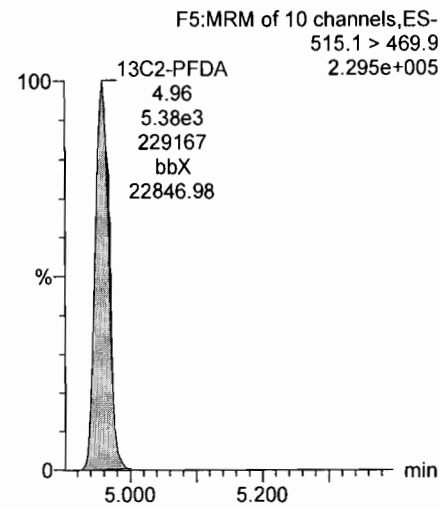
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13C2-PFDA



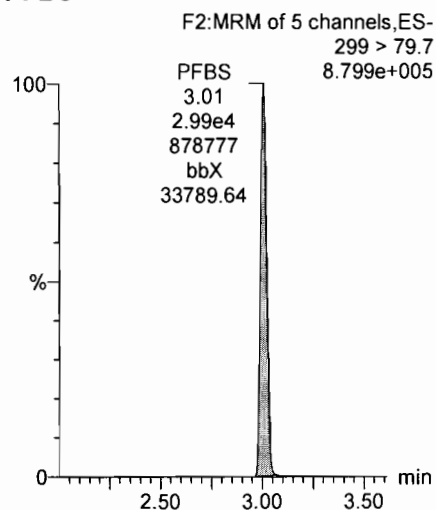
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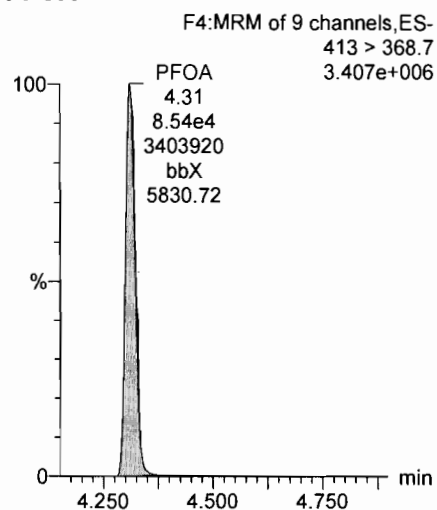
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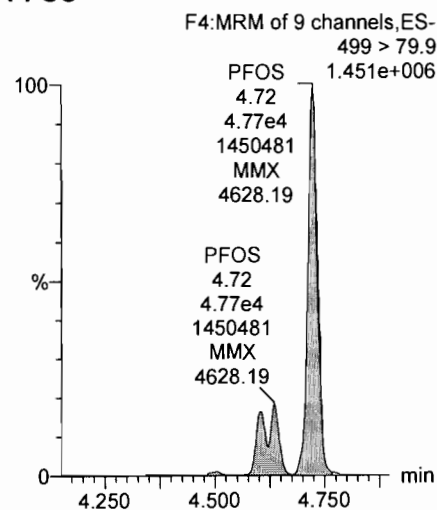
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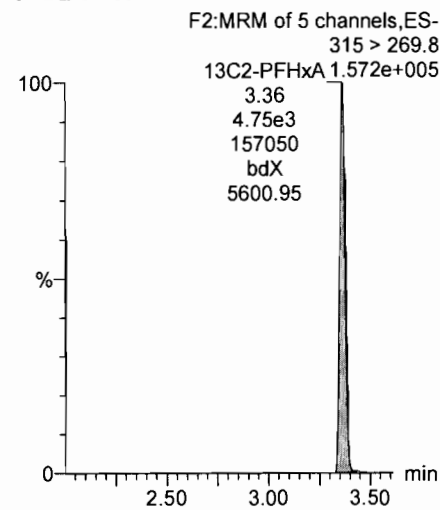
