Naval Facilities Engineering Command

Groundwater Investigation Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Figure, SDG 1700296

Outlying Landing Field Coupeville
Naval Air Station Whidbey Island
Coupeville, Washington

February 2019

March 14, 2017

Vista Work Order No. 1700296

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 March 07, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO-08'.

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 Lopez 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. 1700296
Case Narrative

Sample Condition on Receipt:

Eight groundwater 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:

Modified EPA Method 537

All samples contained particulate and were centrifuged prior to extraction.

The aqueous samples were extracted and analyzed for PFBS, PFOA, and PFOS using Modified 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 Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

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

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1700296-01	WI-CV-GW08M-0317	04-Mar-17 12:00	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-02	WI-CV-EB12-030317	03-Mar-17 17:15	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-03	WI-CV-GW07S-0317	04-Mar-17 13:25	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-04	WI-CV-EB13-030417	04-Mar-17 14:30	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-05	WI-CV-GW14M-0317	04-Mar-17 17:00	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-06	WI-CV-GW13S-0317	03-Mar-17 17:05	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-07	WI-CV-GW07M-0317	04-Mar-17 17:15	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-08	WI-CV-EB14-030417	04-Mar-17 17:45	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0034	Lab Sample:	B7C0034-BLK1
Sample Size:	0.125 L	Date Extracted:	08-Mar-2017 8:40	Date Analyzed:	09-Mar-17 16:38 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFOA	ND	0.651	2.00	8.00	
PFOS	ND	0.807	0.900	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	127	60 - 150	
IS	13C2-PFOA	89.3	60 - 150	
IS	13C8-PFOS	118	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0034	Lab Sample:	B7C0034-BS1
Sample Size:	0.125 L	Date Extracted:	08-Mar-2017 8:40	Date Analyzed:	09-Mar-17 16:13 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	81.9	80.0	102	60 - 130
PFOA	86.5	80.0	108	70 - 130
PFOS	88.6	80.0	111	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	107	60 - 150
IS	13C2-PFOA	81.7	60 - 150
IS	13C8-PFOS	108	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW08M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 12:00
Location:	MW-08M

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-01	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 16:51	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.74	3.91	7.79	
PFOA	ND	0.634	1.95	7.79	
PFOS	ND	0.786	0.879	7.79	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	117	60 - 150	
IS	13C2-PFOA	91.9	60 - 150	
IS	13C8-PFOS	110	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB12-030317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	03-Mar-2017 17:15
Location:	EB12

Sample Data

Matrix:	Groundwater
Sample Size:	0.121 L

Laboratory Data

Lab Sample:	1700296-02	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:03	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.85	4.13	8.28	
PFOA	ND	0.674	2.07	8.28	
PFOS	ND	0.836	0.930	8.28	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	105	60 - 150	
IS	13C2-PFOA	81.9	60 - 150	
IS	13C8-PFOS	101	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW07S-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 13:25
Location:	MW-07S

Sample Data

Matrix:	Groundwater
Sample Size:	0.114 L

Laboratory Data

Lab Sample:	1700296-03	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:16	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.97	4.39	8.81	
PFOA	ND	0.717	2.19	8.81	
PFOS	ND	0.889	0.987	8.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	91.0	60 - 150	
IS	13C8-PFOS	123	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB13-030417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 14:30
Location:	EB-13

Sample Data

Matrix:	Groundwater
Sample Size:	0.124 L

Laboratory Data

Lab Sample:	1700296-04	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:28	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.03	8.08	
PFOA	ND	0.657	2.02	8.08	
PFOS	ND	0.815	0.907	8.08	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.1	60 - 150	
IS	13C8-PFOS	107	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW14M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:00
Location:	MW-14M

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700296-05	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:41	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	111	1.82	4.07	8.14	
PFOA	166	0.662	2.03	8.14	
PFOS	0.898	0.821	0.915	8.14	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.5	60 - 150	
IS	13C2-PFOA	95.4	60 - 150	
IS	13C8-PFOS	122	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW13S-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	03-Mar-2017 17:05
Location:	MW-13S

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700296-06	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:53 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.07	8.11	
PFOA	ND	0.660	2.03	8.11	
PFOS	ND	0.818	0.915	8.11	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.4	60 - 150	
IS	13C8-PFOS	119	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW07M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:15
Location:	MW-07M

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-07	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 18:06	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.80	
PFOA	ND	0.635	1.95	7.80	
PFOS	0.844	0.787	0.879	7.80	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	90.0	60 - 150	
IS	13C8-PFOS	124	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB14-030417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:45
Location:	EB-14

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-08	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 18:18	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.82	
PFOA	ND	0.636	1.95	7.82	
PFOS	ND	0.789	0.879	7.82	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	110	60 - 150	
IS	13C2-PFOA	102	60 - 150	
IS	13C8-PFOS	114	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, 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**

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
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

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Laboratory Project ID: 1700296 Temp: 5.7 °C
Storage ID: WR-2 E5 Storage Secured: Yes ☑ No ☐

Project ID: Navy CLEAN CTO 08 P.O.#: 10006-7-10651 / 679550.09.FI.WS Sampler: B. Prentice, E. Bilyeu, M. Witmer (name)

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☒ 7 days Specify:

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Katie Tippin	CH2M					

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
			Sydney Roughton Sydney Roughton	3/7/17	1034
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

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

ATTN: Sample Receiving

Method of Shipment: FedEx

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA 1613 2378-TCDD	EPA 1613 TCDD/TCDF	EPA 1613 PCDD/PCDF	EPA 8290 2378-TCDD	EPA 8290 TCDD/TCDF	EPA 8290 PCDD/PCDF	EPA 8280 2378-TCDD	EPA 8280 TCDD/TCDF	EPA 8280 PCDD/PCDF	EPA 1668 TOTALS	EPA 1668 COPLANAR PCB's	EPA 1668 209 CONGENERS	EPA 1668 PBDE	EPA 1614 PAH	CARB429 WHO-29	CARB429 Mod. EPA 537	Comments
WI-CV-GW08M-0317	3/4/17	1200	MW-08M	2	O	GW															X		
WI-CV-EB12-030317	3/3/17	1715	EB12	2	O	~~GW~~															X		
WI-CV-GW07S-0317	3/4/17	1325	MW-07S	2	O	GW															X		
WI-CV-EB13-030417	3/4/17	1430	EB-13	2	O	~~GW~~															X		
WI-CV-GW14M-0317	3/4/17	1700	MW-14M	2	O	GW															X		
WI-CV-GW13S-0317	3/3/17	1705	MW-13S	2	O	GW															X		
WI-CV-GW07M-0317	3/4/17	1715	MW-07M	2	O	GW															X		
WI-CV-EB14-030417	3/4/17	1745	EB-14	2	O	O															X		
																					X		
																					X		

Special Instructions/Comments:

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M
Address: 1100 Circle Blvd NE
City: Corvallis State: OR Zip: 97330
Phone: Fax:
Email: tiffany.hill@ch2m.com

Container Types: A = 1 Liter Amber, G = Glass Jar, P = HDPE, O = Other 500 ml HDPE

Bottle Preservation Type: T = Thiosulfate, TZ = Trizma: <6°C

Matrix Types: AQ = Aqueous, 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 Analytical Laboratory

Vista Project #: 1700296 **TAT** 7

Samples Arrival:	**Date/Time** 3/7/17 1032	**Initials:** SR	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 03/07/17 1047	**Initials:** BZB	**Location:** WR-2 **Shelf/Rack:** E5

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice		None

Temp °C: 5.4 (uncorrected)	**Time:** 1036	**Thermometer ID:** IR-1
Temp °C: 5.7 (corrected)	**Probe used:** Yes ~~X~~ No ~~X~~ SR 3/7/17	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7858 1693 1746	✓		
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:	$Na_2S_2O_3$	Trizma			Yes	(No)	NA
Shipping Container	(Vista)	Client	Retain	Return	Dispose	

Comments:

March 14, 2017

Vista Work Order No. 1700296

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

Dear Ms. Hill,

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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 Lopez 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. 1700296
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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1700296-01	WI-CV-GW08M-0317	04-Mar-17 12:00	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-02	WI-CV-EB12-030317	03-Mar-17 17:15	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-03	WI-CV-GW07S-0317	04-Mar-17 13:25	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-04	WI-CV-EB13-030417	04-Mar-17 14:30	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-05	WI-CV-GW14M-0317	04-Mar-17 17:00	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-06	WI-CV-GW13S-0317	03-Mar-17 17:05	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-07	WI-CV-GW07M-0317	04-Mar-17 17:15	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700296-08	WI-CV-EB14-030417	04-Mar-17 17:45	07-Mar-17 10:32	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0034	Lab Sample:	B7C0034-BLK1
Sample Size:	0.125 L	Date Extracted:	08-Mar-2017 8:40	Date Analyzed:	09-Mar-17 16:38 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFOA	ND	0.651	2.00	8.00	
PFOS	ND	0.807	0.900	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	127	60 - 150	
IS	13C2-PFOA	89.3	60 - 150	
IS	13C8-PFOS	118	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0034	Lab Sample:	B7C0034-BS1
Sample Size:	0.125 L	Date Extracted:	08-Mar-2017 8:40	Date Analyzed:	09-Mar-17 16:13 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	81.9	80.0	102	60 - 130
PFOA	86.5	80.0	108	70 - 130
PFOS	88.6	80.0	111	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	107	60 - 150
IS	13C2-PFOA	81.7	60 - 150
IS	13C8-PFOS	108	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW08M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 12:00
Location:	MW-08M

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-01	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 16:51	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.74	3.91	7.79	
PFOA	ND	0.634	1.95	7.79	
PFOS	ND	0.786	0.879	7.79	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	117	60 - 150	
IS	13C2-PFOA	91.9	60 - 150	
IS	13C8-PFOS	110	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB12-030317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	03-Mar-2017 17:15
Location:	EB12

Sample Data

Matrix:	Groundwater
Sample Size:	0.121 L

Laboratory Data

Lab Sample:	1700296-02	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:03	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.85	4.13	8.28	
PFOA	ND	0.674	2.07	8.28	
PFOS	ND	0.836	0.930	8.28	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	105	60 - 150	
IS	13C2-PFOA	81.9	60 - 150	
IS	13C8-PFOS	101	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW07S-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 13:25
Location:	MW-07S

Sample Data

Matrix:	Groundwater
Sample Size:	0.114 L

Laboratory Data

Lab Sample:	1700296-03	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:16	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.97	4.39	8.81	
PFOA	ND	0.717	2.19	8.81	
PFOS	ND	0.889	0.987	8.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	91.0	60 - 150	
IS	13C8-PFOS	123	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB13-030417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 14:30
Location:	EB-13

Sample Data

Matrix:	Groundwater
Sample Size:	0.124 L

Laboratory Data

Lab Sample:	1700296-04	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:28	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.03	8.08	
PFOA	ND	0.657	2.02	8.08	
PFOS	ND	0.815	0.907	8.08	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.1	60 - 150	
IS	13C8-PFOS	107	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW14M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:00
Location:	MW-14M

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700296-05	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:41	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	111	1.82	4.07	8.14	
PFOA	166	0.662	2.03	8.14	
PFOS	0.898	0.821	0.915	8.14	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.5	60 - 150	
IS	13C2-PFOA	95.4	60 - 150	
IS	13C8-PFOS	122	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW13S-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	03-Mar-2017 17:05
Location:	MW-13S

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700296-06	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 17:53 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.07	8.11	
PFOA	ND	0.660	2.03	8.11	
PFOS	ND	0.818	0.915	8.11	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.4	60 - 150	
IS	13C8-PFOS	119	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-GW07M-0317

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:15
Location:	MW-07M

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-07	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 18:06	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.80	
PFOA	ND	0.635	1.95	7.80	
PFOS	0.844	0.787	0.879	7.80	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	90.0	60 - 150	
IS	13C8-PFOS	124	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: WI-CV-EB14-030417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-08
Date Collected:	04-Mar-2017 17:45
Location:	EB-14

Sample Data

Matrix:	Groundwater
Sample Size:	0.128 L

Laboratory Data

Lab Sample:	1700296-08	Date Received:	07-Mar-2017 10:32
QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Analyzed:	09-Mar-17 18:18	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.82	
PFOA	ND	0.636	1.95	7.82	
PFOS	ND	0.789	0.879	7.82	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	110	60 - 150	
IS	13C2-PFOA	102	60 - 150	
IS	13C8-PFOS	114	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, 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**

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
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

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Laboratory Project ID: 1700296 Temp: 5.7 °C
Storage ID: WR-2 E5 Storage Secured: Yes ☑ No ☐

Project ID: Navy CLEAN CTO 08 P.O.#: 10006-7-10651 / 074550.09.FI.WS Sampler: B. Prentice, E. Bilyeu, M. Witmer (name)

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☒ 7 days Specify:

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Katie Tippin	CH2M					

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
			Sydney Roughton Sydney Roughton	3/7/17	1034
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

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

ATTN: Sample Recieving

Method of Shipment: FedEx

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA 1613 2378-TCDD	EPA 1613 TCDD/TCDF	EPA 1613 PCDD/PCDF	EPA 8290 2378-TCDD	EPA 8290 TCDD/TCDF	EPA 8290 PCDD/PCDF	EPA 8280 2378-TCDD	EPA 8280 TCDD/TCDF	EPA 8280 PCDD/PCDF	EPA 1668 TOTALS	EPA 1668 COPLANAR PCB's	EPA 1668 209 CONGENERS	EPA 1668 PBDE	EPA 1614 PAH	CARB429 WHO-29	CARB429 Mod. EPA 537	Comments
WI-CV-GW08M-030317	3/4/17	1200	MW-08M	2	O	GW															X		
WI-CV-EB12-030317	3/3/17	1715	EB12	2	O	~~GW~~															X		
WI-CV-GW07S-030317	3/4/17	1325	MW-07S	2	O	GW															X		
WI-CV-EB13-030417	3/4/17	1430	EB-13	2	O	~~GW~~															X		
WI-CV-GW14M-030317	3/4/17	1700	MW-14M	2	O	GW															X		
WI-CV-GW13S-030317	3/3/17	1705	MW-13S	2	O	GW															X		
WI-CV-GW07M-030317	3/4/17	1715	MW-07M	2	O	GW															X		
WI-CV-EB14-030417	3/4/17	1745	EB-14	2	O	O															X		
																					X		
																					X		

Special Instructions/Comments:

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M
Address: 1100 Circle Blvd NE
City: Corvallis State: OR Zip: 97330
Phone: Fax:
Email: tiffany.hill@ch2m.com

Container Types: A = 1 Liter Amber, G = Glass Jar, P = HDPE, O = Other 500 ml HDPE

Bottle Preservation Type: T = Thiosulfate, TZ = Trizma: <6°C

Matrix Types: AQ = Aqueous, 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 Analytical Laboratory

Vista Project #: 1700296 **TAT** 7

Samples Arrival:	**Date/Time** 3/7/17 1032	**Initials:** SR	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 03/07/17 1047	**Initials:** BZB	**Location:** WR-2 **Shelf/Rack:** E5

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice		None

Temp °C: 5.4 (uncorrected)	**Time:** 1036	**Thermometer ID:** IR-1
Temp °C: 5.7 (corrected)	**Probe used:** Yes ~~No~~	

SR 3/7/17

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7858 1693 1746	✓		
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:	$Na_2S_2O_3$	Trizma			Yes	(No) NA
Shipping Container	(Vista)	Client	Retain	Return	Dispose	

Comments:

EXTRACTION INFORMATION

Process Sheet

Workorder: 1700296

RUSH

Prep Expiration: 2017-Mar-17
Client: CH2M Hill

Workorder Due: 14-Mar-17 00:00

TAT: 7

Method: **537 PFAS DOD (LOQ as mRL)**
Matrix: **Aqueous**

Prep Batch: B7C0034

Prep Data Entered: 3/9/17 ZH
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700296-01	☒	WI-CV-GW08M-0317	07-Mar-17 10:32	WR-2 E-5	
1700296-02	☒	WI-CV-EB12-030317	07-Mar-17 10:32	WR-2 E-5	
1700296-03	☒	WI-CV-GW07S-0317	07-Mar-17 10:32	WR-2 E-5	
1700296-04	☒	WI-CV-EB13-030417	07-Mar-17 10:32	WR-2 E-5	
1700296-05	☒	WI-CV-GW14M-0317	07-Mar-17 10:32	WR-2 E-5	
1700296-06	☒	WI-CV-GW13S-0317	07-Mar-17 10:32	WR-2 E-5	
1700296-07	☒	WI-CV-GW07M-0317	07-Mar-17 10:32	WR-2 E-5	
1700296-08	☒	WI-CV-EB14-030417	07-Mar-17 10:32	WR-2 E-5	

Vista PM:Martha Maier

Vial Box ID: Earthworm

Sample Reconciled By: _____ 3/8/17

Page 1 of 1

Percent Solids

Vista Analytical Laboratory

Project: B7C0034 *Balance ID:* N/A

Sample ID	Chemist: N/A Date: Time: Boat Wt.	Sample + Boat Wt.	Chemist: N/A Date: Time: Residue + Boat Wt.	Chemist/Date JK 3/8/17 pH before	pH* after	Cl
1700296-01 (B)				7	2	Ø
~~JT~~ HC 3/8/17				N/A	N/A	N/A
1700296-02 (A)		HC 3/8/17		5	2	Ø
-03 (B)				7	2	Ø
-04 (A)				5	2	Ø
-05 (B)				7	2	Ø
-06 (B)				7	2	Ø
-07 (B)				7	2	Ø
-08 (A)				5	2	Ø
1700298-01 (C)				7	2	Ø

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

(A) 2 drops HCl to adjust pH to 2.0
(B) 3 drops HCl to adjust pH to 2.0
(C) 6 drops HCl to adjust pH 2
HC 3/8/17

- *Methods 8280, 613, 1613, 8290, 1614 – pH <9*
- *Methods 1668/PCN – pH 2-3*
- *NCASI 551 – pH 1*

%Solids rmh 5/2011

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS

Method: 537 PFAS DOD (LOO as mRL)

B7C0034

Chemist: E. Schneider

Prep Date/Time: 08-Mar-17 08:40

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
☐	B7C0034-BLK1 (A)	N/A	N/A	~~0.250~~ 0.125	ES TK 3/8/17	TK 3/8/17	ES TK 3/8/17
☐	B7C0034-BS1 (A)	↓	↓	↓ 0.125	—	↓	↓
☐	1700296-01 (B)	155.27	26.97	0.1283 ✓	↓	↓	↓
☐	1700296-02	147.48	26.77	0.12071			
☐	1700296-03	140.31	26.78	0.11353			
☐	1700296-04	150.78	26.97	0.12381			
☐	1700296-05	149.81	26.93	0.12288			
☐	1700296-06	150.14	26.78	0.12336			
☐	1700296-07	155.02	26.87	0.12815			
☐	1700296-08	154.62	26.75	0.17787			
☐	1700298-01	237.95	27.40	0.21055	↓	↓	↓

(A) 0.625g trizma added to QCs TK 3/8/17

(B) centrifuged samples to remove gelatinous substance TK 3/8/17

IS Name	NS Name	RS Name		
16L1920, 10µL (V3)	16I2905, 10µL (V1)	17A1201, 10µL (V3)	SPE Chem: Strata XAW 33µm 200mg/6mL Ele SOLV: 0.5% NH4OH in MeOH + MeOH Final Volume(s): 1 mL	Check Out: Chemist/Date: 3/8/17 TK Check In: Chemist/Date: N/A Balance ID: HRMS-8

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 12:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	4.079e0	6.326e3		0.125	3.00		
2	2	PFHpA	363 > 318.9	2.743e1	1.448e4		0.125	3.89		
3	3	PFHxS	398.9 > 79.6	2.611e1	6.570e3		0.125	4.00		
4	4	PFOA	413 > 368.7	1.963e2	2.815e4		0.125	4.28		
5	5	PFNA	463 > 418.8		7.611e3		0.125			
6	6	PFOS	499 >79.9		8.918e3		0.125			
7	7	13C3-PFBS	302.0 > 98.8	6.326e3	1.216e4	0.410	0.125	2.99	127	127
8	8	13C4-PFHpA	367.2 > 321.8	1.448e4	1.216e4	1.098	0.125	3.88	109	109
9	9	18O2-PFHxS	403 > 102.6	6.570e3	1.216e4	0.434	0.125	4.00	124	124
10	10	13C2-PFOA	414.9 > 369.7	2.815e4	6.836e3	4.608	0.125	4.28	89.3	89.3
11	11	13C5-PFNA	468.2 > 422.9	7.611e3	8.256e3	0.867	0.125	4.61	106	106
12	12	13C8-PFOS	507.0 > 79.9	8.918e3	7.866e3	0.958	0.125	4.67	118	118
13	13	13C5-PFHxA	318>272.9	2.215e4	2.215e4	1.000	0.125	3.37	100	100
14	14	13C3-PFHxS	401.9 > 79.9	1.216e4	1.216e4	1.000	0.125	4.00	100	100
15	15	13C8-PFOA	421.3 > 376	6.836e3	6.836e3	1.000	0.125	4.28	100	100
16	16	13C9-PFNA	472.2 > 426.9	8.256e3	8.256e3	1.000	0.125	4.61	100	100
17	17	13C4-PFOS	503.0 > 79.9	7.866e3	7.866e3	1.000	0.125	4.68	100	100
18	18	Total PFBS	299 > 79.7		6.570e3		0.125			
19	19	Total PFHxS	398.9 > 79.6		6.570e3		0.125			
20	20	Total PFOA	413 > 368.7		2.815e4		0.125			
21	21	Total PFOS	499 > 79.9		8.918e3		0.125			

Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 12:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	18	Total PFBS	299 > 79.7	3.00	4.079	6569.784	
2	1	PFBS	299 > 79.7	3.00	4.079	6325.771	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.00	26.106	6569.784	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.28	196.284	28145.277	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
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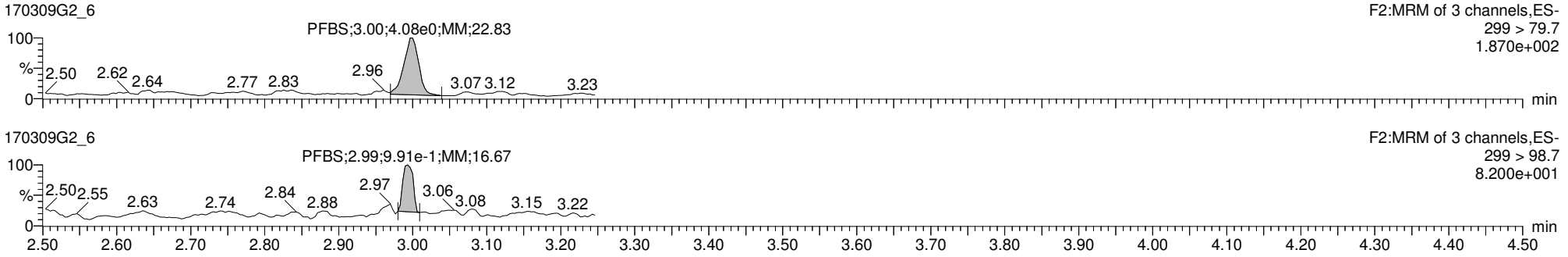
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

PFBS



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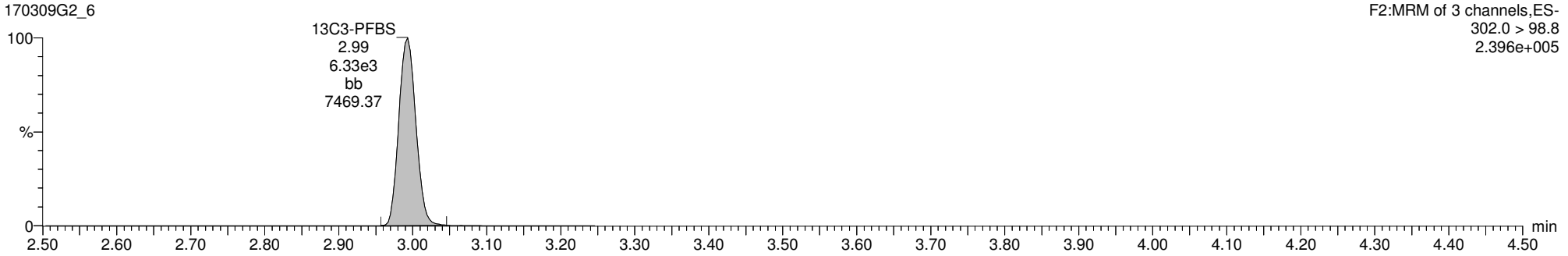