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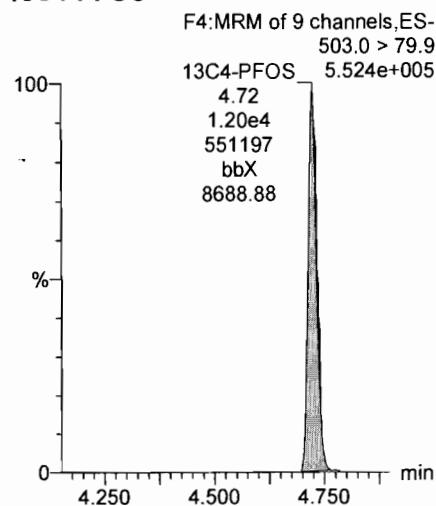
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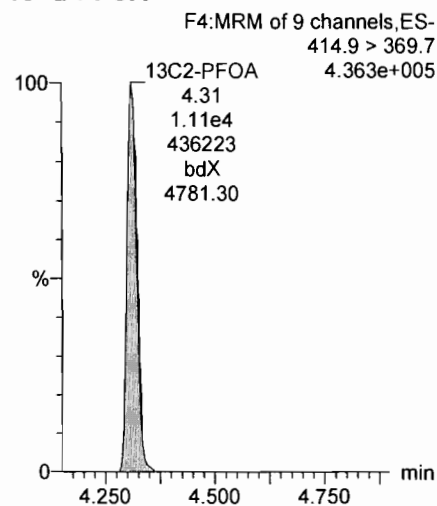
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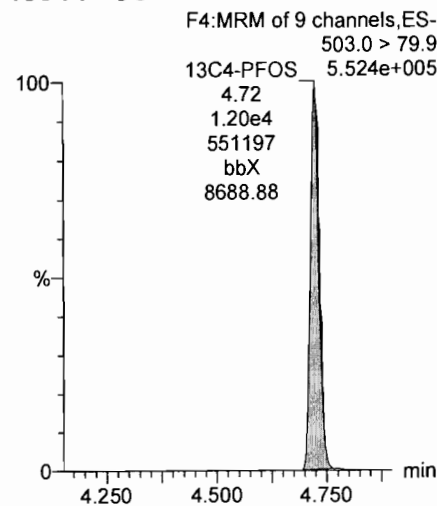
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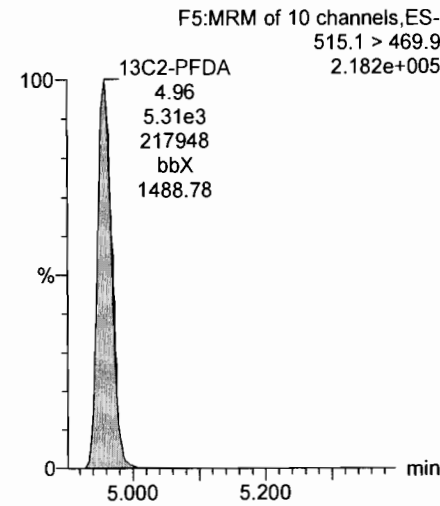
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13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-12.qld