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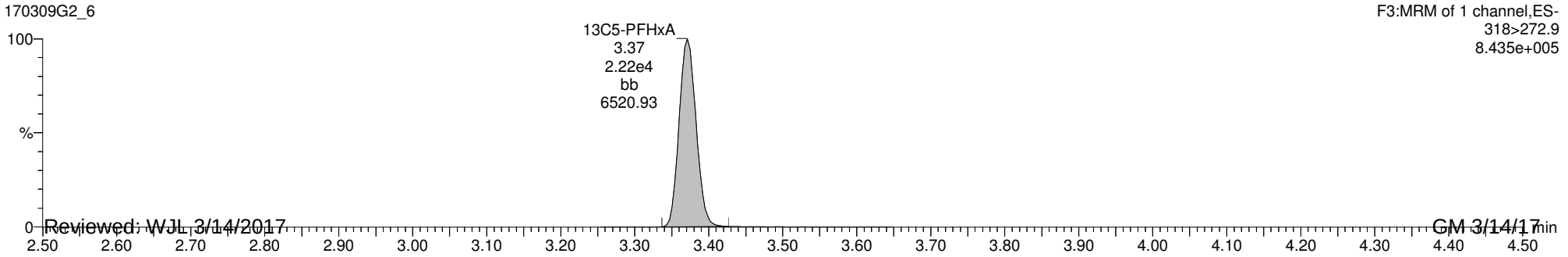

Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
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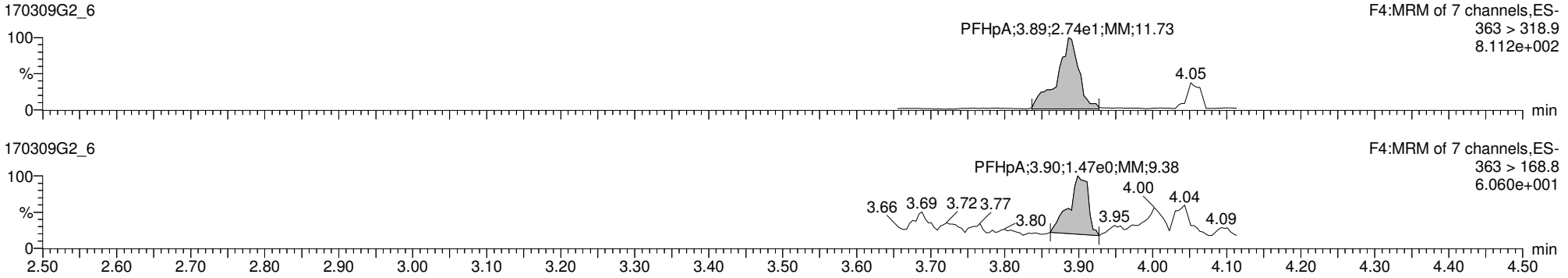
ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

PFHpA



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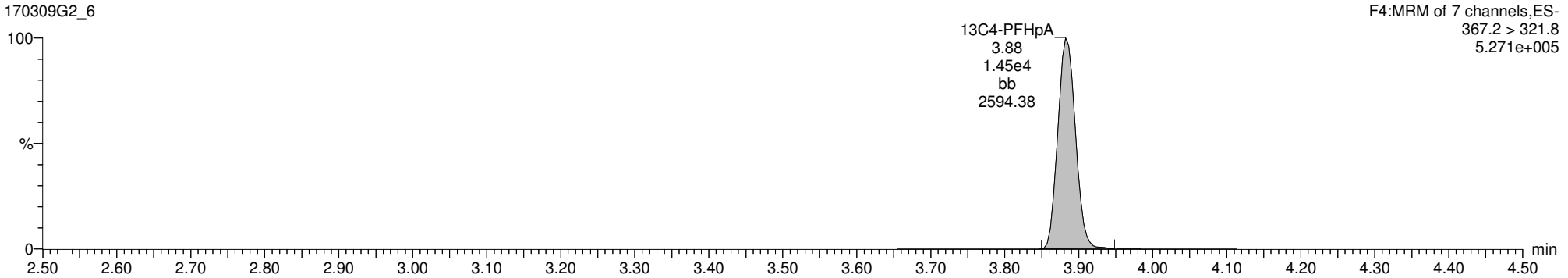

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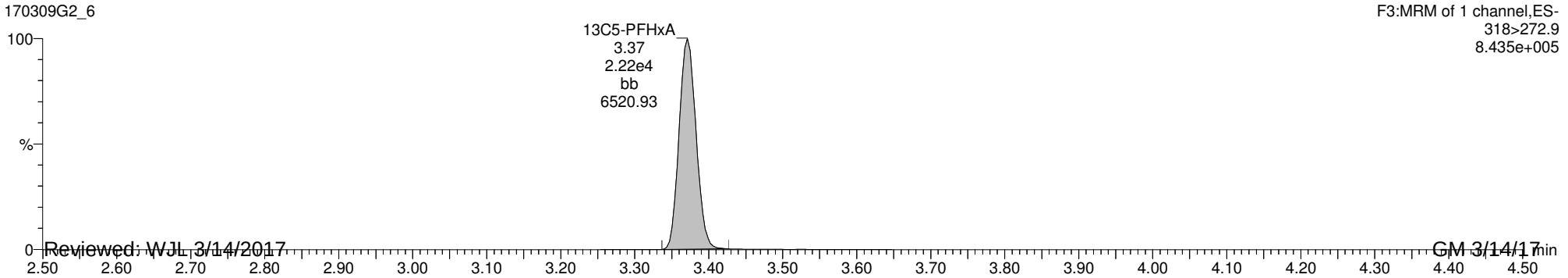


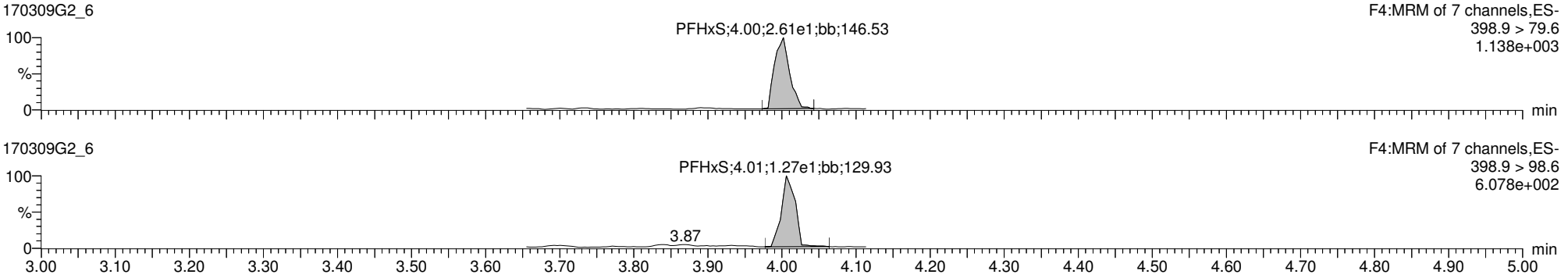
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

Total PFHxS



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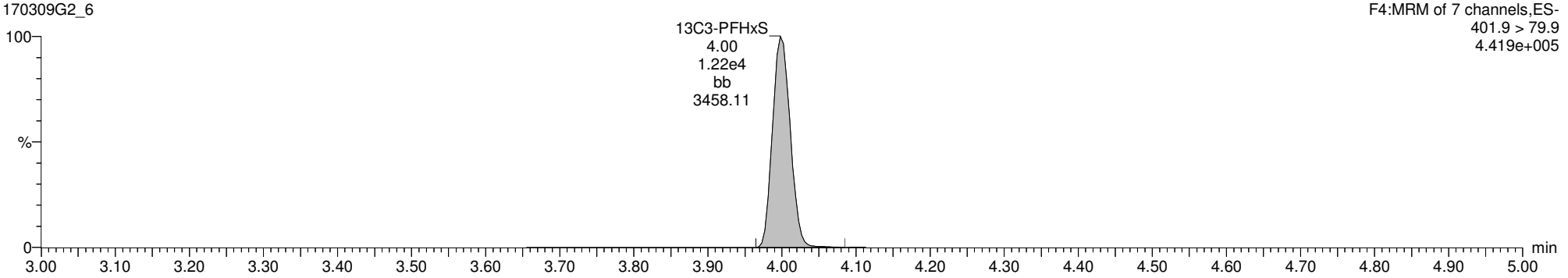

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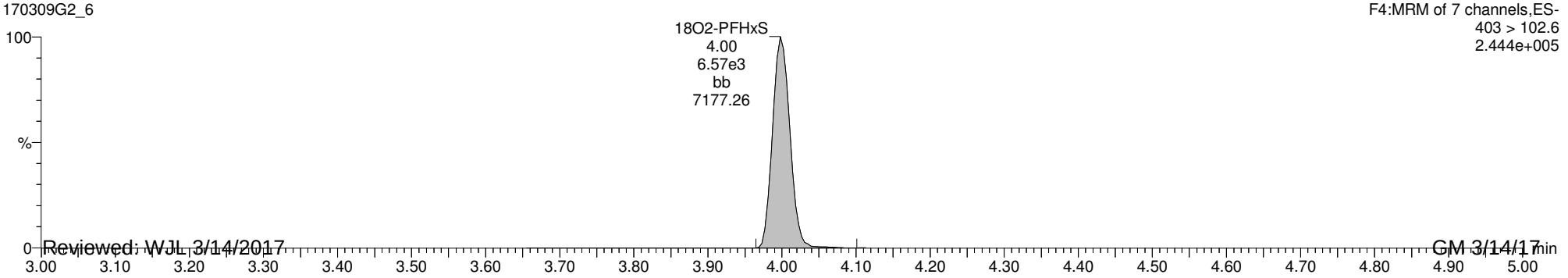


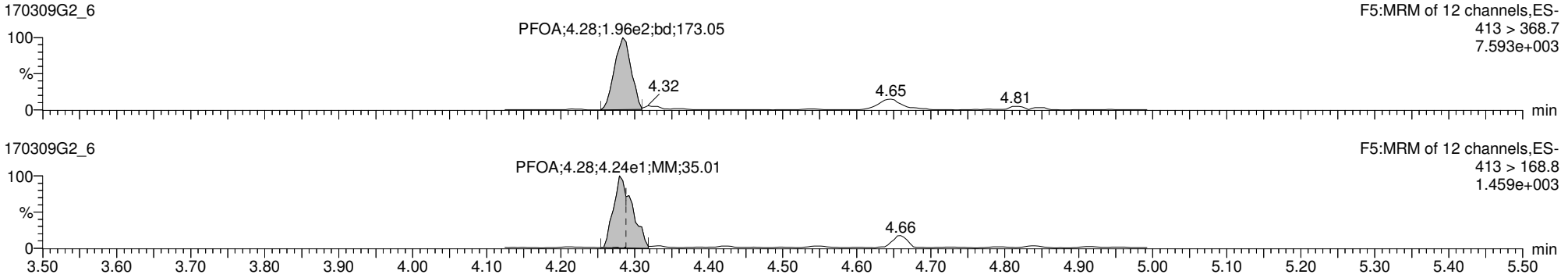
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

Total PFOA



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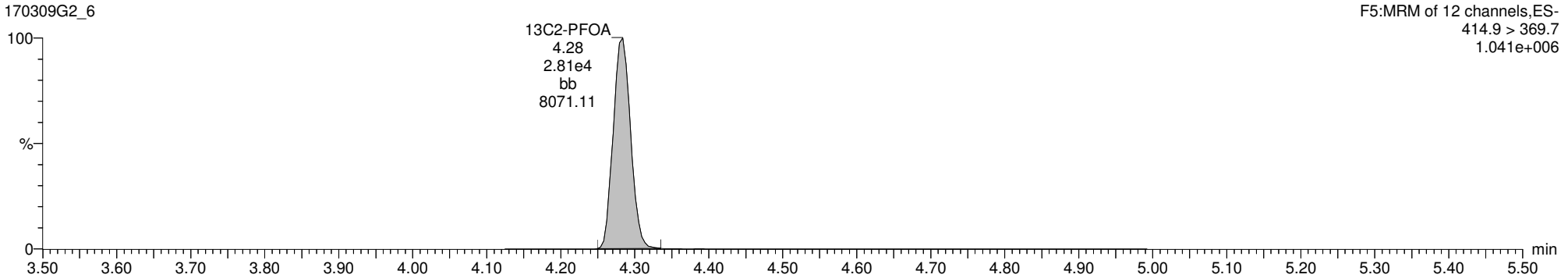

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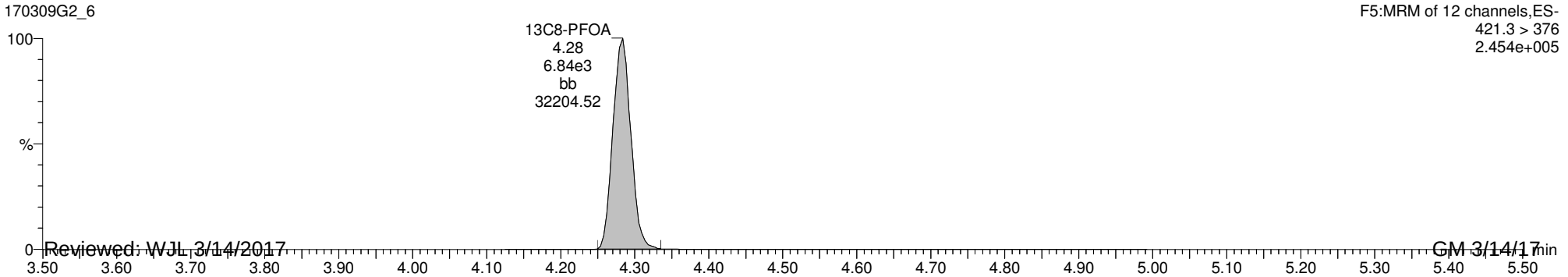


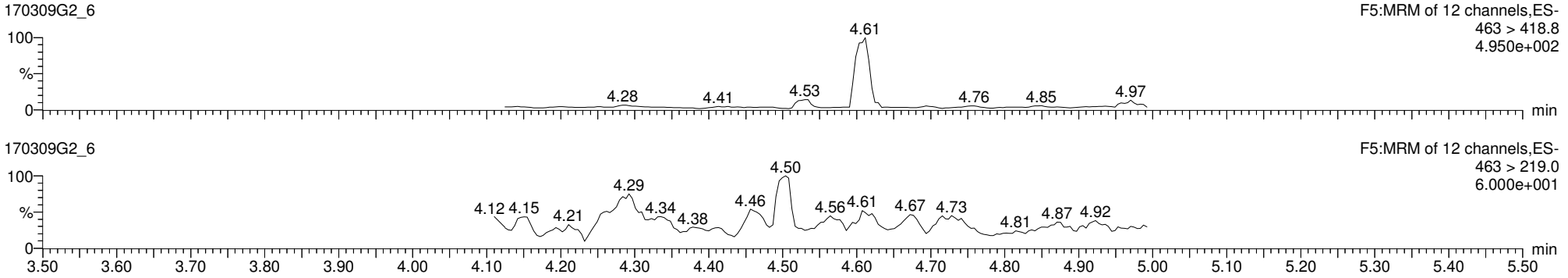
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

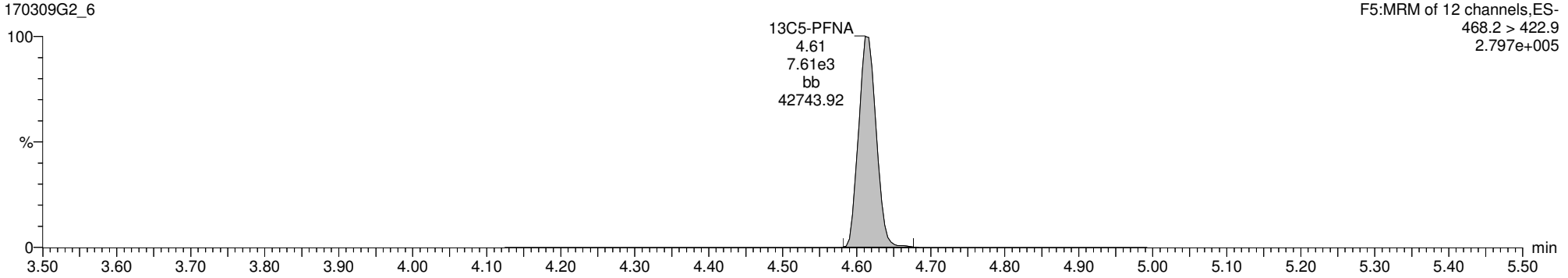
Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

PFNA



13C5-PFNA



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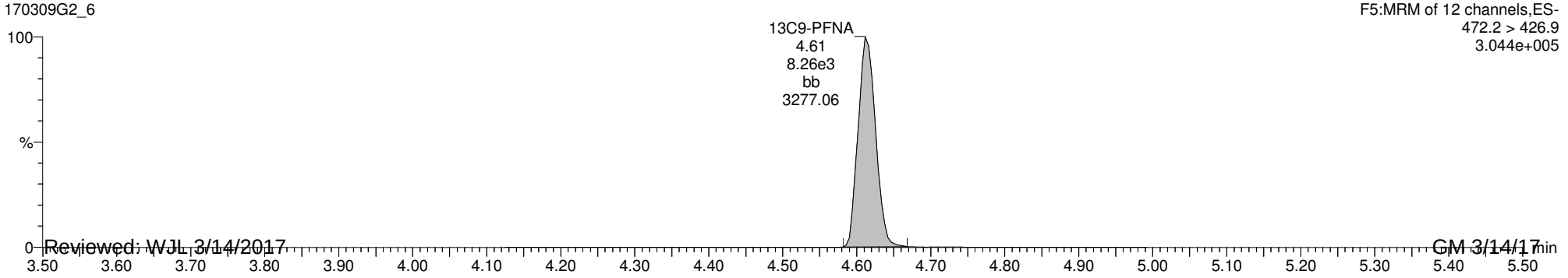


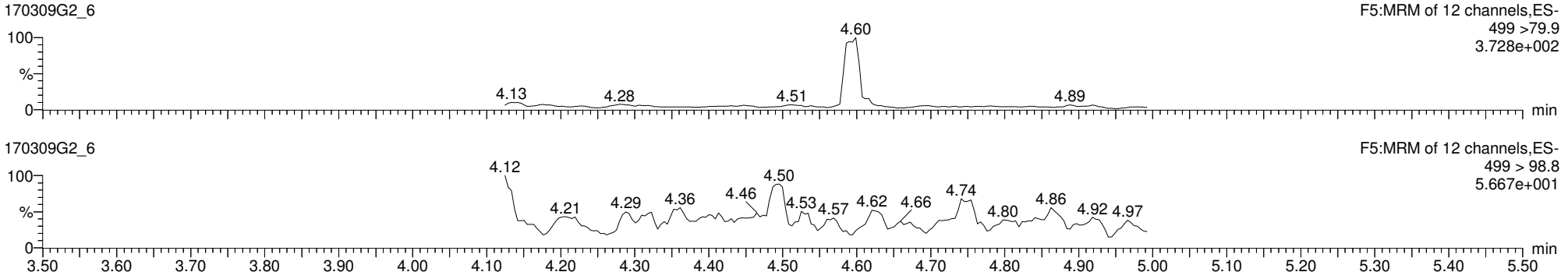
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-6.qld

Last Altered: Tuesday, March 14, 2017 10:57:00 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:57:24 Pacific Daylight Time

ID: B7C0034-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170309G2_6, Date: 09-Mar-2017, Time: 16:38:38, Instrument: , Lab: , User:

Total PFOS



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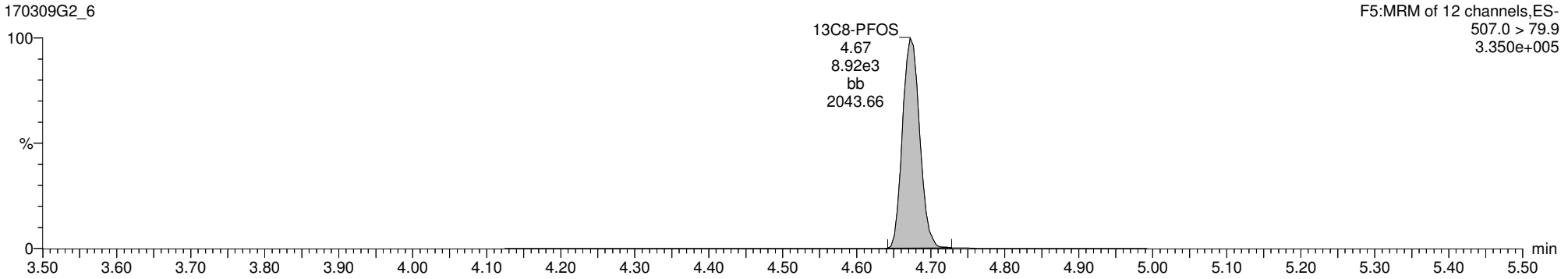

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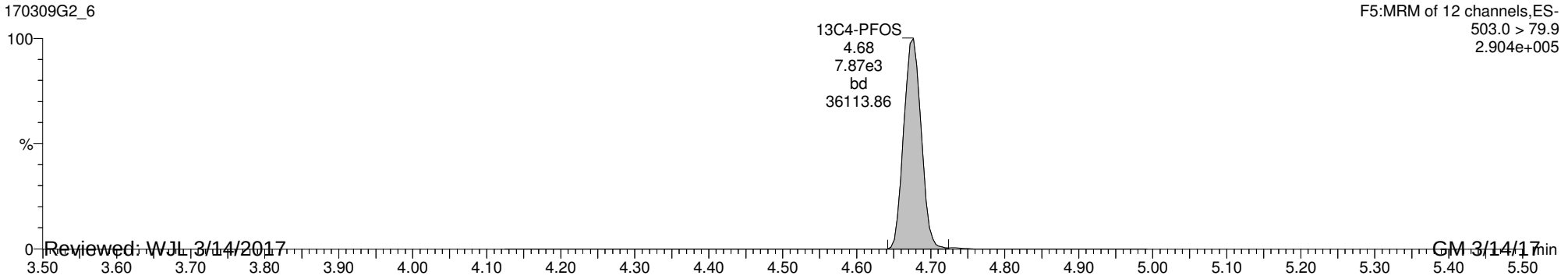

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

Last Altered: Tuesday, March 14, 2017 10:49:02 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:50:39 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 12:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BS1 OPR 0.125, Description: OPR, Name: 170309G2_4, Date: 09-Mar-2017, Time: 16:13:33

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.240e4	6.338e3		0.125	2.99	81.9	102
2	2	PFHpA	363 > 318.9	2.418e4	1.638e4		0.125	3.88	81.5	102
3	3	PFHxS	398.9 > 79.6	9.937e3	7.001e3		0.125	4.00	77.8	97.3
4	4	PFOA	413 > 368.7	2.127e4	3.032e4		0.125	4.28	86.5	108
5	5	PFNA	463 > 418.8	1.748e4	8.372e3		0.125	4.61	76.0	95.0
6	6	PFOS	499 >79.9	4.143e3	8.764e3		0.125	4.67	88.6	111
7	7	13C3-PFBS	302.0 > 98.8	6.338e3	1.451e4	0.410	0.125	2.99	107	107
8	8	13C4-PFHpA	367.2 > 321.8	1.638e4	1.451e4	1.098	0.125	3.88	103	103
9	9	18O2-PFHxS	403 > 102.6	7.001e3	1.451e4	0.434	0.125	4.00	111	111
10	10	13C2-PFOA	414.9 > 369.7	3.032e4	8.057e3	4.608	0.125	4.28	81.7	81.7
11	11	13C5-PFNA	468.2 > 422.9	8.372e3	8.979e3	0.867	0.125	4.61	108	108
12	12	13C8-PFOS	507.0 > 79.9	8.764e3	8.467e3	0.958	0.125	4.67	108	108
13	13	13C5-PFHxA	318>272.9	2.252e4	2.252e4	1.000	0.125	3.37	100	100
14	14	13C3-PFHxS	401.9 > 79.9	1.451e4	1.451e4	1.000	0.125	4.00	100	100
15	15	13C8-PFOA	421.3 > 376	8.057e3	8.057e3	1.000	0.125	4.28	100	100
16	16	13C9-PFNA	472.2 > 426.9	8.979e3	8.979e3	1.000	0.125	4.61	100	100
17	17	13C4-PFOS	503.0 > 79.9	8.467e3	8.467e3	1.000	0.125	4.67	100	100
18	18	Total PFBS	299 > 79.7		7.001e3		0.125		81.9	
19	19	Total PFHxS	398.9 > 79.6		7.001e3		0.125		77.8	
20	20	Total PFOA	413 > 368.7		3.032e4		0.125		86.5	
21	21	Total PFOS	499 > 79.9		8.764e3		0.125		88.6	