Last Altered: Monday, December 11, 2017 10:41:12 Pacific Standard Time

Printed: Monday, December 11, 2017 10:41:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_DW_L3_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18_537_Q1_12-08-17_L3.cdb 10 Dec 2017 22:49:55

Name: 171208G2_12, Date: 08-Dec-2017, Time: 18:13:34, ID: ICV171208G2-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.46e3	1.15e4		1.0000	3.03	3.01	8.65	10.8	108.1
2	2 PFOA	413 > 368.7	8.56e3	1.03e4		1.0000	4.31	4.31	8.35	10.3	102.8
3	3 PFOS	499 > 79.9	5.12e3	1.15e4		1.0000	4.73	4.72	12.8	10.7	106.5
4	4 13C2-PFHxA	315 > 269.8	4.62e3	1.03e4	0.443	1.0000	3.37	3.36	4.50	10.2	101.6
5	5 13C2-PFDA	515.1 > 469.9	5.52e3	1.03e4	0.509	1.0000	4.94	4.96	5.38	10.6	105.6
6	6 13C2-PFOA	414.9 > 369.7	1.03e4	1.03e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.15e4	1.15e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

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Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-12.qld

Last Altered: Monday, December 11, 2017 10:41:12 Pacific Standard Time

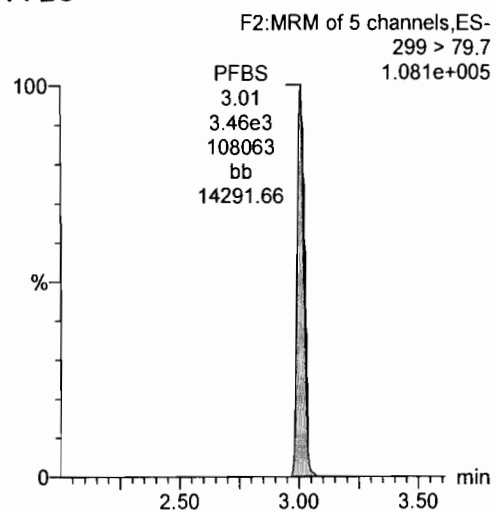
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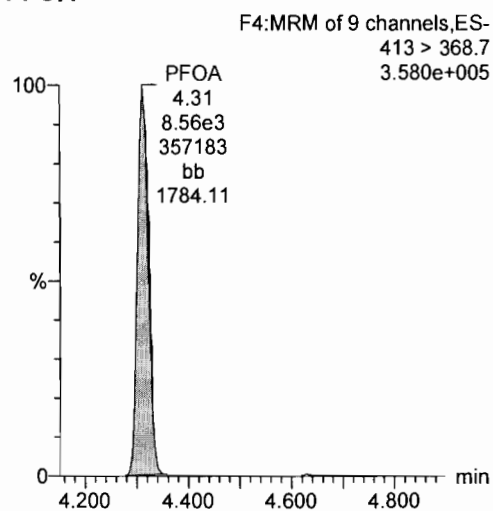
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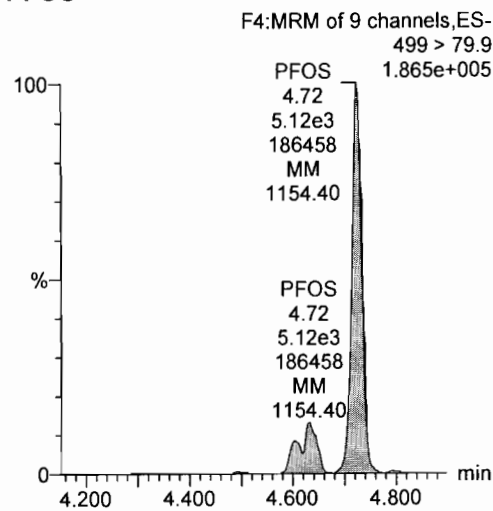
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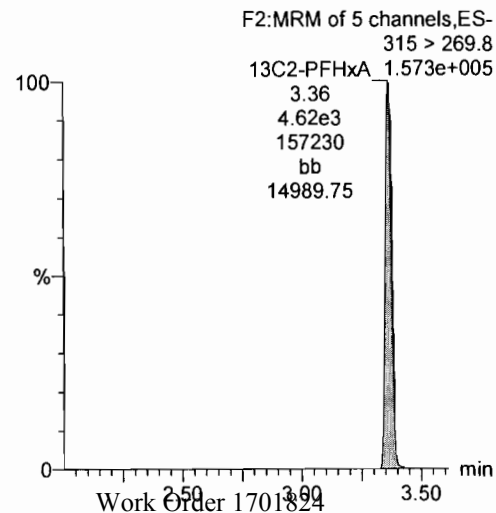
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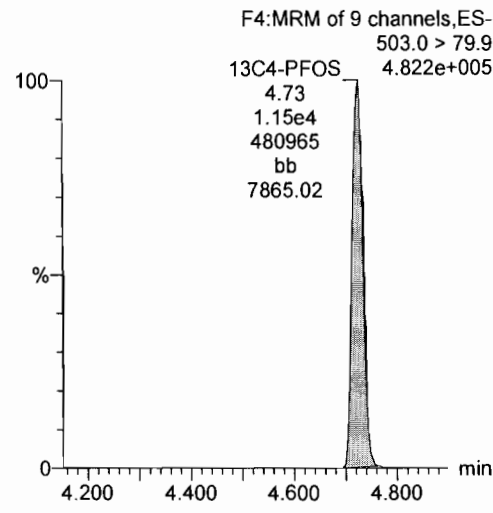
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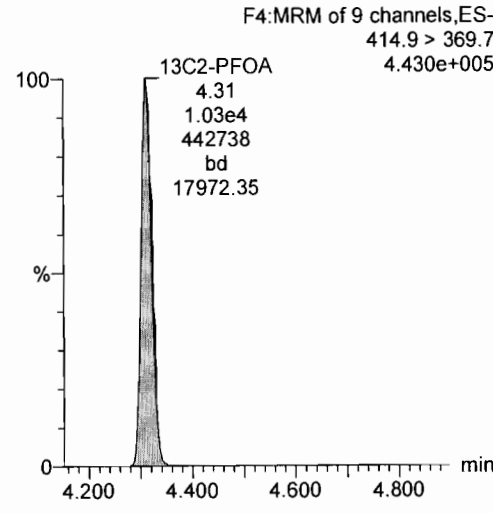
13C2-PFHxA