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

Last Altered: Tuesday, March 14, 2017 10:49:02 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:50:39 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BS1 OPR 0.125, Description: OPR, Name: 170309G2_4, Date: 09-Mar-2017, Time: 16:13:33

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7	2.99	12400.189	6338.477	81.9

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.00	9937.394	7000.535	77.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	20	Total PFOA	413 > 368.7	4.66	59.737	30316.322	
2	20	Total PFOA	413 > 368.7	4.54	5.196	30316.322	
3	20	Total PFOA	413 > 368.7	4.45	14.105	30316.322	
4	20	Total PFOA	413 > 368.7	4.39	18.677	30316.322	
5	4	PFOA	413 > 368.7	4.28	21269.826	30316.322	86.5
6	20	Total PFOA	413 > 368.7	4.19	6.076	30316.322	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	6	PFOS	499 >79.9	4.67	4142.626	8764.335	88.6

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

Last Altered: Tuesday, March 14, 2017 10:49:02 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 10:50:39 Pacific Daylight Time

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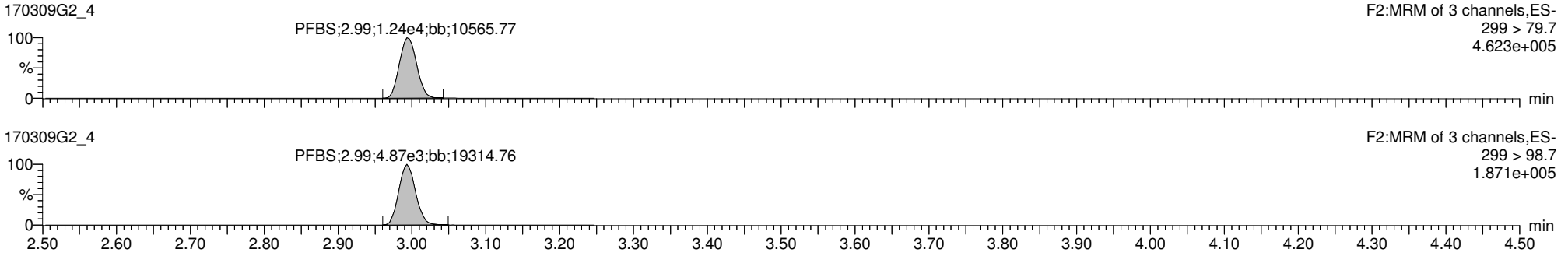
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 09:35:26

ID: B7C0034-BS1 OPR 0.125, Description: OPR, Name: 170309G2_4, Date: 09-Mar-2017, Time: 16:13:33, Instrument: , Lab: , User:

PFBS



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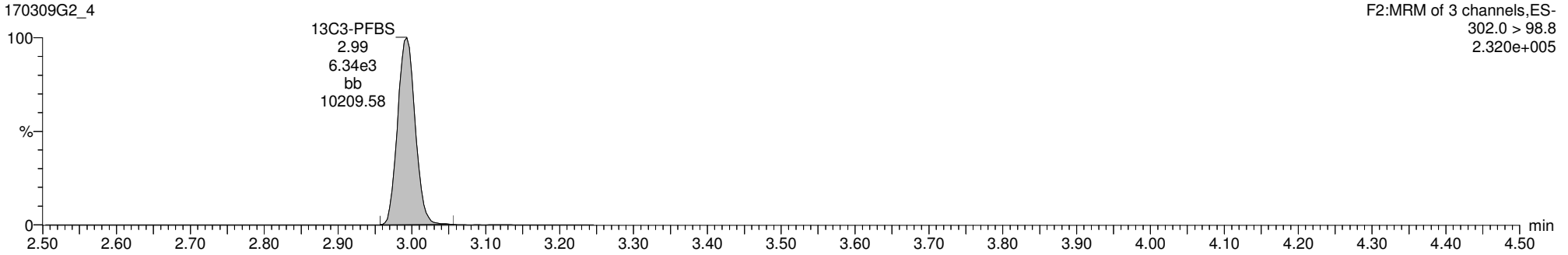
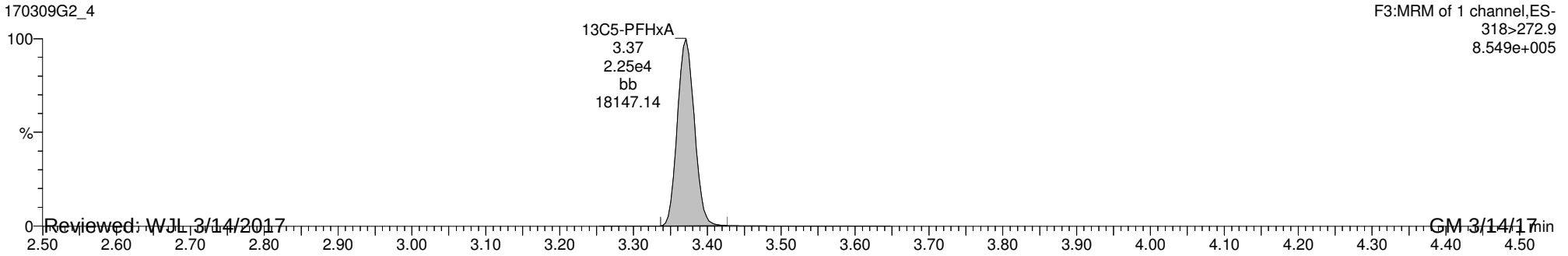


13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

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Printed: Tuesday, March 14, 2017 10:50:39 Pacific Daylight Time

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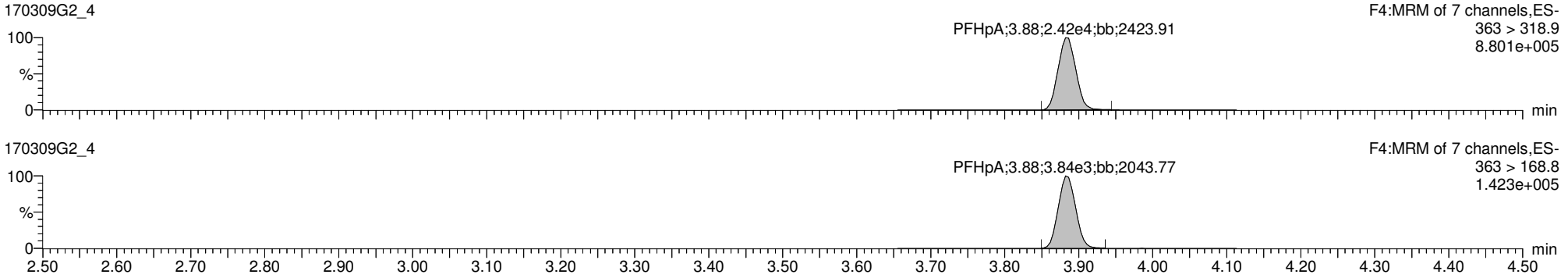
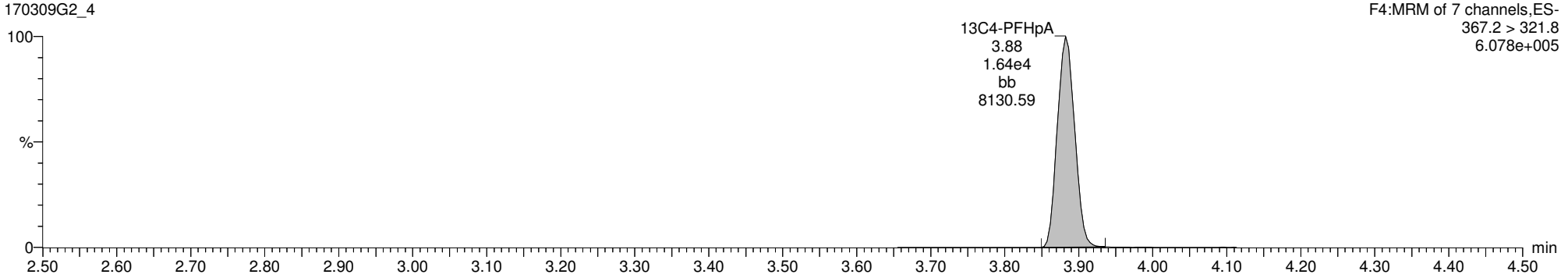
PFHpA



13C4-PFHpA



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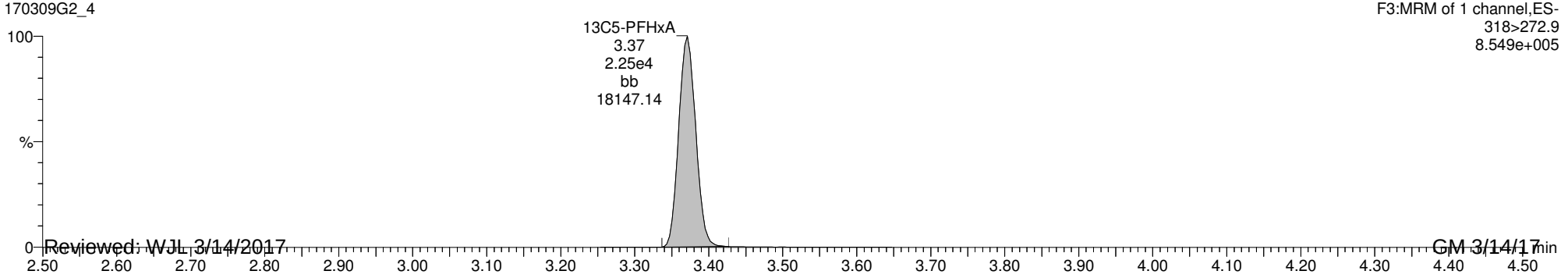

Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

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Printed: Tuesday, March 14, 2017 10:50:39 Pacific Daylight Time

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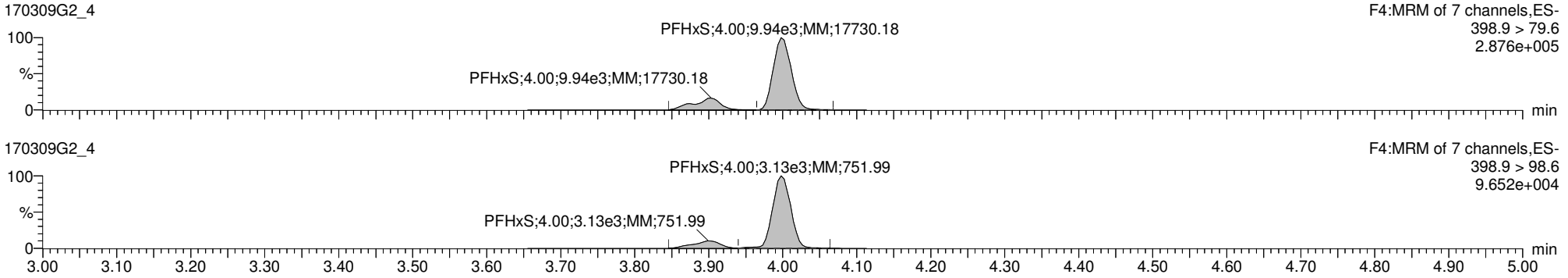
Total PFHxS



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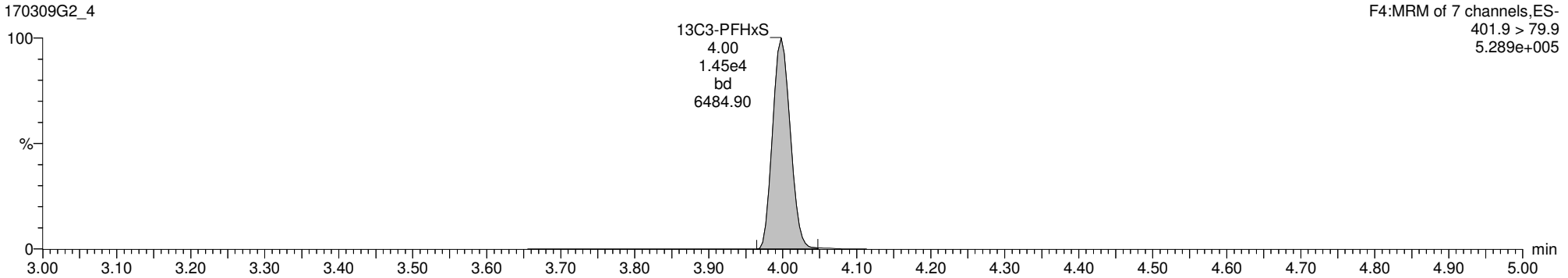

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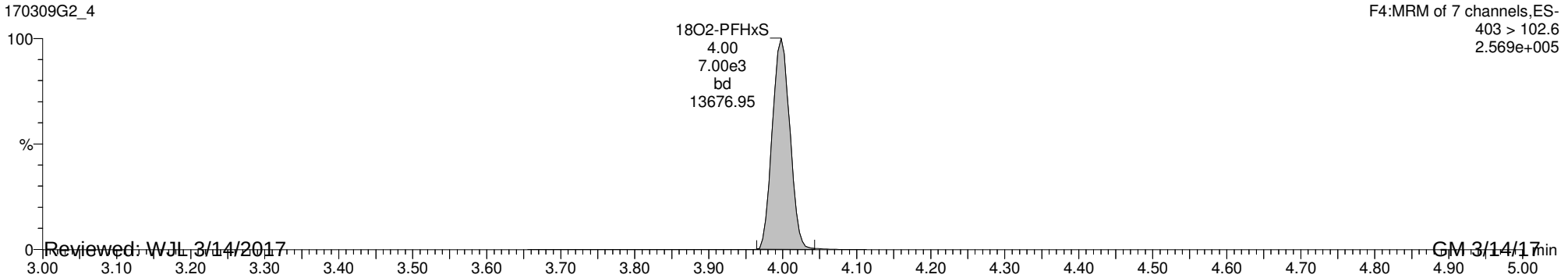

Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-4.qld

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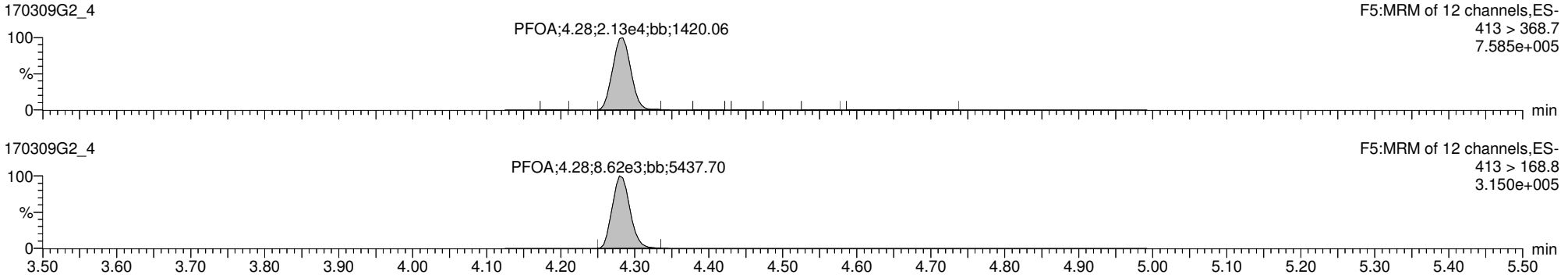
Total PFOA



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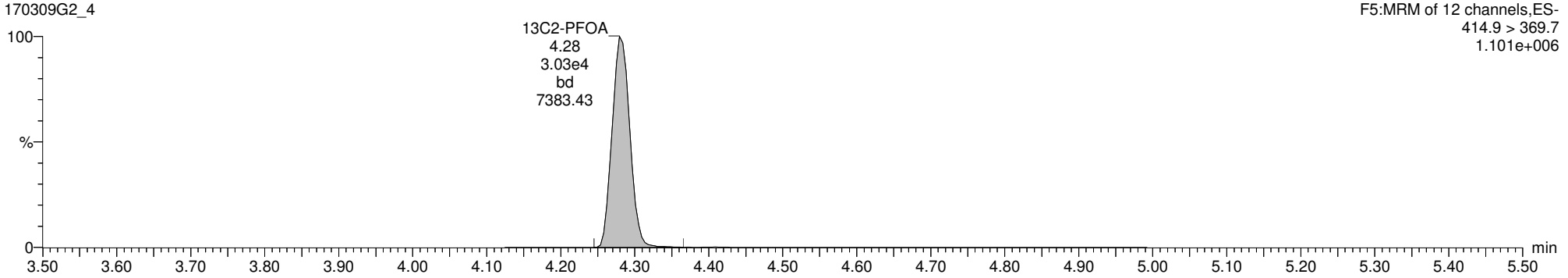
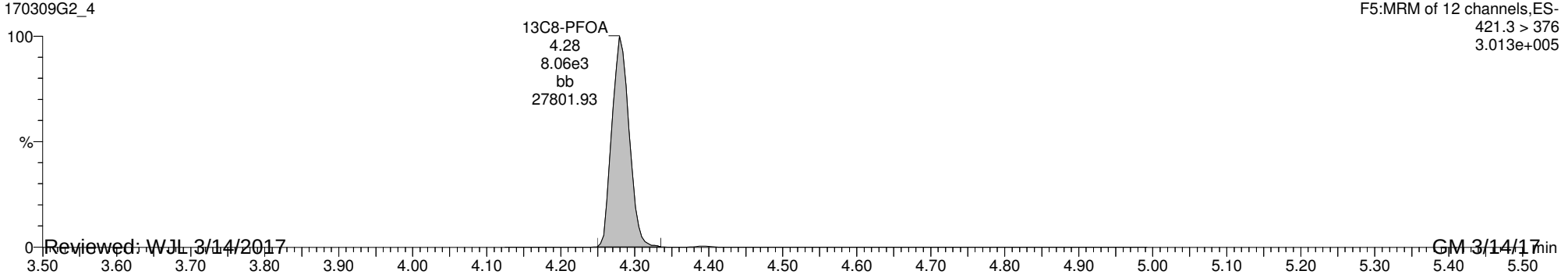


13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/14/17

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Last Altered: Tuesday, March 14, 2017 10:49:02 Pacific Daylight Time
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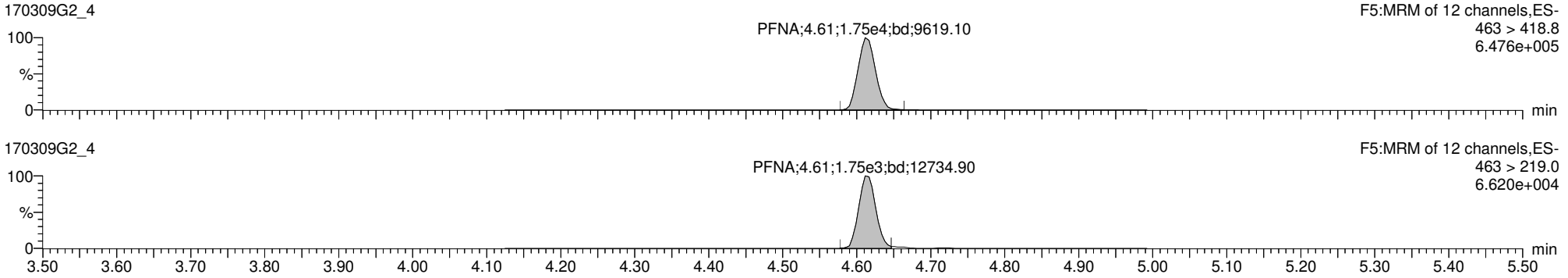
PFNA



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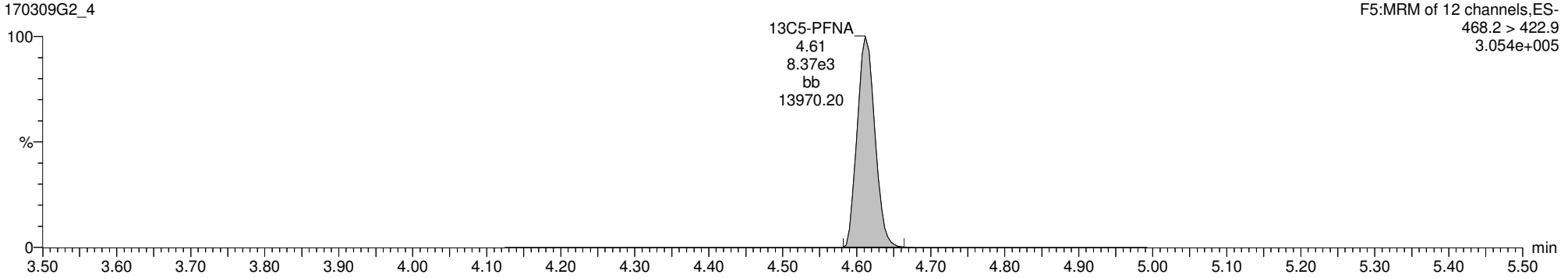

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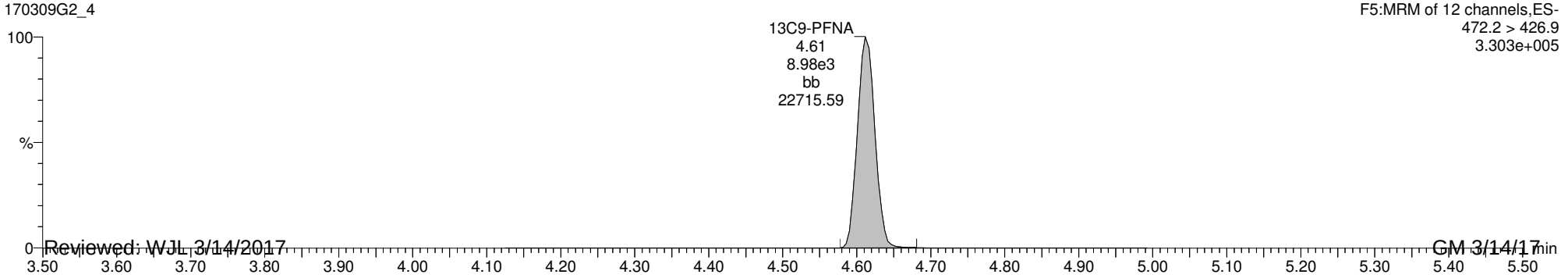

Reviewed: WJL 3/14/2017 GM 3/14/17

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Last Altered: Tuesday, March 14, 2017 10:49:02 Pacific Daylight Time
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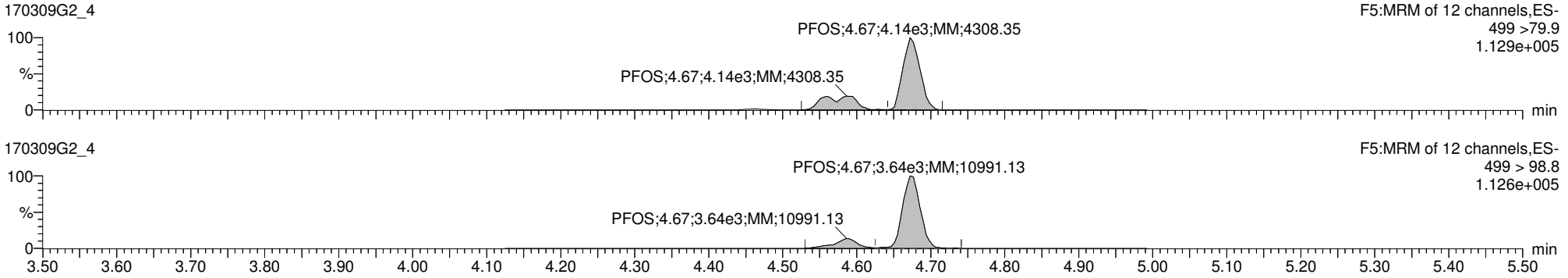
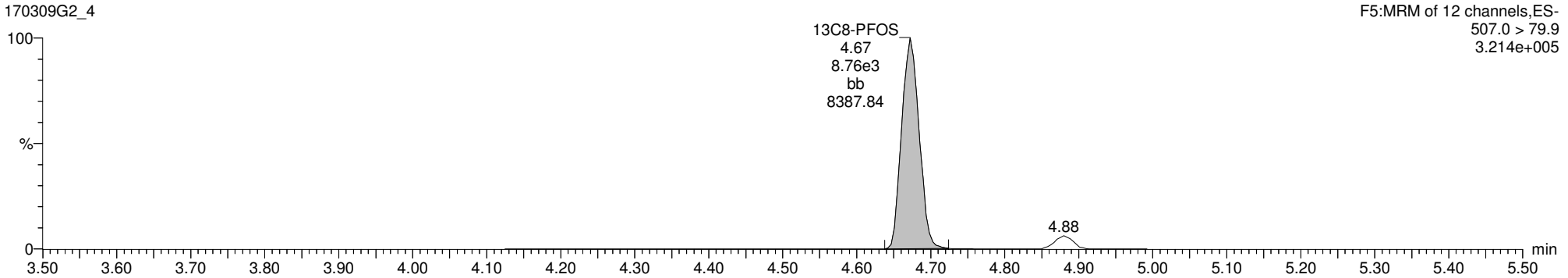
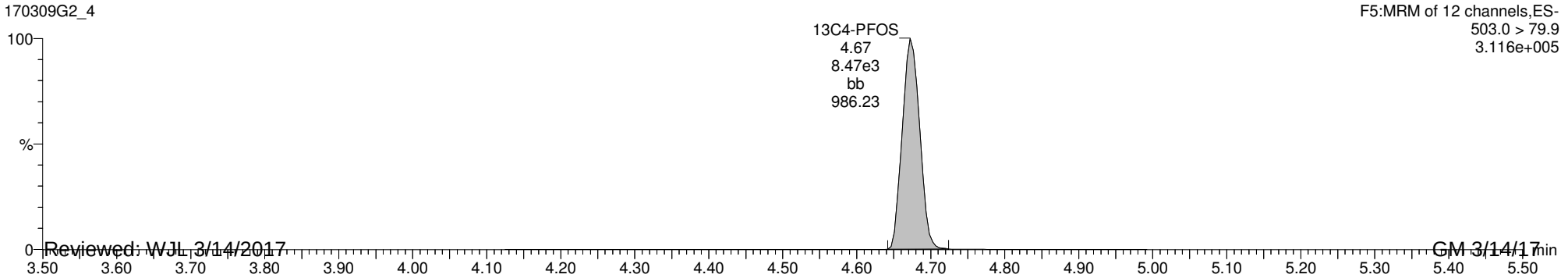
Total PFOS



13C8-PFOS



13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-7.qld

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Printed: Friday, March 10, 2017 2:40:13 PM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-01 WI-CV-GW08M-0317 0.125, Description: WI-CV-GW08M-0317, Name: 170309G2_7, Date: 09-Mar-2017, Time: 16:51:08

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.801e2	6.346e3		0.128	3.00	1.58	
2	4	PFOA	413 > 368.7	4.930e2	2.794e4		0.128	4.28	0.407	
3	6	PFOS	499 >79.9		8.486e3		0.128			
4	7	13C3-PFBS	302.0 > 98.8	6.346e3	1.324e4	0.410	0.128	3.00	114	117
5	10	13C2-PFOA	414.9 > 369.7	2.794e4	6.594e3	4.608	0.128	4.28	89.6	91.9
6	12	13C8-PFOS	507.0 > 79.9	8.486e3	8.089e3	0.958	0.128	4.68	107	109
7	15	13C8-PFOA	421.3 > 376	6.594e3	6.594e3	1.000	0.128	4.28	97.4	100
8	17	13C4-PFOS	503.0 > 79.9	8.089e3	8.089e3	1.000	0.128	4.68	97.4	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-7.qld

Last Altered: Friday, March 10, 2017 2:39:07 PM Pacific Standard Time
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-01 WI-CV-GW08M-0317 0.125, Description: WI-CV-GW08M-0317, Name: 170309G2_7, Date: 09-Mar-2017, Time: 16:51:08

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		6.391e3		0.128		1.58	
2	20	Total PFOA	413 > 368.7		2.794e4		0.128		0.407	
3	21	Total PFOS	499 > 79.9		8.486e3		0.128			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-7.qld

Last Altered: Friday, March 10, 2017 2:39:07 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:40:13 PM Pacific Standard Time

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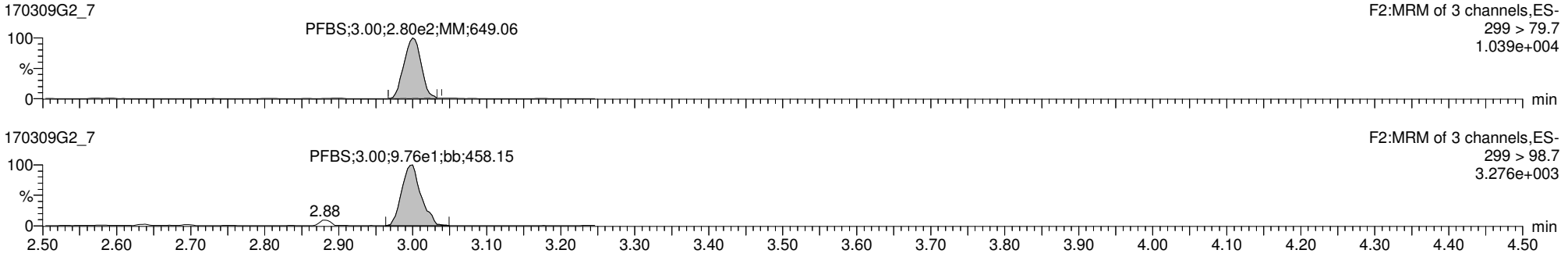
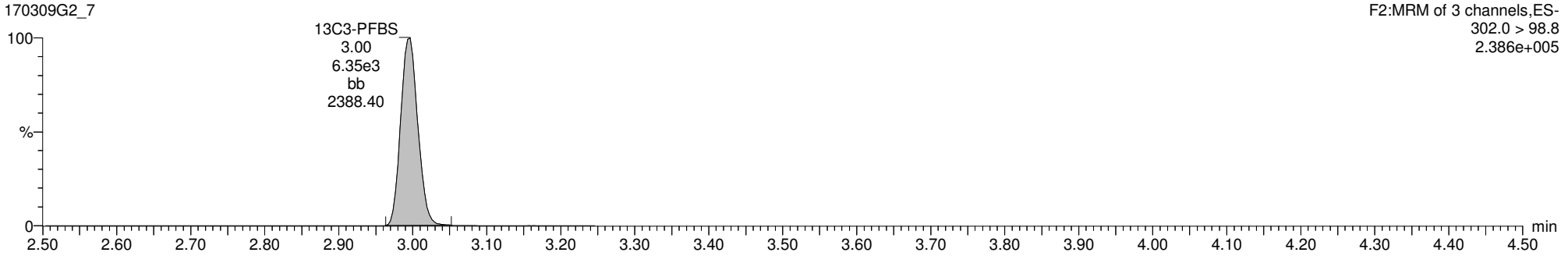
ID: 1700296-01 WI-CV-GW08M-0317 0.125, Description: WI-CV-GW08M-0317, Name: 170309G2_7, Date: 09-Mar-2017, Time: 16:51:08, Instrument: , Lab: , User:

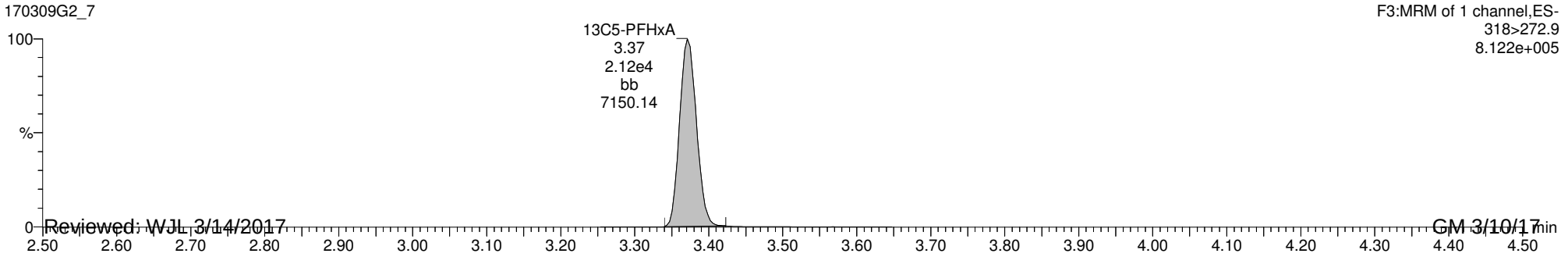
PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-7.qld

Last Altered: Friday, March 10, 2017 2:39:07 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:40:13 PM Pacific Standard Time

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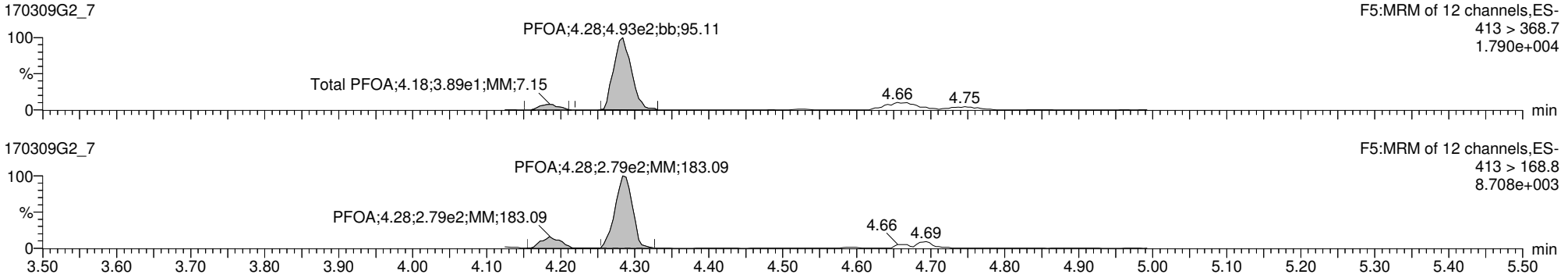
Total PFOA



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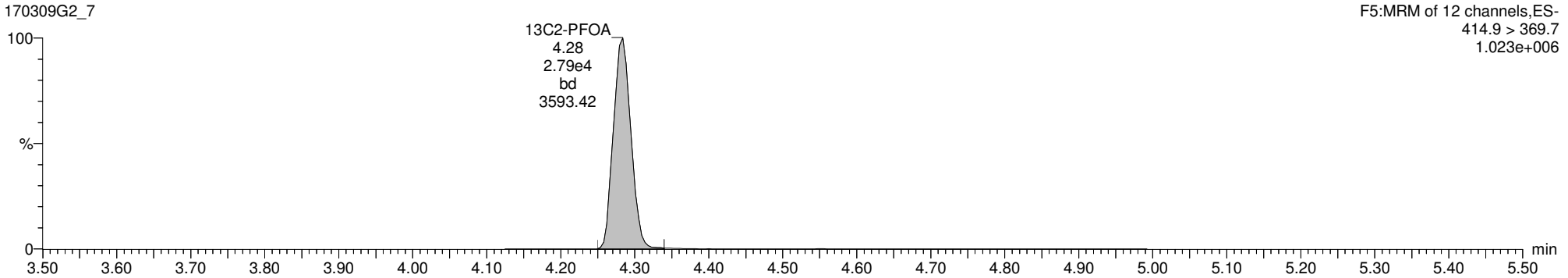
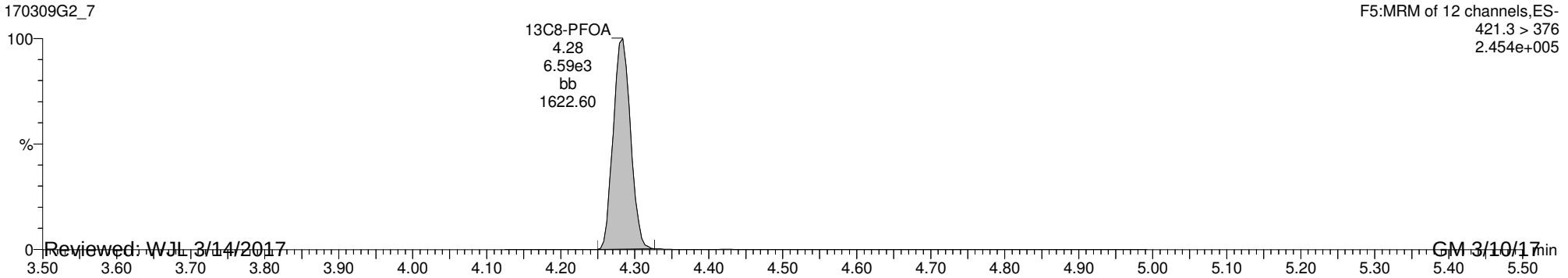


13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/10/17

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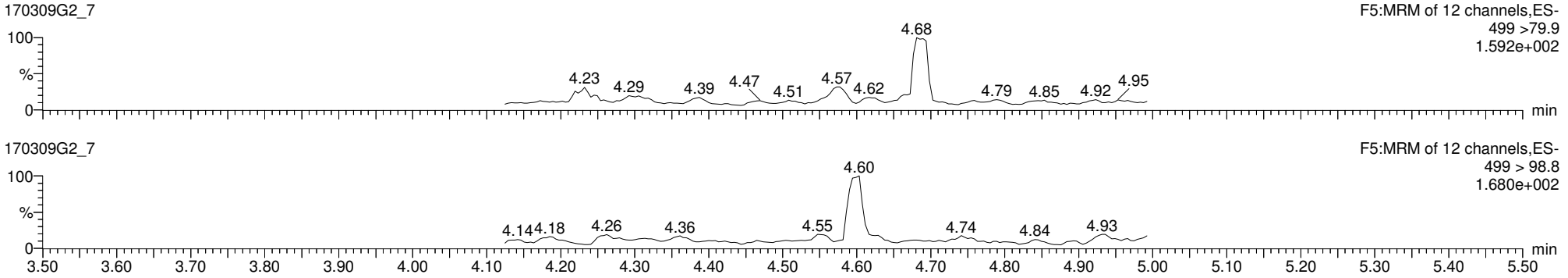
Total PFOS



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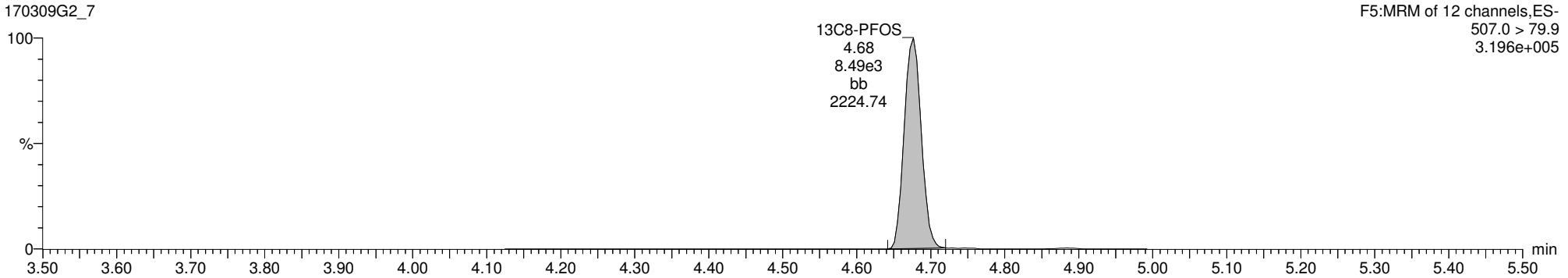
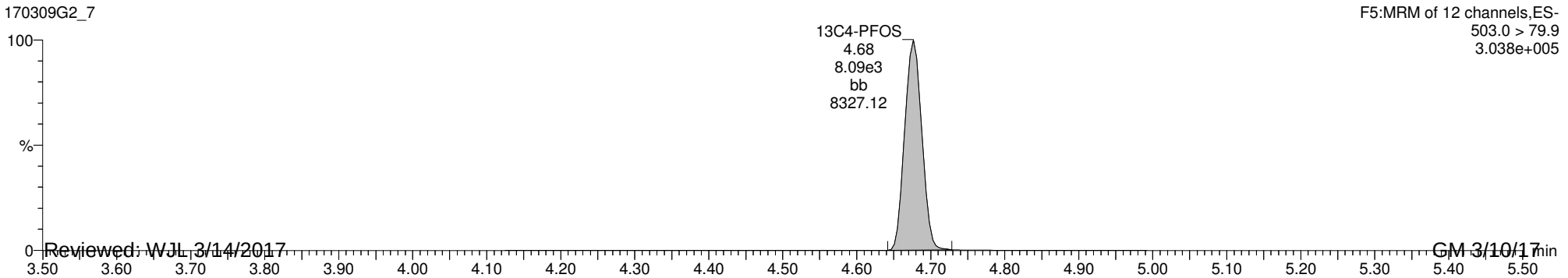


13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-8.qld

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-02 WI-CV-EB12-030317 0.125, Description: WI-CV-EB12-030317, Name: 170309G2_8, Date: 09-Mar-2017, Time: 17:03:41

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.725e3		0.121			
2	4	PFOA	413 > 368.7	2.068e2	3.462e4		0.121	4.28		
3	6	PFOS	499 >79.9		9.705e3		0.121			
4	7	13C3-PFBS	302.0 > 98.8	6.725e3	1.561e4	0.410	0.121	2.99	109	105
5	10	13C2-PFOA	414.9 > 369.7	3.462e4	9.172e3	4.608	0.121	4.28	84.8	81.9
6	12	13C8-PFOS	507.0 > 79.9	9.705e3	9.990e3	0.958	0.121	4.68	105	101
7	15	13C8-PFOA	421.3 > 376	9.172e3	9.172e3	1.000	0.121	4.28	104	100
8	17	13C4-PFOS	503.0 > 79.9	9.990e3	9.990e3	1.000	0.121	4.68	104	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-8.qld

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-02 WI-CV-EB12-030317 0.125, Description: WI-CV-EB12-030317, Name: 170309G2_8, Date: 09-Mar-2017, Time: 17:03:41

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		7.902e3		0.121			
2	20	Total PFOA	413 > 368.7		3.462e4		0.121			
3	21	Total PFOS	499 > 79.9		9.705e3		0.121			

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-8.qld

Last Altered: Friday, March 10, 2017 2:42:54 PM Pacific Standard Time
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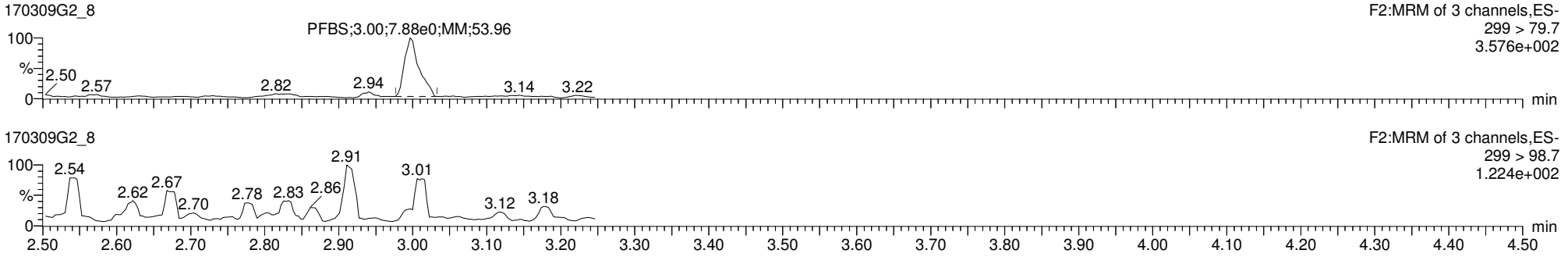
ID: 1700296-02 WI-CV-EB12-030317 0.125, Description: WI-CV-EB12-030317, Name: 170309G2_8, Date: 09-Mar-2017, Time: 17:03:41, Instrument: , Lab: , User:

PFBS



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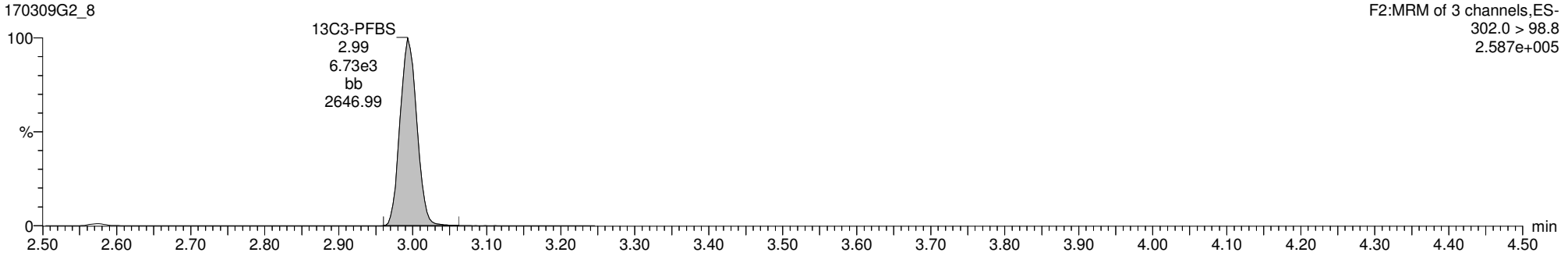
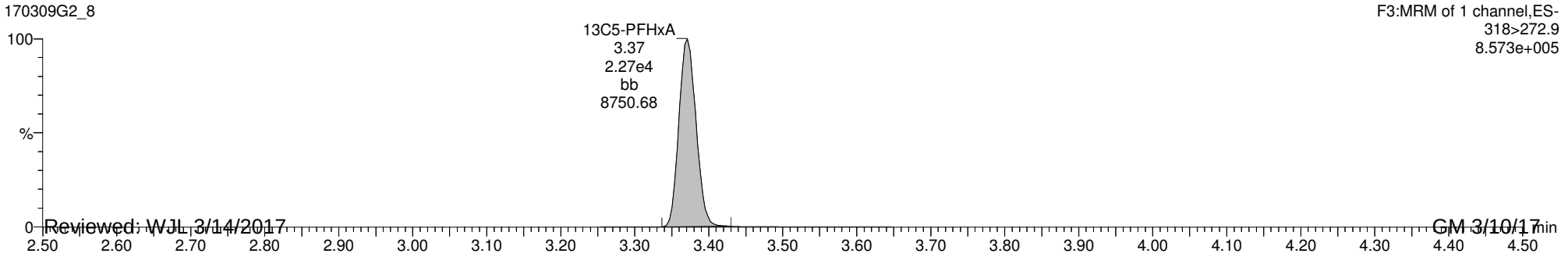