13C4-PFOS



13C2-PFOA



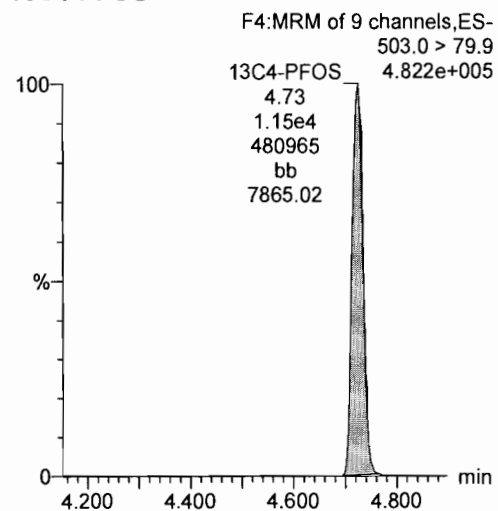
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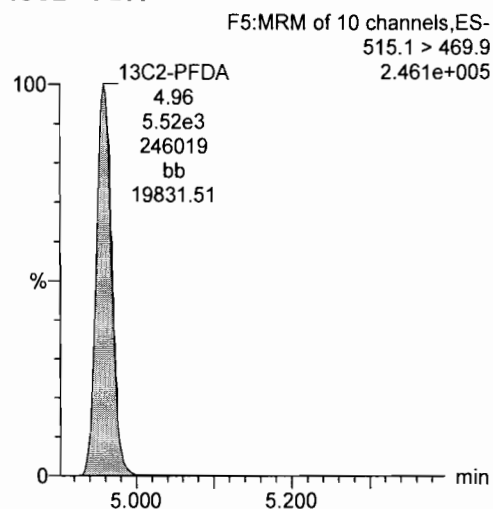
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Name: 171208G2_12, Date: 08-Dec-2017, Time: 18:13:34, ID: ICV171208G2-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030

13C4-PFOS



13C2-PFDA



Results

Contract_ID	DO_CTO Number	Phase	Installation_ID	Sample_Name	CH2M_ Code	Analysis_Group	Analytical_ Method	PRC_ Code	Lab_ Code	Lab_Name	Leachate Method	Sample_ Basis	Extraction Method	Result_ Type	Lab_QC_ Type	Sample_ Medium	QC_ Level	Date_Time_ Collected	Date_ Received	Leachate Date
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N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB32-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 10:52	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB33-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 11:16	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB34-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 12:05	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB35-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:40	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB36-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 13:24	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	

Result

Contract_ID	DO_CTO _Number	Phase	Installation_ID	Leachate _Time	Extraction_D ate	Extraction_T ime	Analysis_ Date	Analysis _Time	Lab_Sample_ID	Dilution	Run_ +AC1Nu mber	Percent Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:12:00	1701824-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.94	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:12:00	1701824-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.94	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:12:00	1701824-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.94	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:12:00	1701824-01	1	-999			13C2-PFHxA	13C2-PFHxA		99.2	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:25:00	1701824-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.84	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:25:00	1701824-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.84	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:25:00	1701824-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.84	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:25:00	1701824-02	1	-999			13C2-PFHxA	13C2-PFHxA		94.0	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:37:00	1701824-03	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.01	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:37:00	1701824-03	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.01	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:37:00	1701824-03	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.01	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:37:00	1701824-03	1	-999			13C2-PFHxA	13C2-PFHxA		102	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:50:00	1701824-04	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.80	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:50:00	1701824-04	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.80	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:50:00	1701824-04	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.80	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:50:00	1701824-04	1	-999			13C2-PFHxA	13C2-PFHxA		106	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:02:00	1701824-05	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:02:00	1701824-05	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:02:00	1701824-05	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:02:00	1701824-05	1	-999			13C2-PFHxA	13C2-PFHxA		96.1	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:15:00	1701824-06	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.78	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:15:00	1701824-06	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.78	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:15:00	1701824-06	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.78	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:15:00	1701824-06	1	-999			13C2-PFHxA	13C2-PFHxA		105	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:27:00	1701824-07	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.96	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:27:00	1701824-07	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.96	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:27:00	1701824-07	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.96	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:27:00	1701824-07	1	-999			13C2-PFHxA	13C2-PFHxA		104	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:39:00	1701824-08	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.75	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:39:00	1701824-08	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.75	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:39:00	1701824-08	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.75	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:39:00	1701824-08	1	-999			13C2-PFHxA	13C2-PFHxA		95.4	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:52:00	1701824-09	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:52:00	1701824-09	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:52:00	1701824-09	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.92	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	23:52:00	1701824-09	1	-999			13C2-PFHxA	13C2-PFHxA		108	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:04:00	1701824-10	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:04:00	1701824-10	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:04:00	1701824-10	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:04:00	1701824-10	1	-999			13C2-PFHxA	13C2-PFHxA		97.7	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:17:00	1701824-11	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.95	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:17:00	1701824-11	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.95	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:17:00	1701824-11	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.95	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171212	00:17:00	1701824-11	1	-999			13C2-PFHxA	13C2-PFHxA		101	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:15:00	1701824-12	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.85	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:15:00	1701824-12	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.85	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:15:00	1701824-12	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.85	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:15:00	1701824-12	1	-999			13C2-PFHxA	13C2-PFHxA		104	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:27:00	1701824-13	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.79	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:27:00	1701824-13	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.79	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:27:00	1701824-13	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.79	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:27:00	1701824-13	1	-999			13C2-PFHxA	13C2-PFHxA		98.6	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:40:00	1701824-14	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.10	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:40:00	1701824-14	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.10	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:40:00	1701824-14	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.10	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:40:00	1701824-14	1	-999			13C2-PFHxA	13C2-PFHxA		102	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:52:00	1701824-15	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:52:00	1701824-15	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	