13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-8.qld

Last Altered: Friday, March 10, 2017 2:42:54 PM Pacific Standard Time
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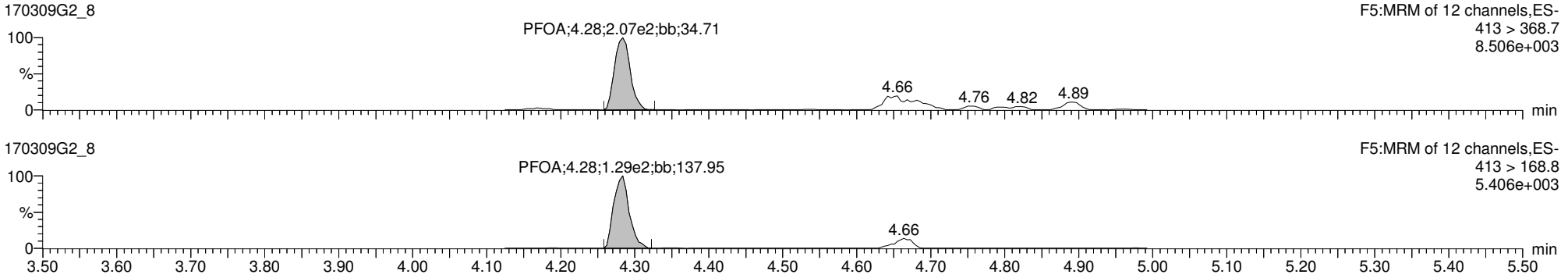
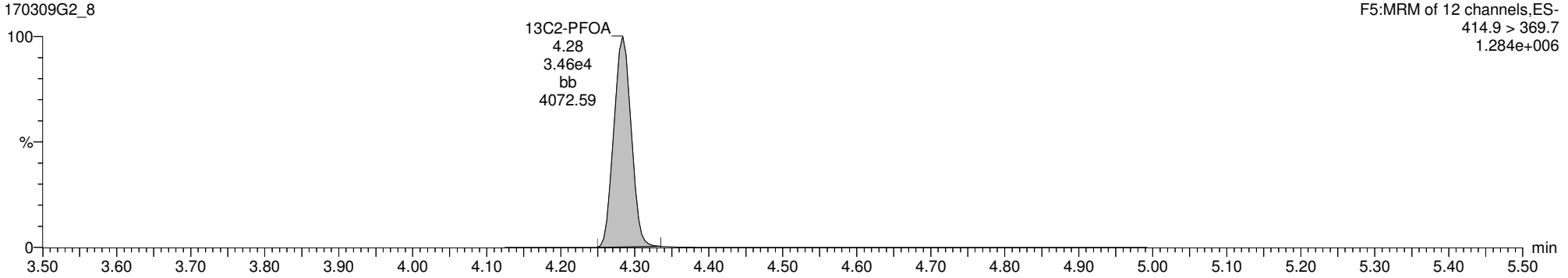
ID: 1700296-02 WI-CV-EB12-030317 0.125, Description: WI-CV-EB12-030317, Name: 170309G2_8, Date: 09-Mar-2017, Time: 17:03:41, Instrument: , Lab: , User:

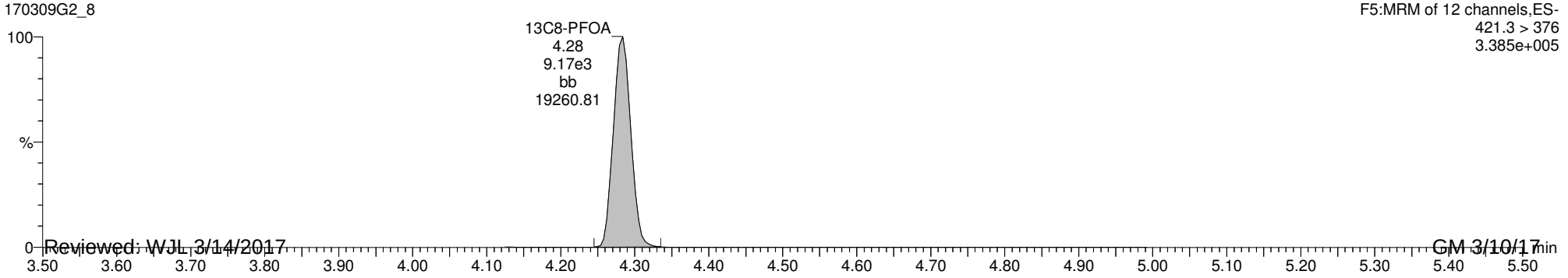
Total PFOA



13C2-PFOA



13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-8.qld

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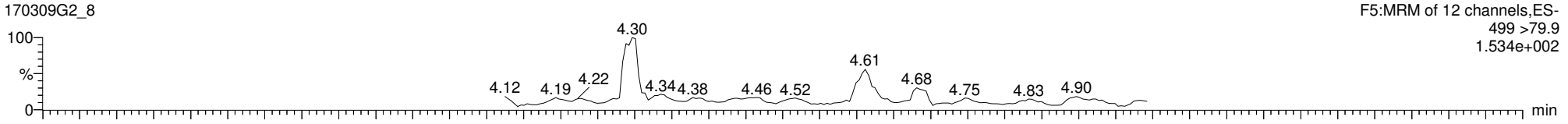
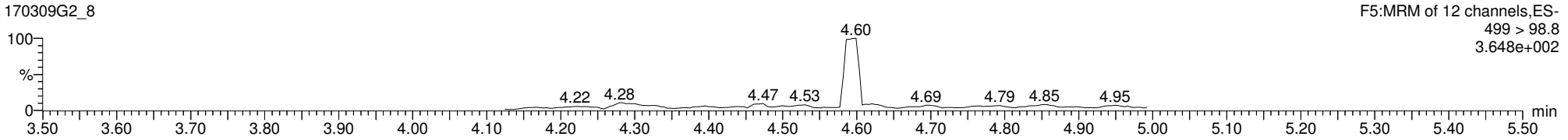
Printed: Friday, March 10, 2017 2:43:13 PM Pacific Standard Time

ID: 1700296-02 WI-CV-EB12-030317 0.125, Description: WI-CV-EB12-030317, Name: 170309G2_8, Date: 09-Mar-2017, Time: 17:03:41, Instrument: , Lab: , User:

Total PFOS





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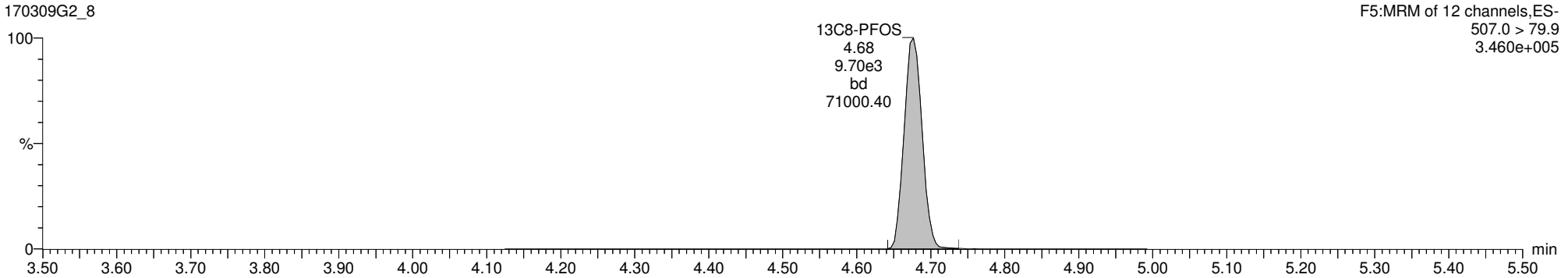
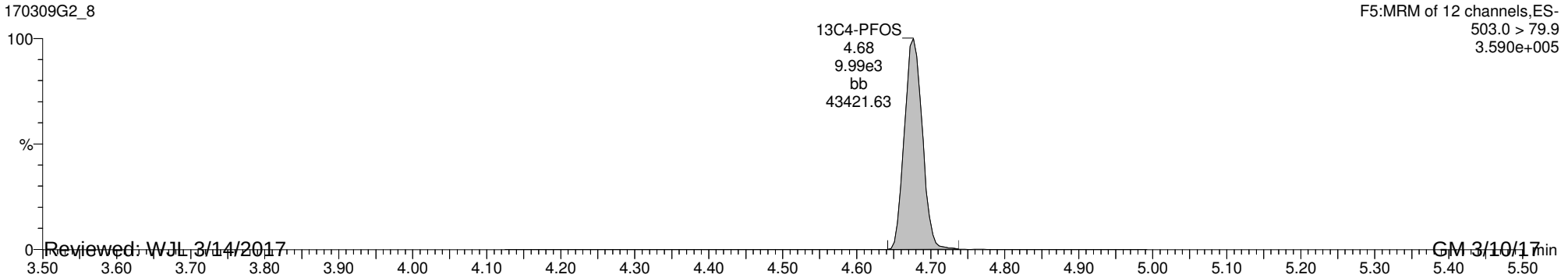


13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-9.qld

Last Altered: Friday, March 10, 2017 12:14:50 PM Pacific Standard Time
Printed: Friday, March 10, 2017 12:17:31 PM Pacific Standard Time

Method: Untitled 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-03 WI-CV-GW07S-0317 0.125, Description: WI-CV-GW07S-0317, Name: 170309G2_9, Date: 09-Mar-2017, Time: 17:16:14

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.719e3		0.114			
2	4	PFOA	413 > 368.7	2.500e2	3.369e4		0.114	4.29		
3	6	PFOS	499 >79.9		1.095e4		0.114			
4	7	13C3-PFBS	302.0 > 98.8	6.719e3	1.461e4	0.410	0.114	2.99	124	112
5	10	13C2-PFOA	414.9 > 369.7	3.369e4	8.037e3	4.608	0.114	4.28	100	91.0
6	12	13C8-PFOS	507.0 > 79.9	1.095e4	9.283e3	0.958	0.114	4.68	136	123
7	15	13C8-PFOA	421.3 > 376	8.037e3	8.037e3	1.000	0.114	4.28	110	100
8	17	13C4-PFOS	503.0 > 79.9	9.283e3	9.283e3	1.000	0.114	4.68	110	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-9.qld

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Printed: Friday, March 10, 2017 12:18:02 PM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-03 WI-CV-GW07S-0317 0.125, Description: WI-CV-GW07S-0317, Name: 170309G2_9, Date: 09-Mar-2017, Time: 17:16:14

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		7.443e3		0.114			
2	20	Total PFOA	413 > 368.7		3.369e4		0.114			
3	21	Total PFOS	499 > 79.9		1.095e4		0.114			

Vista Analytical Laboratory Q1

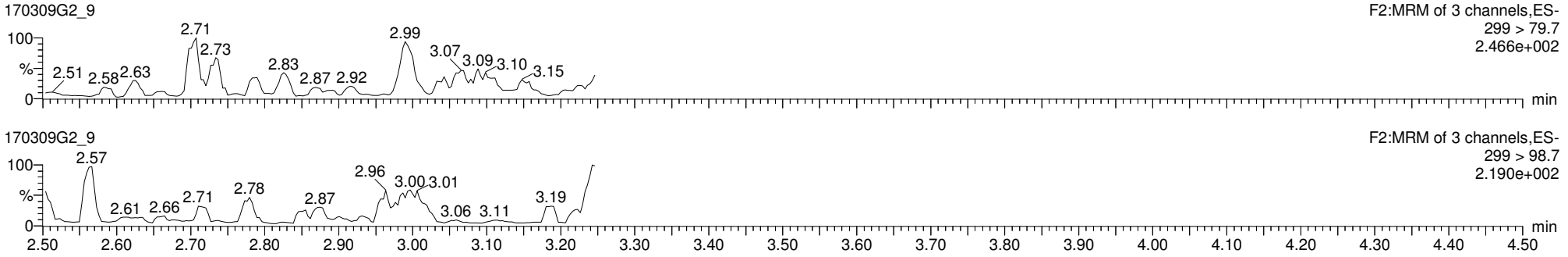
Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-9.qld

Last Altered: Friday, March 10, 2017 12:14:50 PM Pacific Standard Time
Printed: Friday, March 10, 2017 12:17:31 PM Pacific Standard Time

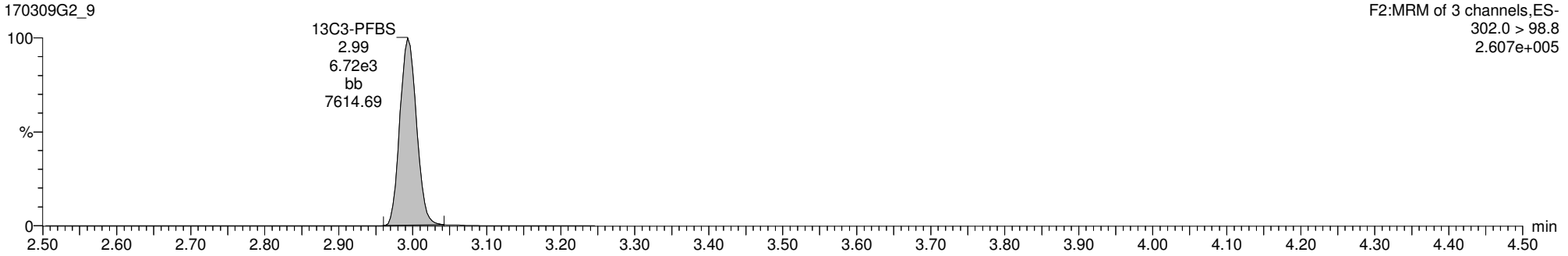
Method: Untitled 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-03 WI-CV-GW07S-0317 0.125, Description: WI-CV-GW07S-0317, Name: 170309G2_9, Date: 09-Mar-2017, Time: 17:16:14, Instrument: , Lab: , User:

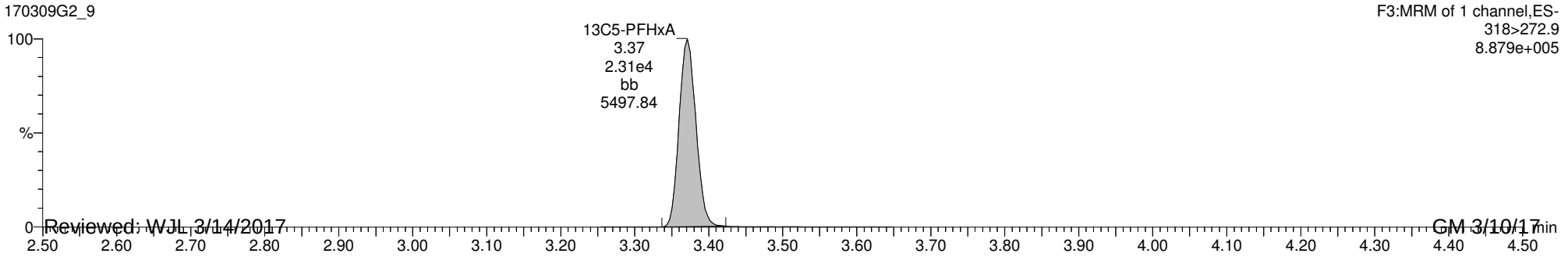
PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-9.qld

Last Altered: Friday, March 10, 2017 12:14:50 PM Pacific Standard Time
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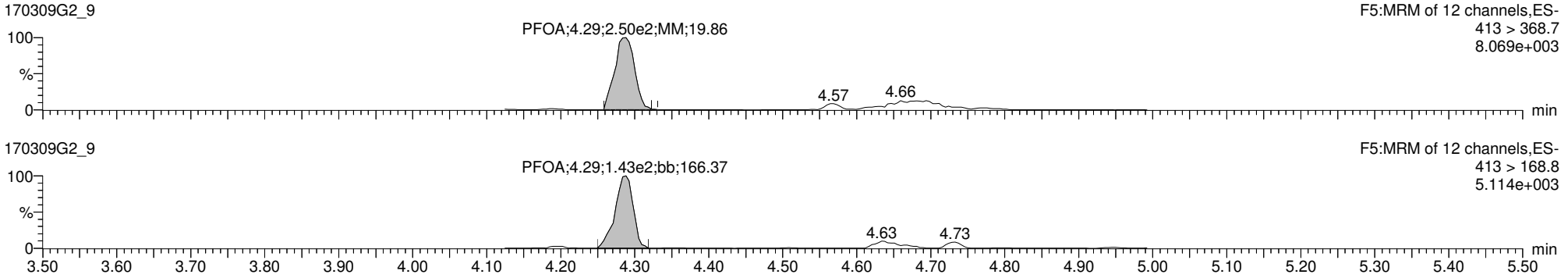
ID: 1700296-03 WI-CV-GW07S-0317 0.125, Description: WI-CV-GW07S-0317, Name: 170309G2_9, Date: 09-Mar-2017, Time: 17:16:14, Instrument: , Lab: , User:

Total PFOA



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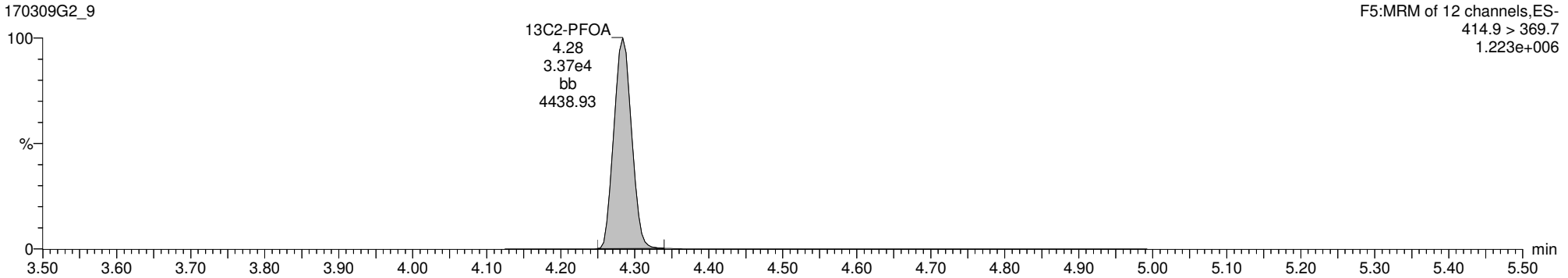
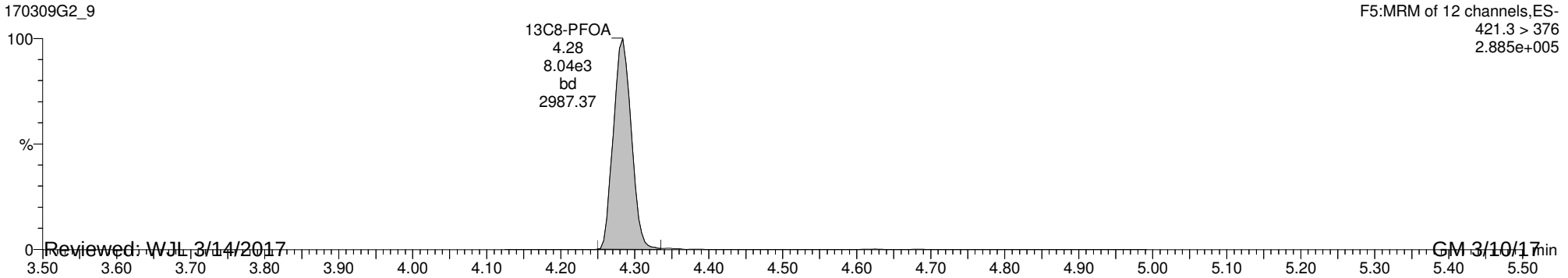


13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/10/17

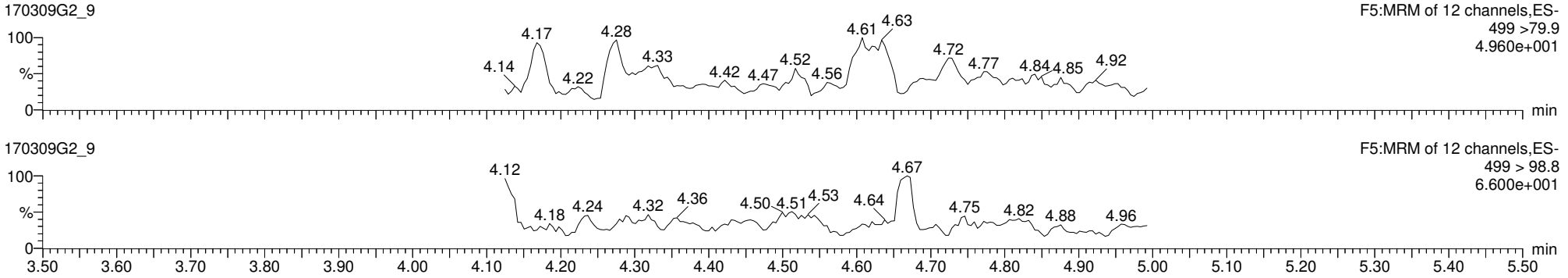
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-9.qld

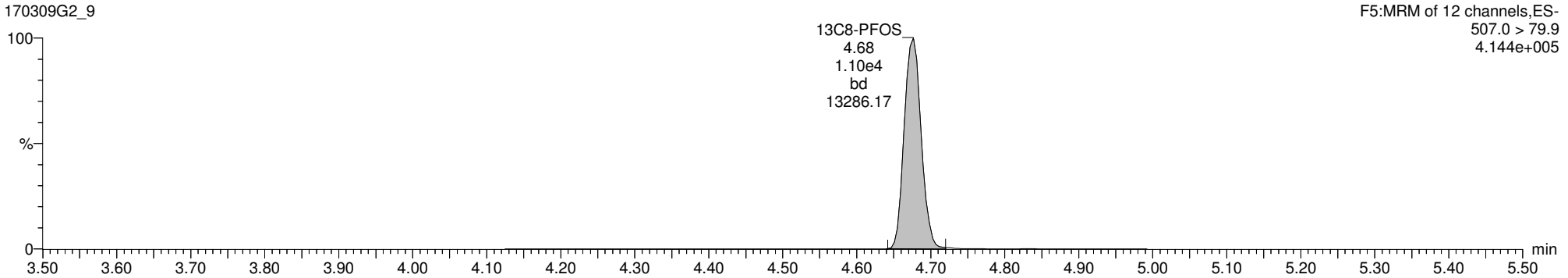
Last Altered: Friday, March 10, 2017 12:14:50 PM Pacific Standard Time
Printed: Friday, March 10, 2017 12:17:31 PM Pacific Standard Time

ID: 1700296-03 WI-CV-GW07S-0317 0.125, Description: WI-CV-GW07S-0317, Name: 170309G2_9, Date: 09-Mar-2017, Time: 17:16:14, Instrument: , Lab: , User:

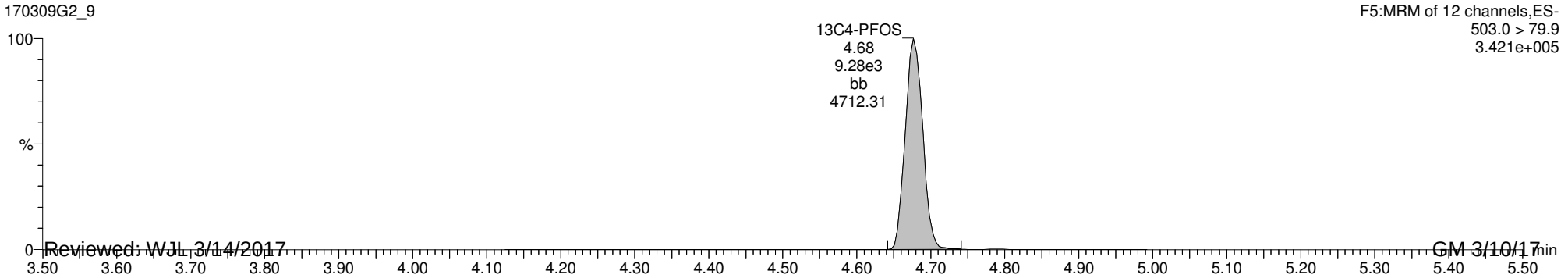
Total PFOS



13C8-PFOS



13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-10.qld

Last Altered: Friday, March 10, 2017 10:26:36 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:27:35 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-04 WI-CV-EB13-030417 0.125, Description: WI-CV-EB13-030417, Name: 170309G2_10, Date: 09-Mar-2017, Time: 17:28:47

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.285e1	6.562e3		0.124	2.99		
2	4	PFOA	413 > 368.7	2.585e2	3.551e4		0.124	4.28		
3	6	PFOS	499 >79.9		1.340e4		0.124			
4	7	13C3-PFBS	302.0 > 98.8	6.562e3	1.592e4	0.410	0.124	3.00	102	101
5	10	13C2-PFOA	414.9 > 369.7	3.551e4	8.648e3	4.608	0.124	4.28	90.0	89.1
6	12	13C8-PFOS	507.0 > 79.9	1.340e4	1.303e4	0.958	0.124	4.67	108	107
7	15	13C8-PFOA	421.3 > 376	8.648e3	8.648e3	1.000	0.124	4.28	101	100
8	17	13C4-PFOS	503.0 > 79.9	1.303e4	1.303e4	1.000	0.124	4.68	101	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-10.qld

Last Altered: Friday, March 10, 2017 10:26:36 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:28:04 AM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-04 WI-CV-EB13-030417 0.125, Description: WI-CV-EB13-030417, Name: 170309G2_10, Date: 09-Mar-2017, Time: 17:28:47

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		7.879e3		0.124			
2	20	Total PFOA	413 > 368.7		3.551e4		0.124			
3	21	Total PFOS	499 > 79.9		1.340e4		0.124			