Contract_ID	DO_CTO _Number	Phase	Installation_ID	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_ Control_ Limit_ Code	QC_ Accuracy_ Upper	QC_ Accuracy_ Lower	Control_L imit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.437	4.94	9.87	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.07	4.94	9.87	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.94	9.87	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.429	4.84	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.84	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.84	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.444	5.01	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.01	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	5.01	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.425	4.80	9.59	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	4.80	9.59	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.998	4.80	9.59	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.436	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.424	4.78	9.56	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.78	9.56	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.994	4.78	9.56	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.440	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.07	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.421	4.75	9.51	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.75	9.51	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.989	4.75	9.51	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.436	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.443	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.438	4.95	9.90	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.07	4.95	9.90	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.95	9.90	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.429	4.85	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.85	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.85	9.69	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.424	4.79	9.58	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.79	9.58	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.996	4.79	9.58	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.452	5.10	10.2	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.10	5.10	10.2	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	5.10	10.2	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.443	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.00	10.0	1701824	S7L0031

Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	Sample_Name	CH2M_ Code	Analysis Group	Analytical_ Method	PRC_ Code	Lab_ Code	Lab_Name	Leachate _Method	Sample_ Basis	Extraction _Method	Result_ Type	Lab_QC_ Type	Sample_ Medium	QC_ Level	Date_Time_ Collected	Date_ Received	Leachate _Date
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB37-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 14:30	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2RW38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-2FB38-1117	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	11/30/2017 15:53	12/02/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/07/2017 09:45	12/07/2017	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/07/2017 09:45	12/07/2017	

Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	Leachate _Time	Extraction_D ate	Extraction_T ime	Analysis_ Date	Analysis _Time	Lab_Sample_ID	Dilution	Run_ +AC1Nu mber	Percent_ Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:52:00	1701824-15	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	12:52:00	1701824-15	1	-999			13C2-PFHxA	13C2-PFHxA		85.9	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:04:00	1701824-16	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.90	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:04:00	1701824-16	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.90	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:04:00	1701824-16	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.90	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:04:00	1701824-16	1	-999			13C2-PFHxA	13C2-PFHxA		97.5	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:17:00	1701824-17	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.91	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:17:00	1701824-17	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.91	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:17:00	1701824-17	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.91	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:17:00	1701824-17	1	-999			13C2-PFHxA	13C2-PFHxA		97.3	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:29:00	1701824-18	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.82	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:29:00	1701824-18	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.82	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:29:00	1701824-18	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.82	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171209	13:29:00	1701824-18	1	-999			13C2-PFHxA	13C2-PFHxA		92.6	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:35:00	B7L0031-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:35:00	B7L0031-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:35:00	B7L0031-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:35:00	B7L0031-BLK1	1	-999			13C2-PFHxA	13C2-PFHxA		108	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:23:00	B7L0031-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		34.3	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:23:00	B7L0031-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		42.3	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:23:00	B7L0031-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		33.7	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:23:00	B7L0031-BS1	1	-999			13C2-PFHxA	13C2-PFHxA		103	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:48:00	B7L0031-MS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		33.8	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:48:00	B7L0031-MS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		42.4	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:48:00	B7L0031-MS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		35.2	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	21:48:00	B7L0031-MS1	1	-999			13C2-PFHxA	13C2-PFHxA		103	PCT_REC		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:00:00	B7L0031-MSD1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		32.3	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:00:00	B7L0031-MSD1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		40.7	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:00:00	B7L0031-MSD1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		34.1	NG_L		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171207	09:45:00	20171211	22:00:00	B7L0031-MSD1	1	-999			13C2-PFHxA	13C2-PFHxA		96.8	PCT_REC		

Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_ Control_ Limit_ Code	QC_ Accuracy_ Upper	QC_ Accuracy_ Lower	Control_L imit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.434	4.90	9.80	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.90	9.80	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.90	9.80	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.435	4.91	9.81	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.91	9.81	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.91	9.81	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.427	4.82	9.65	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	4.82	9.65	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.00	4.82	9.65	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.443	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.443	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.08	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.04	5.00	10.0	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		LSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	0.440	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.07	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.03	4.96	9.93	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		LSA	130	70					5.1				1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	0.436	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.06	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.02	4.92	9.84	1701824	S7L0031
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		LSA	130	70					5.1				1701824	S7L0031

**DATA VALIDATION SUMMARY REPORT
MCOLE ATLANTIC, NORTH CAROLINA**

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1701824
Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
Site: MCOLE Atlantic, North Carolina
Date: January 13, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CH-AT-2RW30-1117	1701824-01	Water
1MS	CH-AT-2RW30-1117MS	1701824-01MS	Water
1MSD	CH-AT-2RW30-1117MSD	1701824-01MSD	Water
2	CH-AT-2FB30-1117	1701824-02	Water
3	CH-AT-2RW31-1117	1701824-03	Water
4	CH-AT-2FB31-1117	1701824-04	Water
5	CH-AT-2RW32-1117	1701824-05	Water
6	CH-AT-2FB32-1117	1701824-06	Water
7	CH-AT-2RW33-1117	1701824-07	Water
8	CH-AT-2FB33-1117	1701824-08	Water
9	CH-AT-2RW34-1117	1701824-09	Water
10	CH-AT-2FB34-1117	1701824-10	Water
11	CH-AT-2RW35-1117	1701824-11	Water
12	CH-AT-2FB35-1117	1701824-12	Water
13	CH-AT-2RW36-1117	1701824-13	Water
14	CH-AT-2FB36-1117	1701824-14	Water
15	CH-AT-2RW37-1117	1701824-15	Water
16	CH-AT-2FB37-1117	1701824-16	Water
17	CH-AT-2RW38-1117	1701824-17	Water
18	CH-AT-2FB38-1117	1701824-18	Water

A full data validation was performed on the analytical data for nine water samples and nine aqueous field blank samples collected on November 30, 2017 by CH2M HILL at the MCOLE Atlantic site in Atlantic, North Carolina. The samples were analyzed under the EPA Method "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis
PFCs

Method References
USEPA Method 537

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM),

Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review,” January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CH-AT-2FB30-1117	None - ND	-	-	-
CH-AT-2FB31-1117	None - ND	-	-	-
CH-AT-2FB32-1117	None - ND	-	-	-
CH-AT-2FB33-1117	None - ND	-	-	-
CH-AT-2FB34-1117	None - ND	-	-	-
CH-AT-2FB35-1117	None - ND	-	-	-
CH-AT-2FB36-1117	None - ND	-	-	-
CH-AT-2FB37-1117	None - ND	-	-	-
CH-AT-2FB38-1117	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

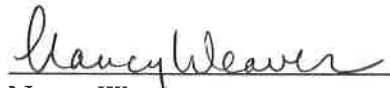
- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:


Nancy Weaver
Senior Chemist

Dated: 1/15/18

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Sample ID: CH-AT-2RW30-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-01	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 09:15		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.437	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12
PFOA	ND	1.07	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12
PFOS	ND	1.03	4.94	9.87		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	99.2	70 - 130		B7L0031	07-Dec-17	0.253 L	11-Dec-17 22:12	1
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

new 11.31.18

Sample ID: CH-AT-2FB30-1117

EPA Method 537

Client Data			Laboratory Data							
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701824-02	Column:	BEH HILIC			
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 09:15	Date Received:	02-Dec-17 09:37					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOA	ND	1.05	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
PFOS	ND	1.01	4.84	9.69		B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	94.0	70 - 130			B7L0031	07-Dec-17	0.258 L	11-Dec-17 22:25	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes

new 11.31.18

Sample ID: CH-AT-2RW31-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-03	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 10:10		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.444	5.01	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 22:37
PFOA	ND	1.08	5.01	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 22:37
PFOS	ND	1.04	5.01	10.0		B7L0031	07-Dec-17	0.250 L	11-Dec-17 22:37
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	102	70 - 130			B7L0031	07-Dec-17	0.250 L	11-Dec-17 22:37
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