Vista Analytical Laboratory Q1

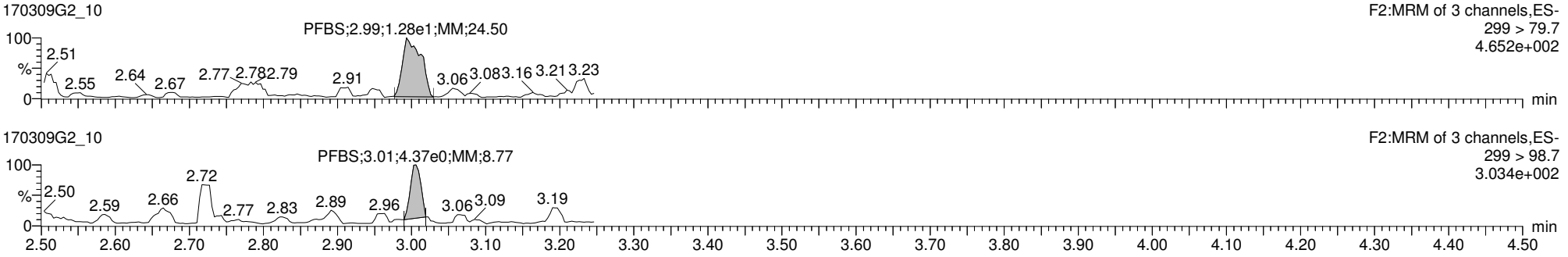
Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-10.qld

Last Altered: Friday, March 10, 2017 10:26:36 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:27:35 AM Pacific Standard Time

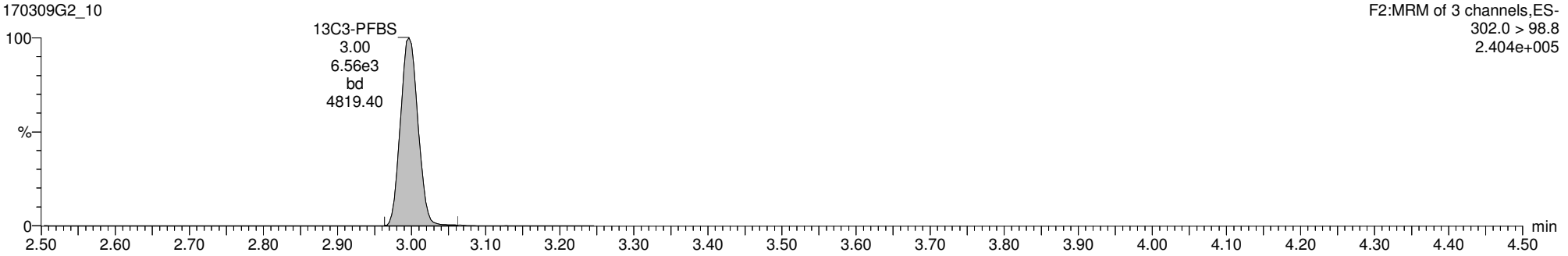
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-04 WI-CV-EB13-030417 0.125, Description: WI-CV-EB13-030417, Name: 170309G2_10, Date: 09-Mar-2017, Time: 17:28:47, Instrument: , Lab: , User:

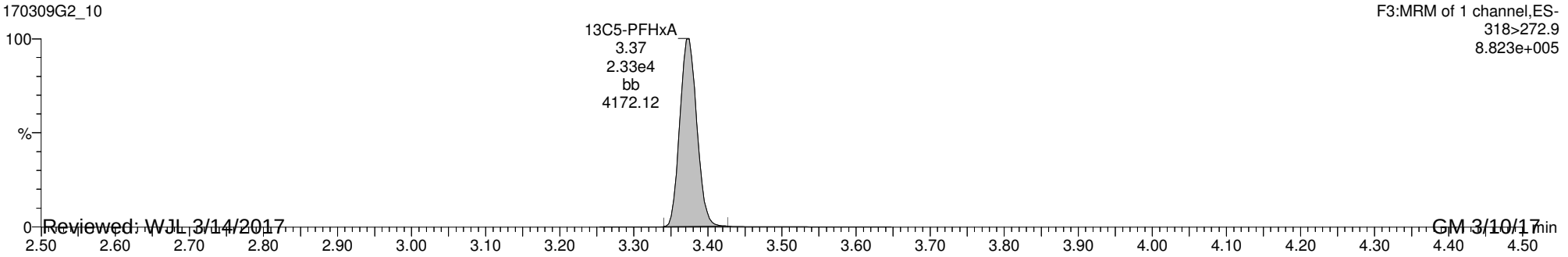
Total PFBS



13C3-PFBS



13C5-PFHxA



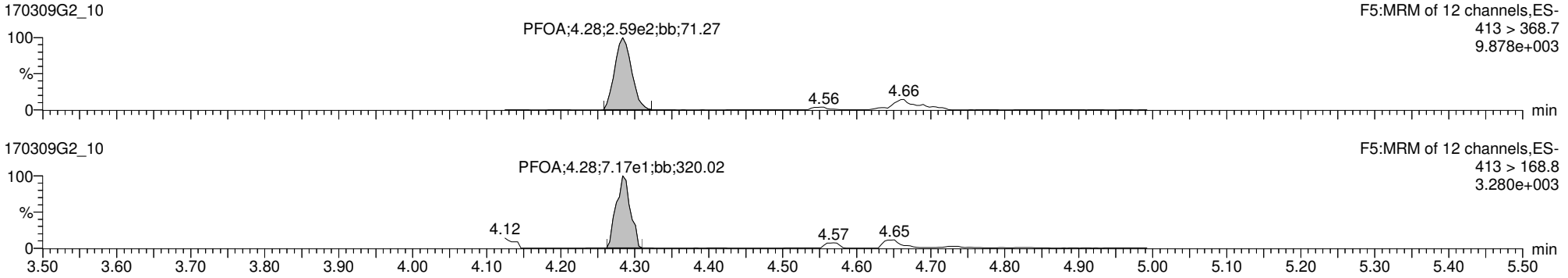
Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-10.qld

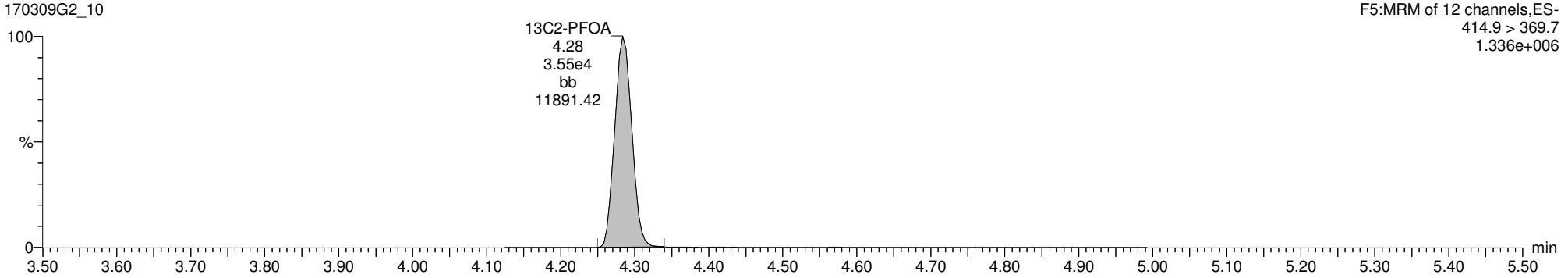
Last Altered: Friday, March 10, 2017 10:26:36 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:27:35 AM Pacific Standard Time

ID: 1700296-04 WI-CV-EB13-030417 0.125, Description: WI-CV-EB13-030417, Name: 170309G2_10, Date: 09-Mar-2017, Time: 17:28:47, Instrument: , Lab: , User:

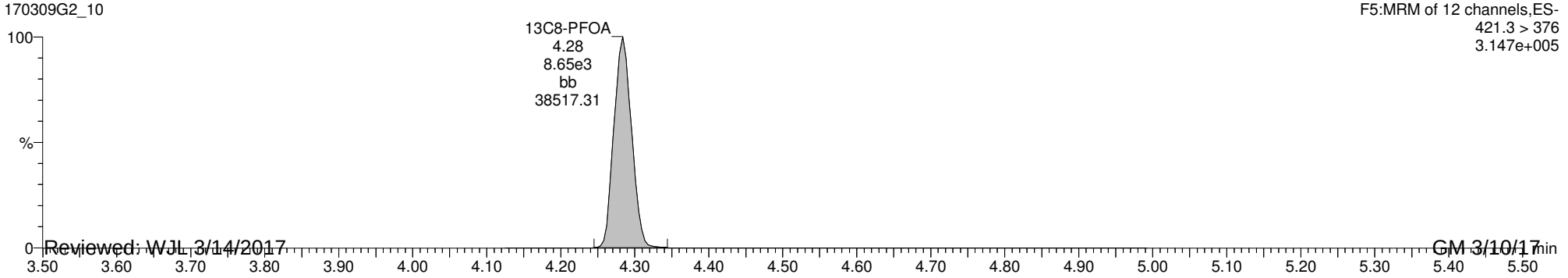
Total PFOA



13C2-PFOA



13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/10/17

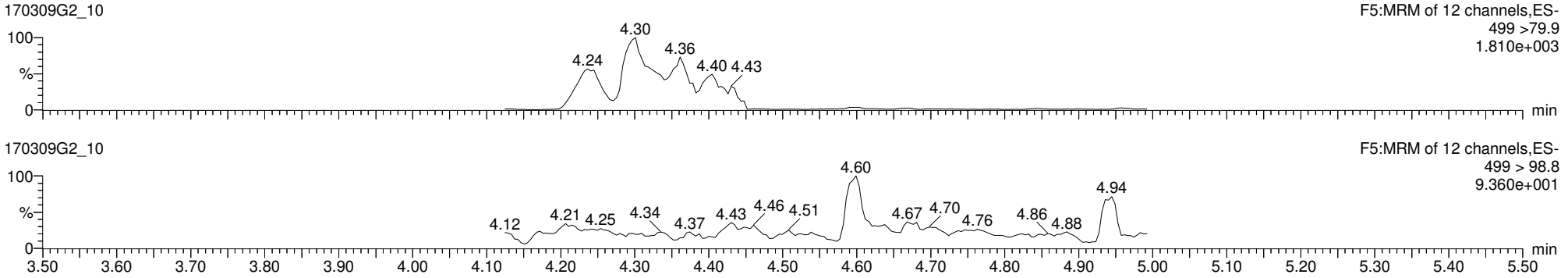
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-10.qld

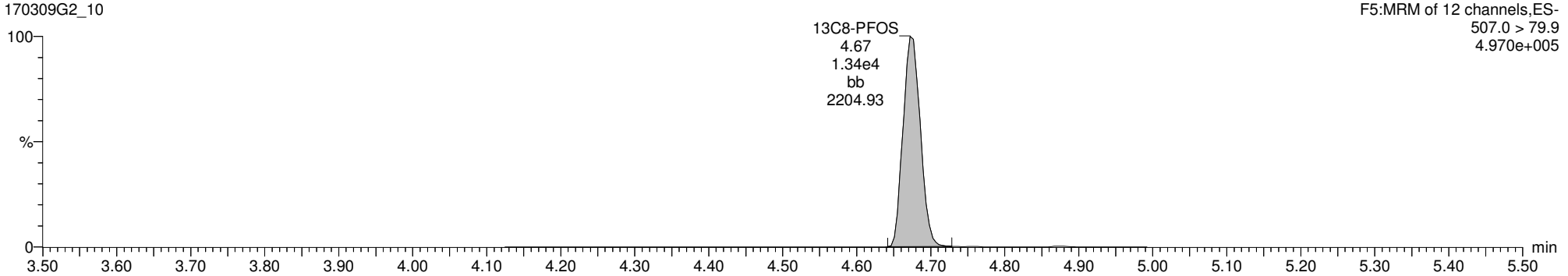
Last Altered: Friday, March 10, 2017 10:26:36 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:27:35 AM Pacific Standard Time

ID: 1700296-04 WI-CV-EB13-030417 0.125, Description: WI-CV-EB13-030417, Name: 170309G2_10, Date: 09-Mar-2017, Time: 17:28:47, Instrument: , Lab: , User:

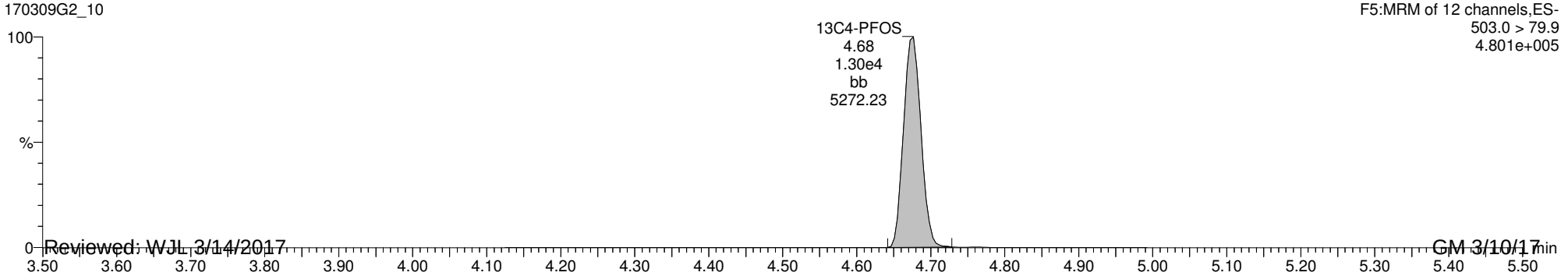
Total PFOS



13C8-PFOS



13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

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Printed: Tuesday, March 14, 2017 11:03:39 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.535e4	5.918e3		0.123	2.99	111	
2	2	PFHpA	363 > 318.9	1.112e4	1.645e4		0.123	3.88	37.6	
3	3	PFHxS	398.9 > 79.6	1.961e4	7.696e3		0.123	4.00	142	
4	4	PFOA	413 > 368.7	3.542e4	3.264e4		0.123	4.28	137	
5	5	PFNA	463 > 418.8		1.130e4		0.123			
6	6	PFOS	499 >79.9	7.292e0	1.287e4		0.123	4.59	0.898	
7	7	13C3-PFBS	302.0 > 98.8	5.918e3	1.511e4	0.410	0.123	2.99	97.2	95.5
8	8	13C4-PFHpA	367.2 > 321.8	1.645e4	1.511e4	1.098	0.123	3.88	101	99.2
9	9	18O2-PFHxS	403 > 102.6	7.696e3	1.511e4	0.434	0.123	3.99	119	117
10	10	13C2-PFOA	414.9 > 369.7	3.264e4	7.421e3	4.608	0.123	4.28	97.1	95.4
11	11	13C5-PFNA	468.2 > 422.9	1.130e4	1.125e4	0.867	0.123	4.62	118	116
12	12	13C8-PFOS	507.0 > 79.9	1.287e4	1.098e4	0.958	0.123	4.67	124	122
13	13	13C5-PFHxA	318>272.9	1.940e4	1.940e4	1.000	0.123	3.37	102	100
14	14	13C3-PFHxS	401.9 > 79.9	1.511e4	1.511e4	1.000	0.123	3.99	102	100
15	15	13C8-PFOA	421.3 > 376	7.421e3	7.421e3	1.000	0.123	4.28	102	100
16	16	13C9-PFNA	472.2 > 426.9	1.125e4	1.125e4	1.000	0.123	4.61	102	100
17	17	13C4-PFOS	503.0 > 79.9	1.098e4	1.098e4	1.000	0.123	4.67	102	100
18	18	Total PFBS	299 > 79.7		7.696e3		0.123		111	
19	19	Total PFHxS	398.9 > 79.6		7.696e3		0.123		142	
20	20	Total PFOA	413 > 368.7		3.264e4		0.123		166	
21	21	Total PFOS	499 > 79.9		1.287e4		0.123		0.898	

Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7	2.99	15350.423	5917.723	110.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.00	19607.484	7695.920	142.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.28	35421.238	32636.701	137.1
2	20	Total PFOA	413 > 368.7	4.18	7862.728	32636.701	29.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	6	PFOS	499 >79.9	4.59	7.292	12868.387	0.9

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

Last Altered: Tuesday, March 14, 2017 11:03:21 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:03:39 Pacific Daylight Time

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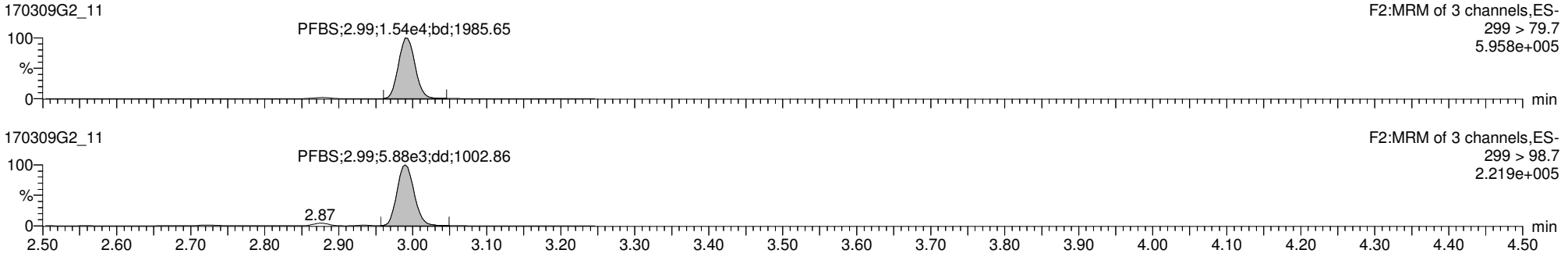
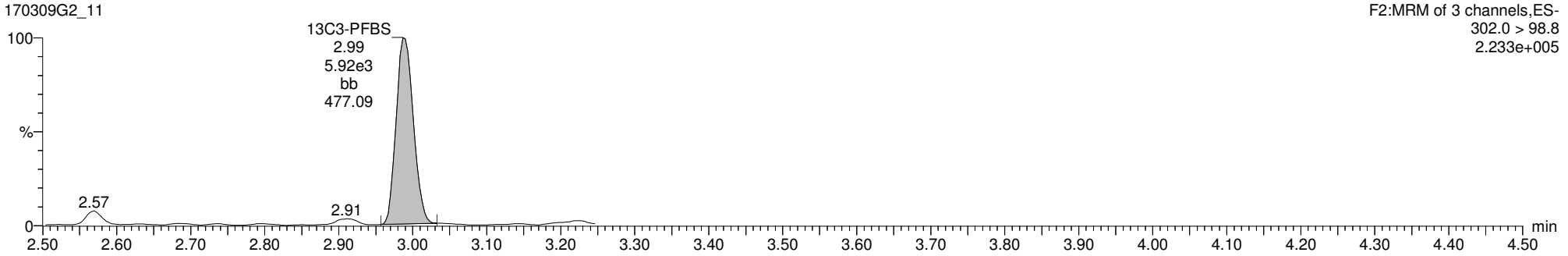
ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21, Instrument: , Lab: , User:

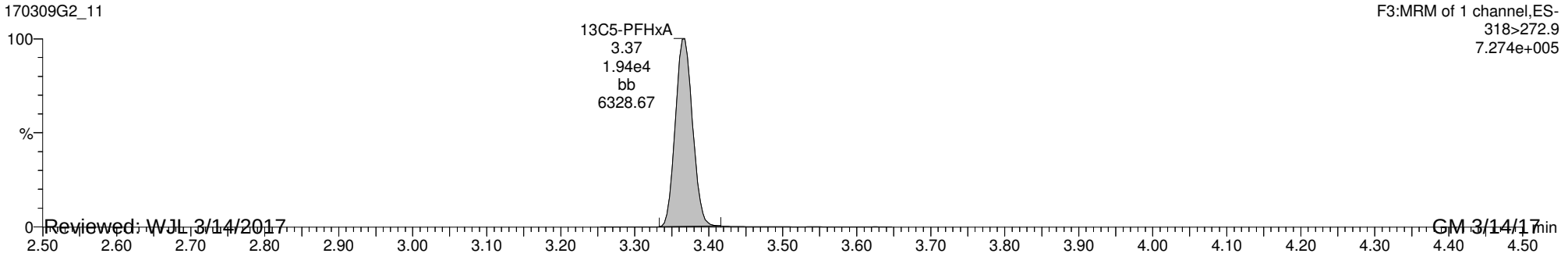
PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

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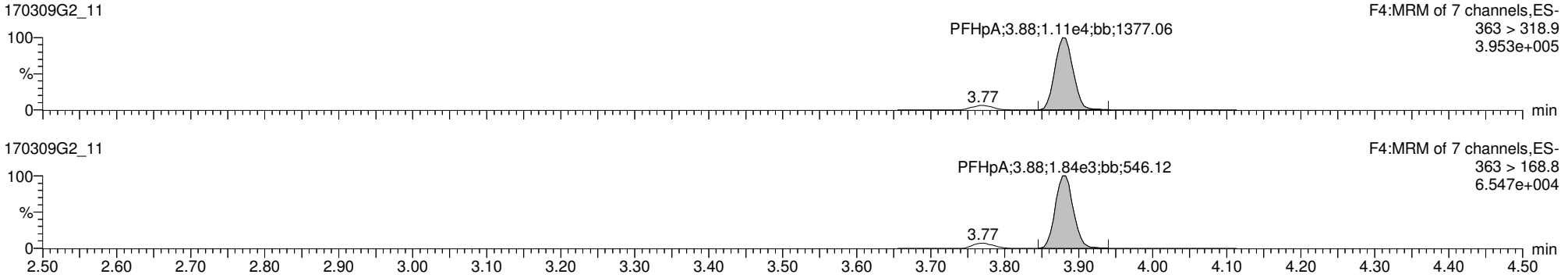
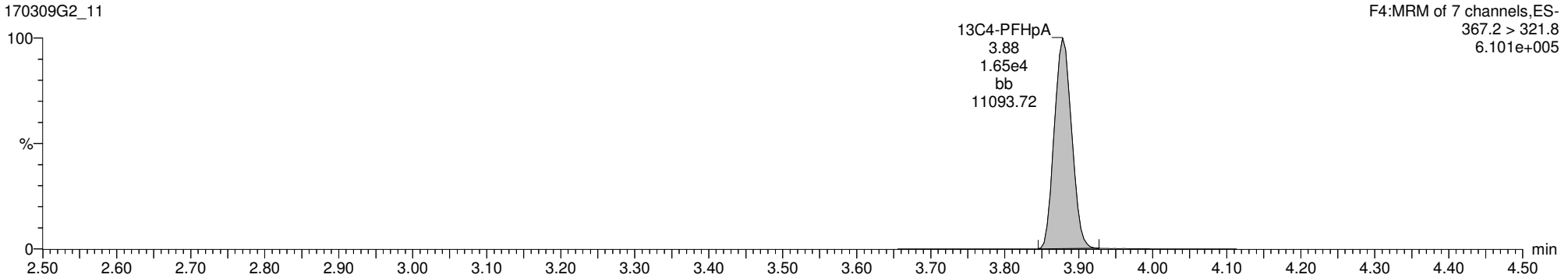
Printed: Tuesday, March 14, 2017 11:03:39 Pacific Daylight Time

ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21, Instrument: , Lab: , User:

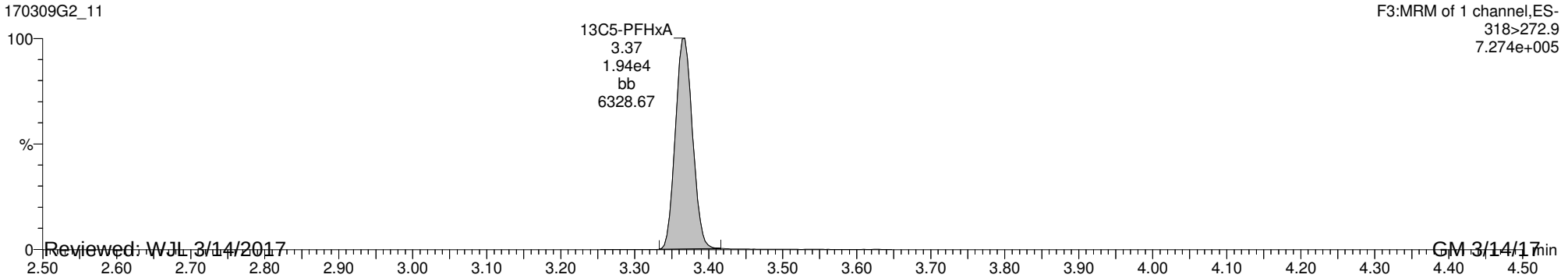
PFHpA



13C4-PFHpA



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

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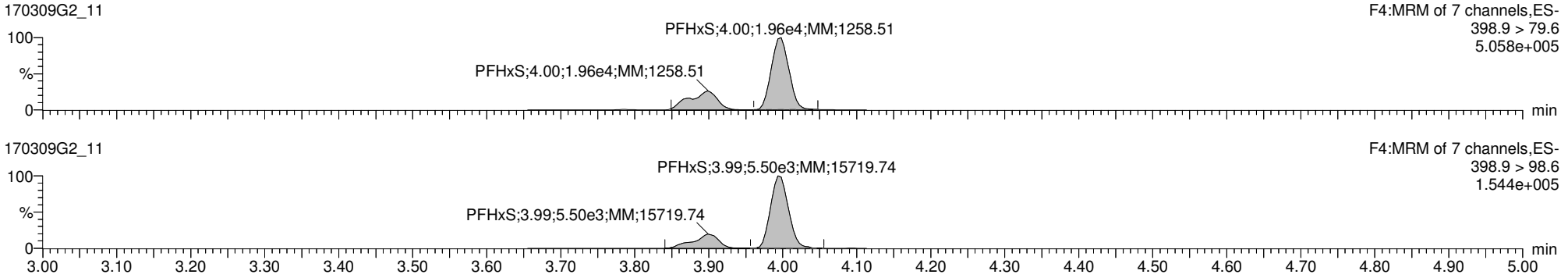
Printed: Tuesday, March 14, 2017 11:03:39 Pacific Daylight Time

ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21, Instrument: , Lab: , User:

Total PFHxS



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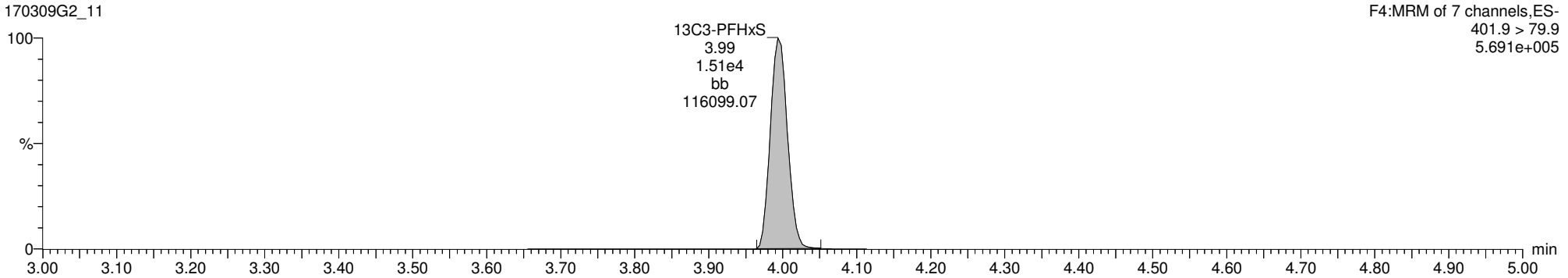
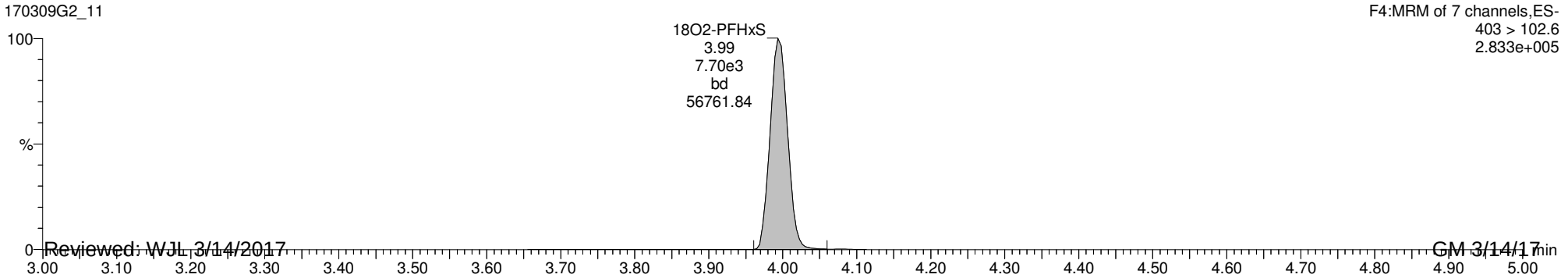


18O2-PFHxS



Reviewed: WJL 3/14/2017 GM 3/14/17

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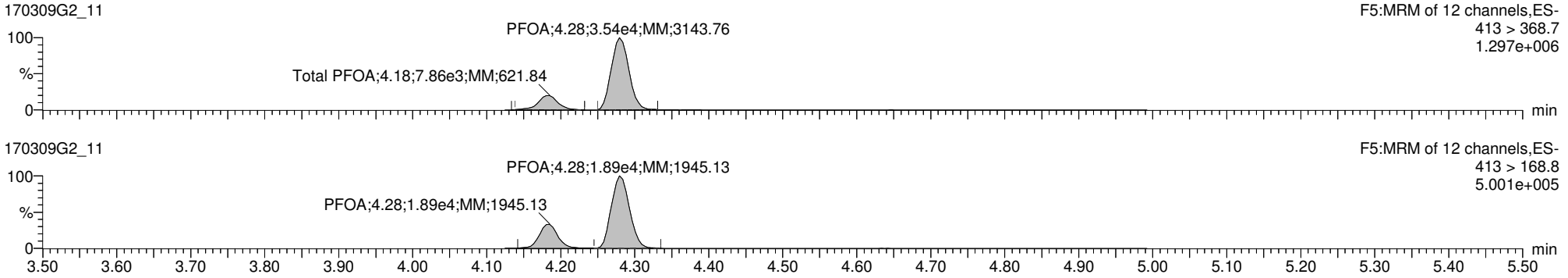
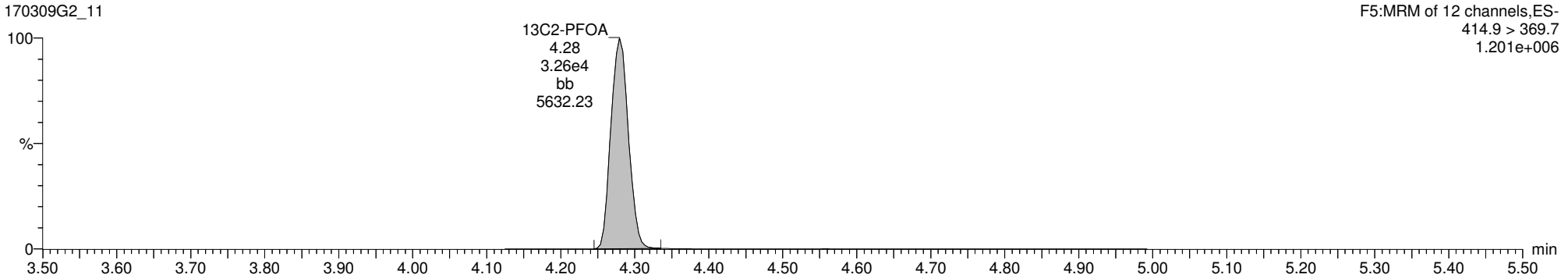
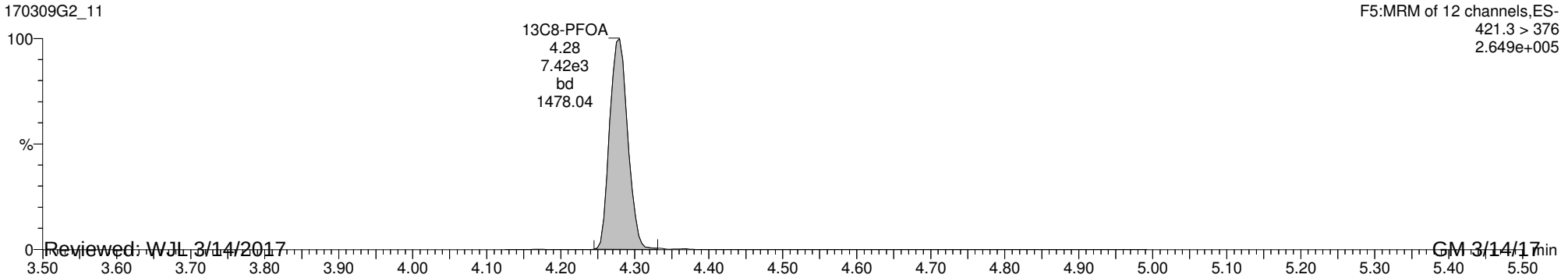
Total PFOA



13C2-PFOA



13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/14/17

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Last Altered: Tuesday, March 14, 2017 11:03:21 Pacific Daylight Time
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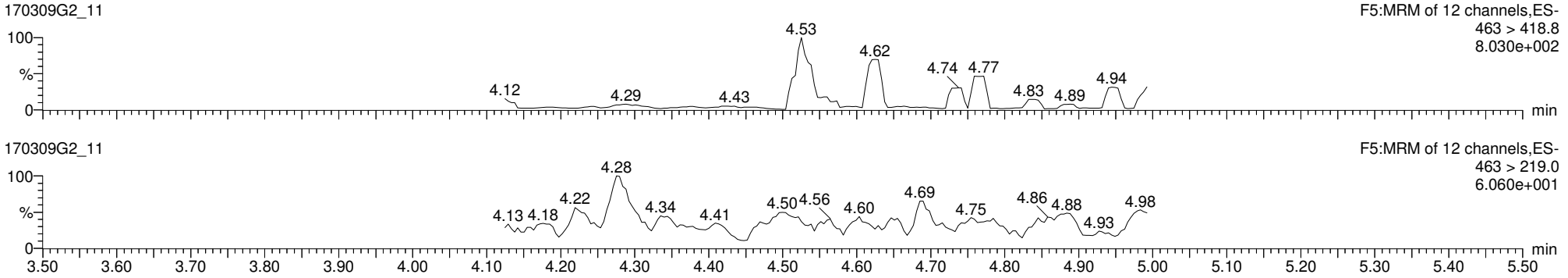
ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21, Instrument: , Lab: , User:

PFNA



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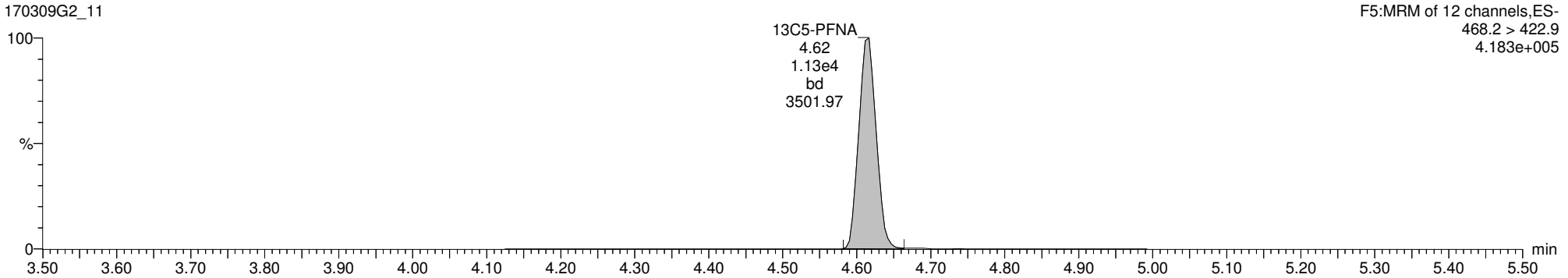

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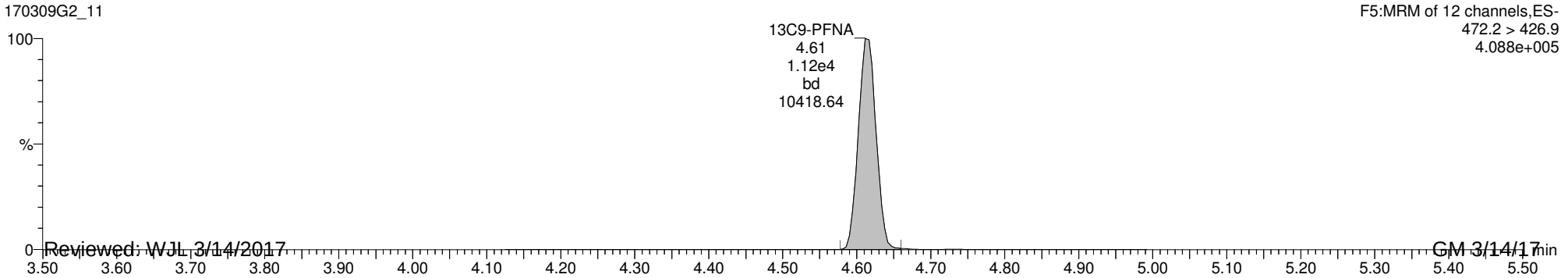


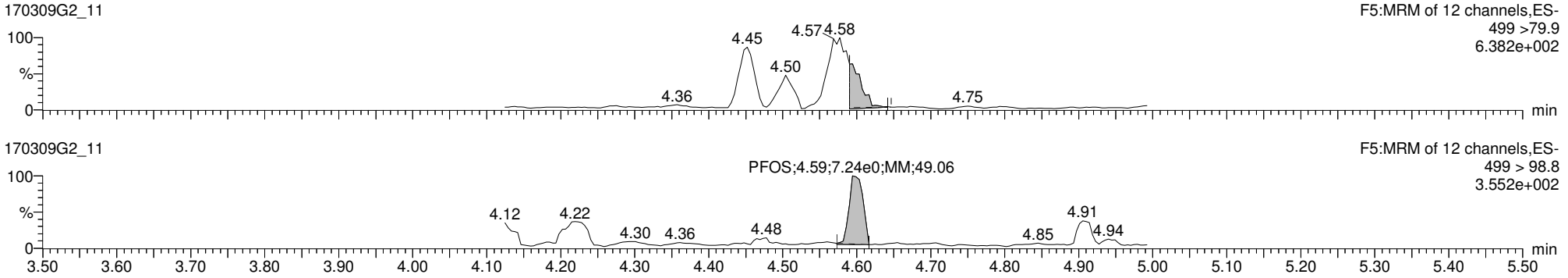
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-11.qld

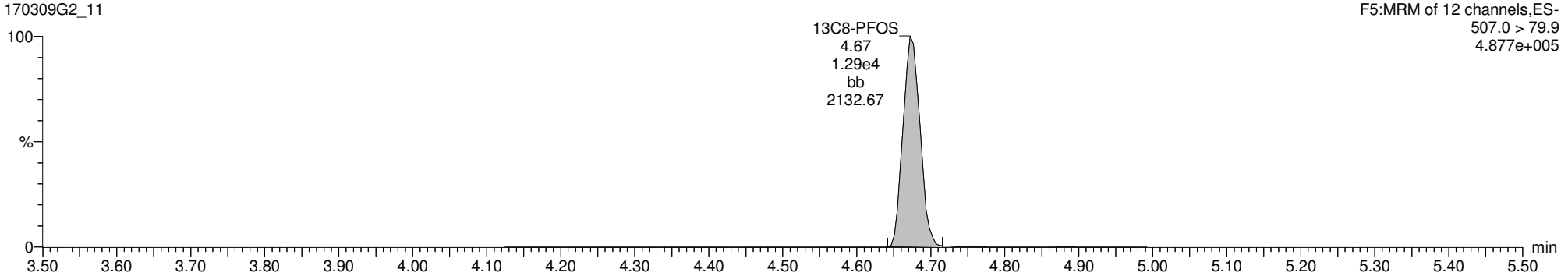
Last Altered: Tuesday, March 14, 2017 11:03:21 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:03:39 Pacific Daylight Time

ID: 1700296-05 WI-CV-GW14M-0317 0.125, Description: WI-CV-GW14M-0317, Name: 170309G2_11, Date: 09-Mar-2017, Time: 17:41:21, Instrument: , Lab: , User:

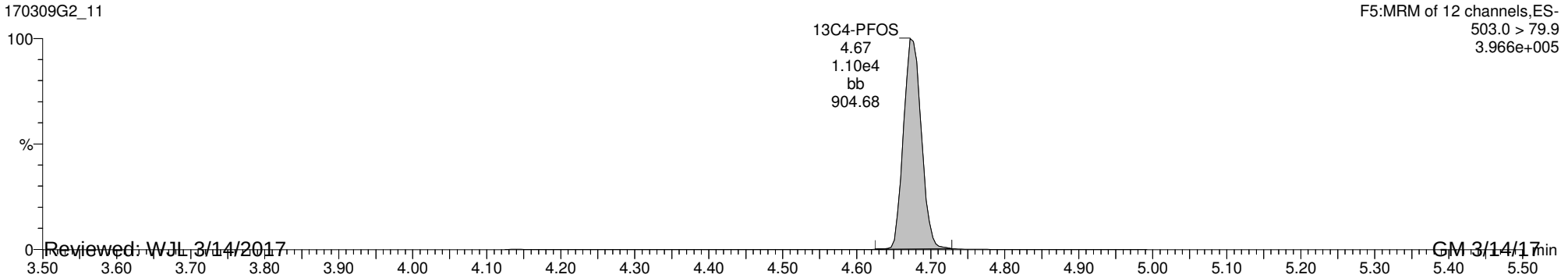
Total PFOS



13C8-PFOS



13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-12.qld

Last Altered: Friday, March 10, 2017 10:40:34 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:40:56 AM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-06 WI-CV-GW13S-0317 0.125, Description: WI-CV-GW13S-0317, Name: 170309G2_12, Date: 09-Mar-2017, Time: 17:53:53

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.791e2	6.019e3		0.123	3.00	1.74	
2	4	PFOA	413 > 368.7	3.409e2	3.371e4		0.123	4.29		
3	6	PFOS	499 >79.9		1.202e4		0.123			
4	7	13C3-PFBS	302.0 > 98.8	6.019e3	1.459e4	0.410	0.123	2.99	102	101
5	10	13C2-PFOA	414.9 > 369.7	3.371e4	8.187e3	4.608	0.123	4.28	90.5	89.4
6	12	13C8-PFOS	507.0 > 79.9	1.202e4	1.053e4	0.958	0.123	4.68	121	119
7	15	13C8-PFOA	421.3 > 376	8.187e3	8.187e3	1.000	0.123	4.28	101	100
8	17	13C4-PFOS	503.0 > 79.9	1.053e4	1.053e4	1.000	0.123	4.68	101	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-12.qld

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ID: 1700296-06 WI-CV-GW13S-0317 0.125, Description: WI-CV-GW13S-0317, Name: 170309G2_12, Date: 09-Mar-2017, Time: 17:53:53

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		7.225e3		0.123		1.74	
2	20	Total PFOA	413 > 368.7		3.371e4		0.123			
3	21	Total PFOS	499 > 79.9		1.202e4		0.123			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-12.qld

Last Altered: Friday, March 10, 2017 10:40:34 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:40:56 AM Pacific Standard Time

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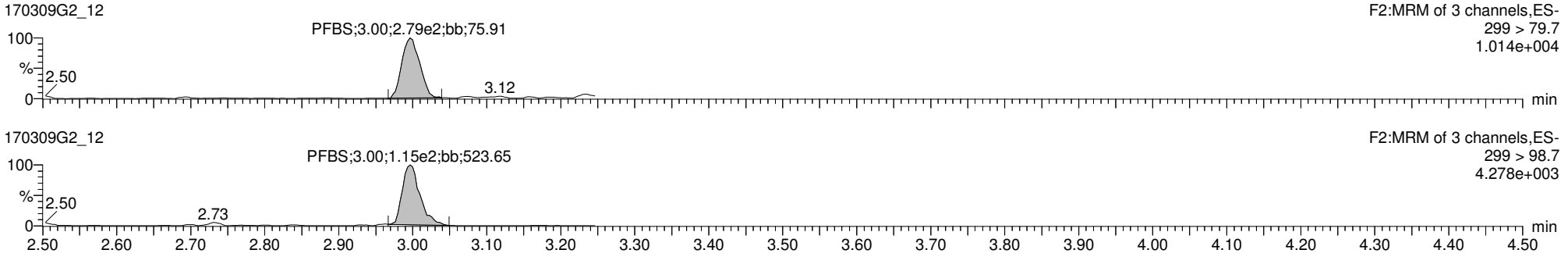
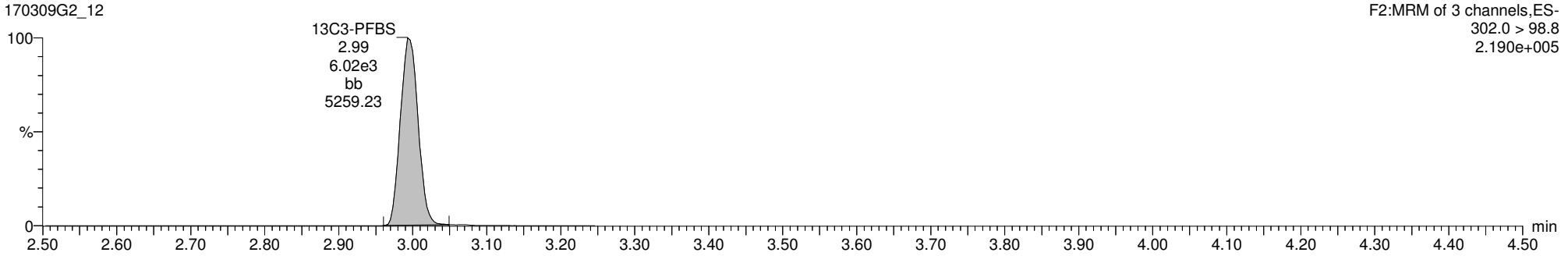
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-06 WI-CV-GW13S-0317 0.125, Description: WI-CV-GW13S-0317, Name: 170309G2_12, Date: 09-Mar-2017, Time: 17:53:53, Instrument: , Lab: , User:

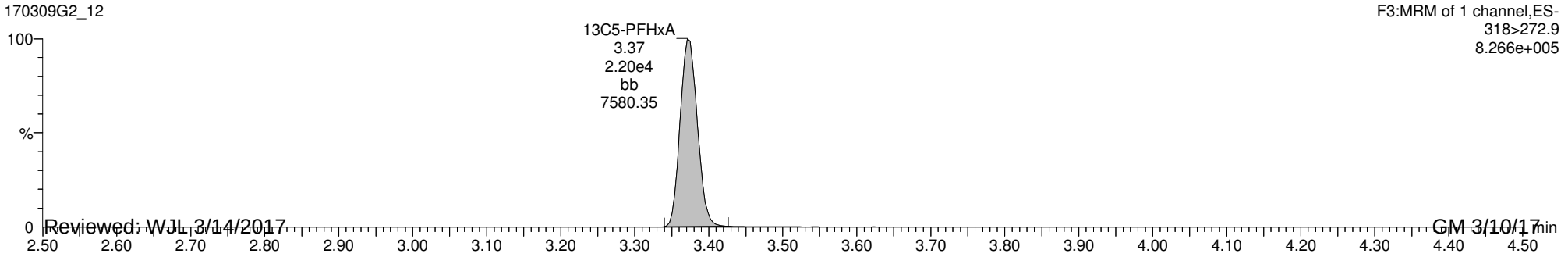
Total PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-12.qld

Last Altered: Friday, March 10, 2017 10:40:34 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:40:56 AM Pacific Standard Time

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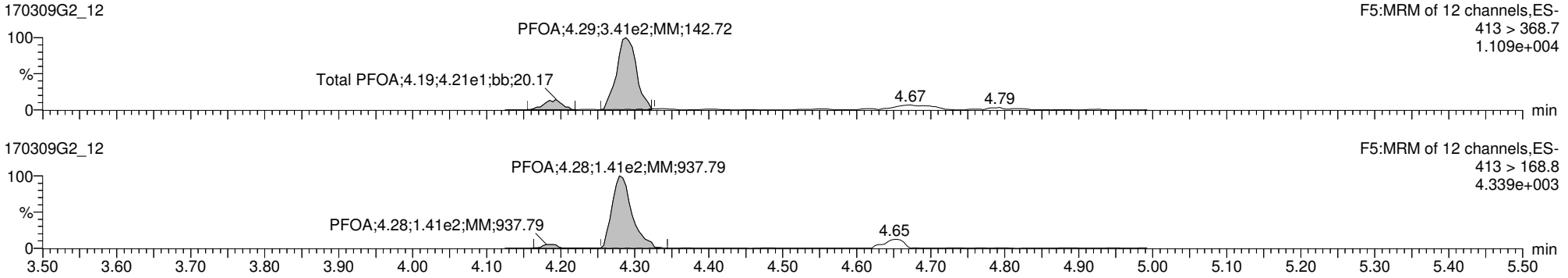
Total PFOA