11/3/18

Sample ID: CH-AT-2FB31-1117										EPA Method 537			
Client Data			Laboratory Data										
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701824-04	Batch	Extracted	Samp Size	Analyzed	Dilution	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 10:10	Date Received:	02-Dec-17 09:37								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.425	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1			
PFOA	ND	1.04	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1			
PFOS	ND	0.998	4.80	9.59		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1			
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	SURR	106	70 - 130		B7L0031	07-Dec-17	0.261 L	11-Dec-17 22:50	1				

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes

new 1.1.31.8

Sample ID: CH-AT-2RW32-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-05	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 10:52		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	96.1	70 - 130		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:02	1
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL. When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes									

22/11/3/18

Sample ID: CH-AT-2FB32-1117										EPA Method 537			
Client Data				Laboratory Data									
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701824-06	Batch	Extracted	Samp Size	Analyzed	Dilution	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 10:52	Date Received:	02-Dec-17 09:37								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.424	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1			
PFOA	ND	1.03	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1			
PFOS	ND	0.994	4.78	9.56		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1			
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	SURR	105	70 - 130		B7L0031	07-Dec-17	0.262 L	11-Dec-17 23:15	1				

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes

11.31.8

Sample ID: CH-AT-2RW33-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-07	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 11:16		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.440	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27
PFOA	ND	1.07	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27
PFOS	ND	1.03	4.96	9.93		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
I3C2-PFHxA	SURR	104	70 - 130		B7L0031	07-Dec-17	0.252 L	11-Dec-17 23:27	1
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL. When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes									

111131.8

Sample ID: CH-AT-2FB33-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-08	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 11:16		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.421	4.75	9.51		B7L0031	07-Dec-17	0.263 L	11-Dec-17 23:39
PFOA	ND	1.03	4.75	9.51		B7L0031	07-Dec-17	0.263 L	11-Dec-17 23:39
PFOS	ND	0.989	4.75	9.51		B7L0031	07-Dec-17	0.263 L	11-Dec-17 23:39
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
I3C2-PFHxA	SURR	95.4	70 - 130		B7L0031	07-Dec-17	0.263 L	11-Dec-17 23:39	1
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes									

11/16/18

Sample ID: CH-AT-2RW34-1117										EPA Method 537			
Client Data				Laboratory Data									
Name: CH2M Hill		Matrix: Drinking Water		Lab Sample: 1701824-09		Column: BEH HILIC							
Project: CTO-08/MCOLF ATLANTIC PFAS INV.		Date Collected: 30-Nov-17 12:05		Date Received: 02-Dec-17 09:37									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.436	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1			
PFOA	ND	1.06	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1			
PFOS	ND	1.02	4.92	9.84		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1			
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	SURR	108	70 - 130		B7L0031	07-Dec-17	0.254 L	11-Dec-17 23:52	1				
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCCL- Lower control limit - upper control limit Results reported to the DL. When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes													

new 11/31/18

Sample ID: CH-AT-2FB34-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-10	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 12:05		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	12-Dec-17 00:04
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	12-Dec-17 00:04
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	12-Dec-17 00:04
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	97.7	70 - 130			B7L0031	07-Dec-17	0.250 L	12-Dec-17 00:04
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

new 11,13,1.8

Sample ID: CH-AT-2RW35-1117										EPA Method 537			
Client Data				Laboratory Data									
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701824-11	Batch	Extracted	Samp Size	Analyzed	Dilution	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 13:40	Date Received:	02-Dec-17 09:37								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.438	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1			
PFOA	ND	1.07	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1			
PFOS	ND	1.03	4.95	9.90		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1			
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	SURR	101	70 - 130		B7L0031	07-Dec-17	0.253 L	12-Dec-17 00:17	1				

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCCL- Lower control limit - upper control limit
Results reported to the DL

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes

11.31.18

Sample ID: CH-AT-2FB35-1117										EPA Method 537									
Client Data					Laboratory Data														
Name:		CH2M Hill			Matrix:		Drinking Water			Lab Sample:		1701824-12			Column:		BEH HILIC		
Project:		CTO-08/MCOLF ATLANTIC PFAS INV.			Date Collected:		30-Nov-17 13:40			Date Received:		02-Dec-17 09:37							
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution									
PFBS	ND	0.429	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1									
PFOA	ND	1.05	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1									
PFOS	ND	1.01	4.85	9.69		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1									
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution										
13C2-PFHxA	SURR	104	70 - 130		B7L0031	07-Dec-17	0.258 L	09-Dec-17 12:15	1										
DL - Detection Limit		LOD - Limit of Detection			LCL-UCL- Lower control limit - upper control limit						When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.								
		LOQ - Limit of quantitation			Results reported to the DL						Only the linear isomer is reported for all other analytes								

1701824

Sample ID: CH-AT-2RW36-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-13	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 13:24		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.424	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27
PFOA	ND	1.03	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27
PFOS	ND	0.996	4.79	9.58		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	98.6	70 - 130		B7L0031	07-Dec-17	0.261 L	09-Dec-17 12:27	
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

1701824

Sample ID: CH-AT-2FB36-1117										EPA Method 537				
Client Data					Laboratory Data									
Name:	CH2M Hill				Matrix:	Drinking Water				Lab Sample:	1701824-14			
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.				Date Collected:	30-Nov-17 13:24				Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
PFBS	ND	0.452	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1				
PFOA	ND	1.10	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1				
PFOS	ND	1.06	5.10	10.2		B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1				
Labeled Standards	% Recovery	Limits			Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	102	70 - 130				B7L0031	07-Dec-17	0.245 L	09-Dec-17 12:40	1				
DL - Detection Limit	LOD - Limit of Detection				When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.									
	LOQ - Limit of quantitation				Only the linear isomer is reported for all other analytes									

W11131.8

Sample ID: CH-AT-2RW37-1117									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-15	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	30-Nov-17 14:30		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52
PFOA	ND	1.08	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52
PFOS	ND	1.04	5.00	10.0		B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	85.9	70 - 130			B7L0031	07-Dec-17	0.250 L	09-Dec-17 12:52
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCCL- Lower control limit - upper control limit Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

new 11.3/18

Sample ID: CH-AT-2FB37-1117									
EPA Method 537									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-16	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 14:30		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.434	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04
PFOA	ND	1.06	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04
PFOS	ND	1.02	4.90	9.80		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	97.5	70 - 130			B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:04
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCL- Lower control limit - upper control limit Results reported to the DL. When reported, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.									

new 1.31.8

Sample ID: CH-AT-2RW38-1117									
EPA Method 537									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1701824-17	Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	30-Nov-17 15:53		Date Received:	02-Dec-17 09:37			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.435	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17
PFOA	ND	1.06	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17
PFOS	ND	1.02	4.91	9.81		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	97.3	70 - 130		B7L0031	07-Dec-17	0.255 L	09-Dec-17 13:17	1
DL - Detection Limit LOD - Limit of Detection LCL-UCL- Lower control limit - upper control limit LOQ - Limit of quantitation Results reported to the DL When reported, PFHxS, PFOA and PFOS include both linear and branched isomers Only the linear isomer is reported for all other analytes									

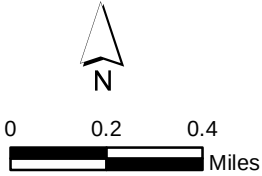
rw1131.8

Sample ID: CH-AT-2FB38-1117							EPA Method 537				
Client Data			Laboratory Data								
Name:	CH2M Hill		Matrix:	Drinking Water		Lab Sample:	1701824-18		Column:	BEH HILIC	
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.		Date Collected:	30-Nov-17 15:53		Date Received:	02-Dec-17 09:37				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.427	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1	
PFOA	ND	1.04	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1	
PFOS	ND	1.00	4.82	9.65		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	92.6	70 - 130		B7L0031	07-Dec-17	0.259 L	09-Dec-17 13:29	1		
DL - Detection Limit				When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.							
LOD - Limit of Detection				Only the linear isomer is reported for all other analytes							
LOQ - Limit of quantitation											

11/13/18



- Legend**
- Proposed Sample Location
 - Public Water Supply Well
 - Direction of Groundwater Flow
 - MCOLF Atlantic - 1-mile zone
 - Base Boundary
 - Site Boundary (suspected source)
 - Parcels



1 inch = 0.4 mile
Imagery: Esri, 2016

Figure 3
Proposed Sampling Locations
Marine Corps Outlying Landing Field Atlantic
Atlantic Beach, North Carolina