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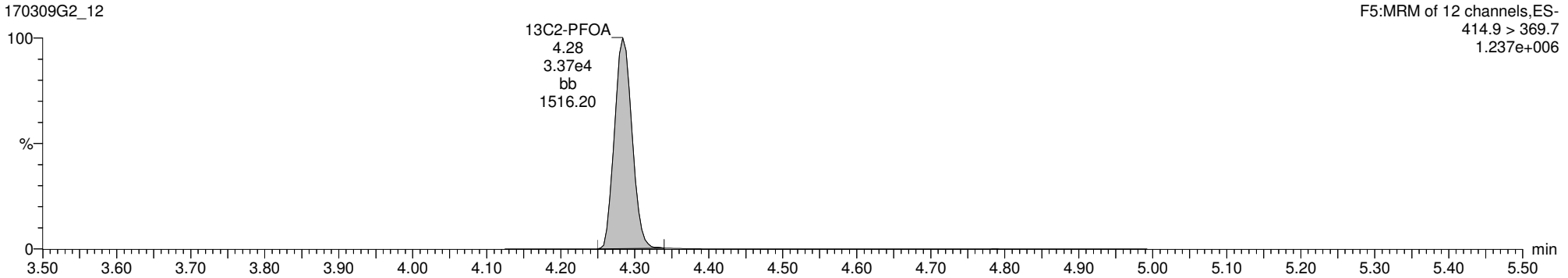
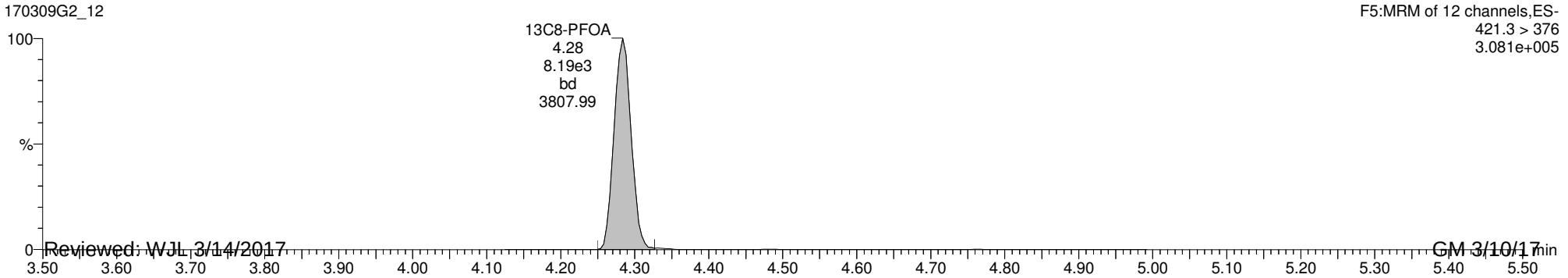


13C8-PFOA



Reviewed: WJL 3/14/2017 GM 3/10/17

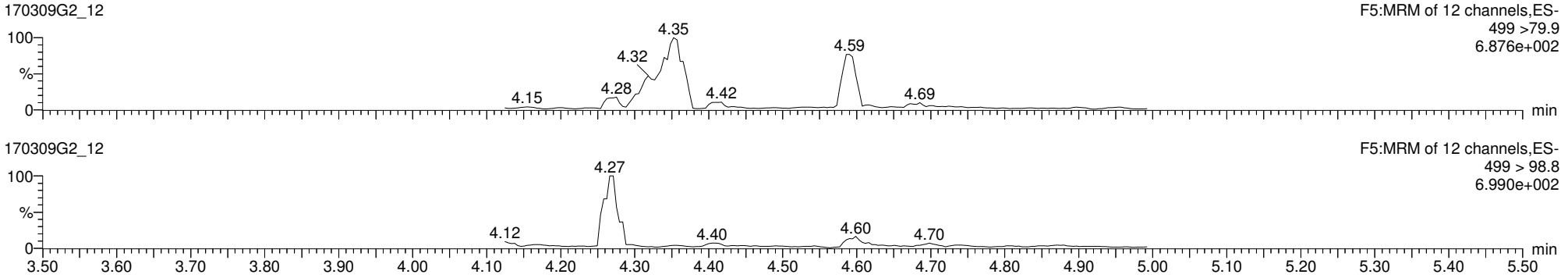
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-12.qld

Last Altered: Friday, March 10, 2017 10:40:34 AM Pacific Standard Time
Printed: Friday, March 10, 2017 10:40:56 AM Pacific Standard Time

ID: 1700296-06 WI-CV-GW13S-0317 0.125, Description: WI-CV-GW13S-0317, Name: 170309G2_12, Date: 09-Mar-2017, Time: 17:53:53, Instrument: , Lab: , User:

Total PFOS



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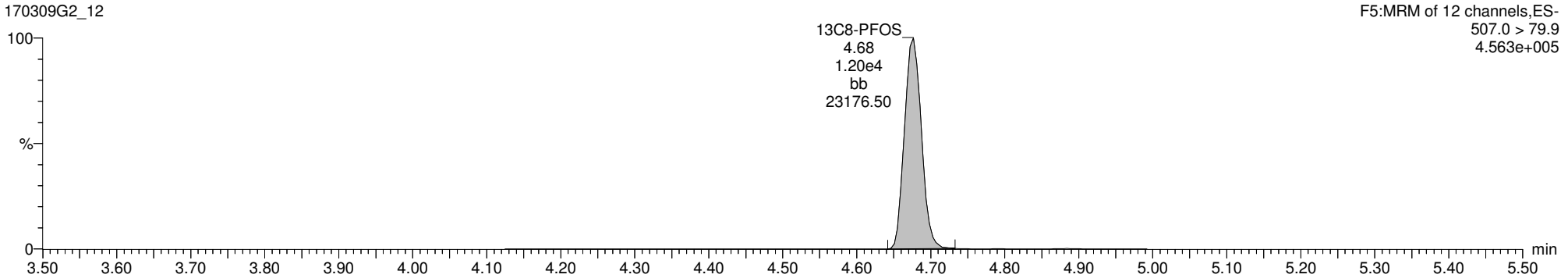
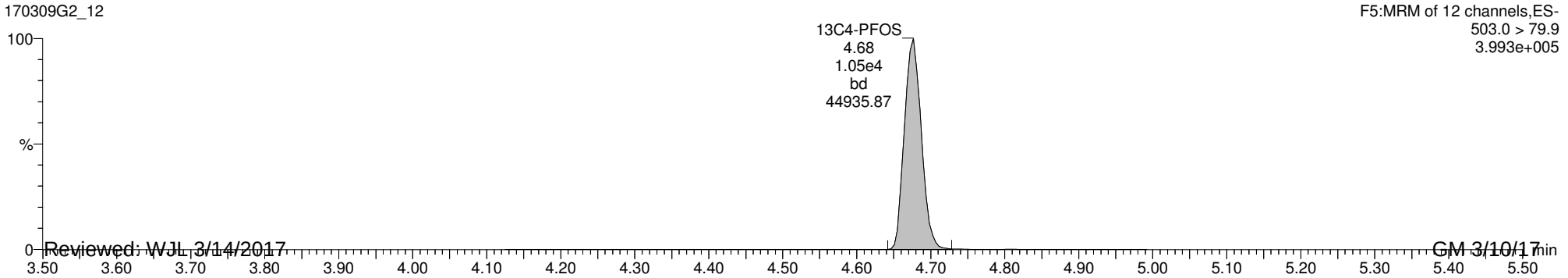


13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

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ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.935e3		0.128			
2	2	PFHpA	363 > 318.9		1.683e4		0.128			
3	3	PFHxS	398.9 > 79.6	6.125e1	7.680e3		0.128	4.00		
4	4	PFOA	413 > 368.7	1.886e2	3.580e4		0.128	4.28		
5	5	PFNA	463 > 418.8		1.042e4		0.128			
6	6	PFOS	499 >79.9	5.385e0	1.137e4		0.128	4.68	0.844	
7	7	13C3-PFBS	302.0 > 98.8	6.935e3	1.510e4	0.410	0.128	3.00	109	112
8	8	13C4-PFHpA	367.2 > 321.8	1.683e4	1.510e4	1.098	0.128	3.89	99.0	102
9	9	18O2-PFHxS	403 > 102.6	7.680e3	1.510e4	0.434	0.128	4.00	114	117
10	10	13C2-PFOA	414.9 > 369.7	3.580e4	8.628e3	4.608	0.128	4.28	87.8	90.0
11	11	13C5-PFNA	468.2 > 422.9	1.042e4	1.096e4	0.867	0.128	4.62	107	110
12	12	13C8-PFOS	507.0 > 79.9	1.137e4	9.610e3	0.958	0.128	4.68	120	124
13	13	13C5-PFHxA	318>272.9	2.316e4	2.316e4	1.000	0.128	3.37	97.5	100
14	14	13C3-PFHxS	401.9 > 79.9	1.510e4	1.510e4	1.000	0.128	4.00	97.5	100
15	15	13C8-PFOA	421.3 > 376	8.628e3	8.628e3	1.000	0.128	4.28	97.5	100
16	16	13C9-PFNA	472.2 > 426.9	1.096e4	1.096e4	1.000	0.128	4.62	97.5	100
17	17	13C4-PFOS	503.0 > 79.9	9.610e3	9.610e3	1.000	0.128	4.68	97.5	100
18	18	Total PFBS	299 > 79.7		7.680e3		0.128			
19	19	Total PFHxS	398.9 > 79.6		7.680e3		0.128			
20	20	Total PFOA	413 > 368.7		3.580e4		0.128			
21	21	Total PFOS	499 > 79.9		1.137e4		0.128		0.844	

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

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ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.00	61.252	7680.350	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.28	188.594	35798.289	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	6	PFOS	499 >79.9	4.68	5.385	11373.567	0.8

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

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Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

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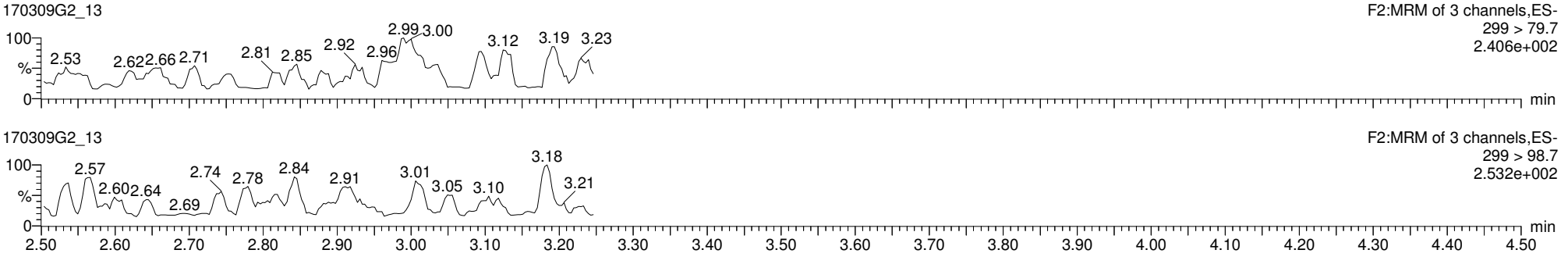
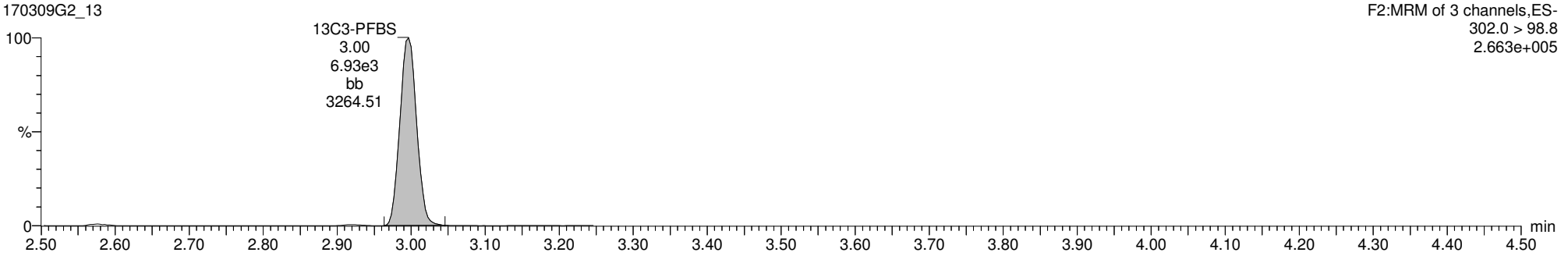
ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27, Instrument: , Lab: , User:

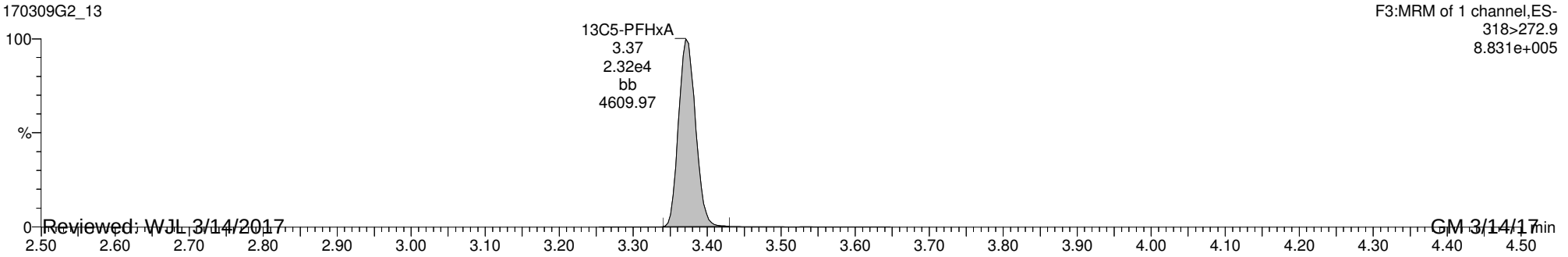
PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/14/17

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Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

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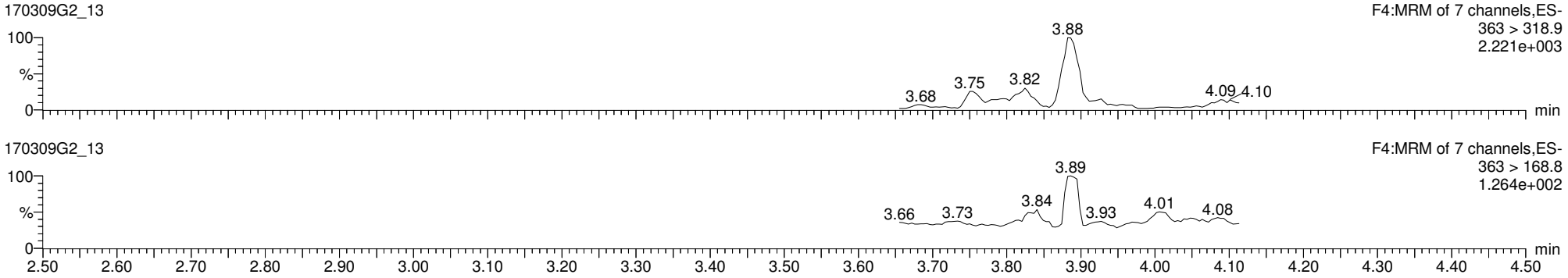
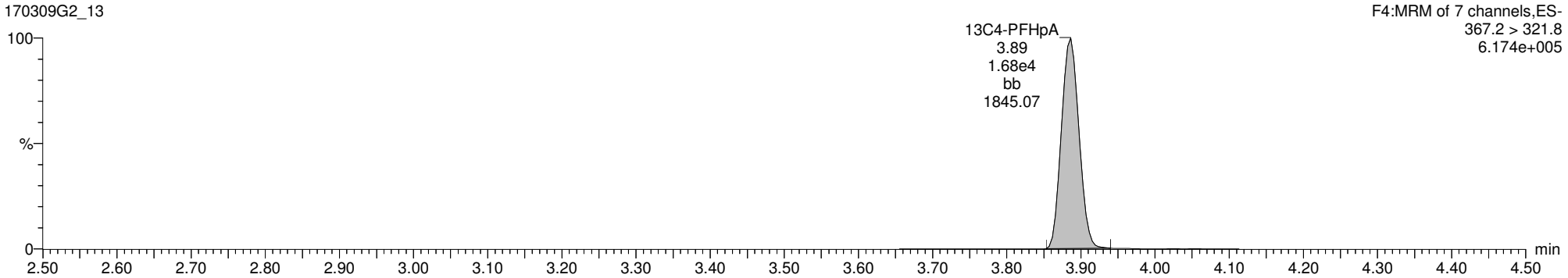
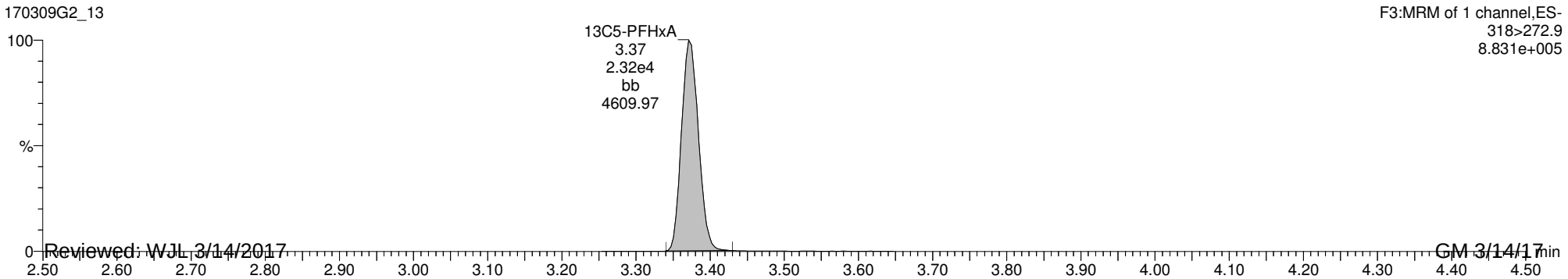
PFHpA



13C4-PFHpA



13C5-PFHxA



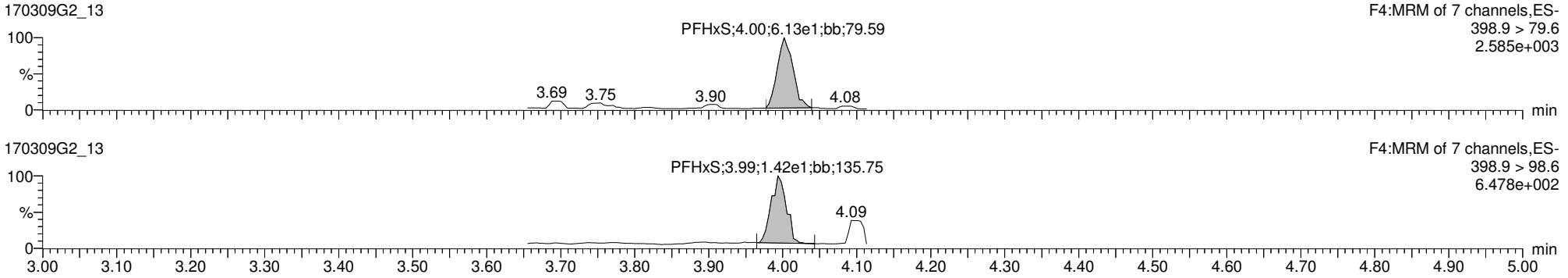
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

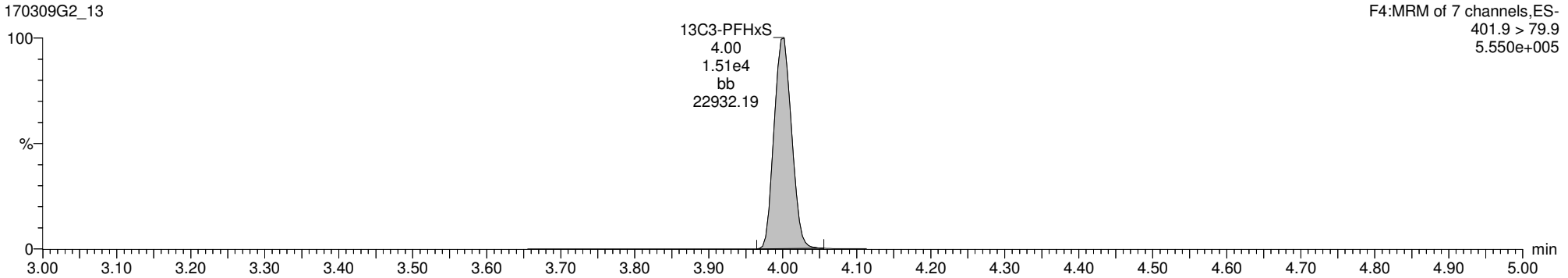
Last Altered: Tuesday, March 14, 2017 10:59:33 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27, Instrument: , Lab: , User:

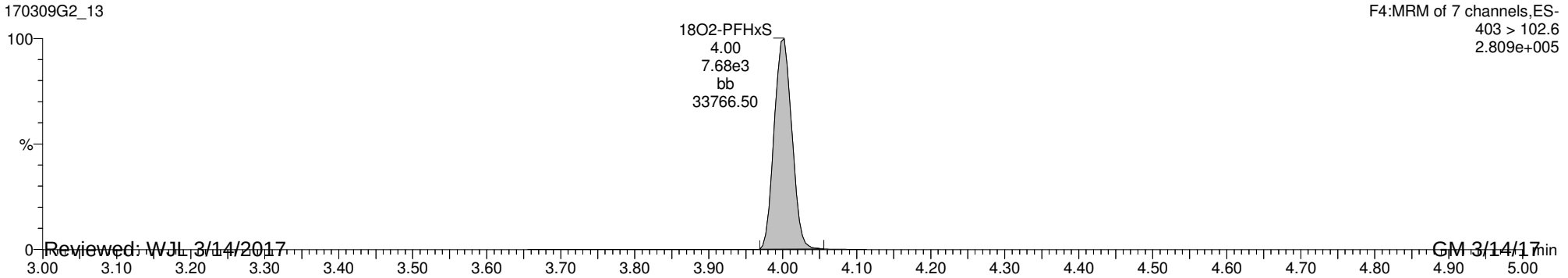
Total PFHxS



13C3-PFHxS



18O2-PFHxS



Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

Last Altered: Tuesday, March 14, 2017 10:59:33 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

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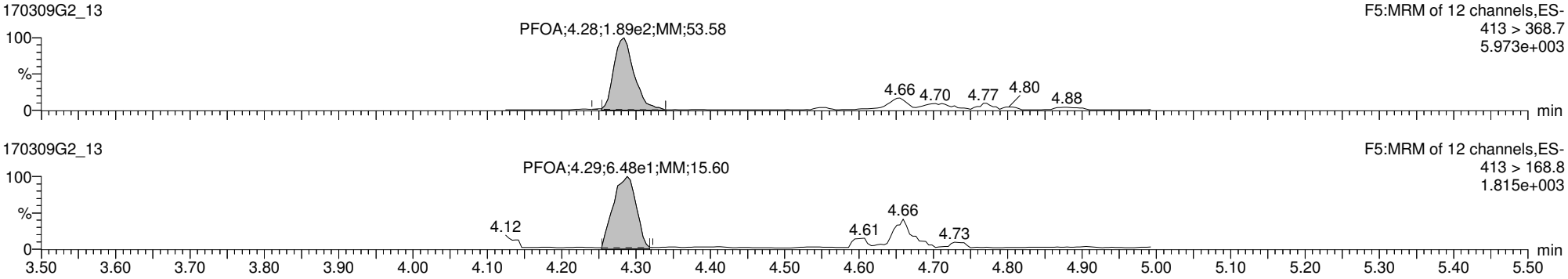
Total PFOA



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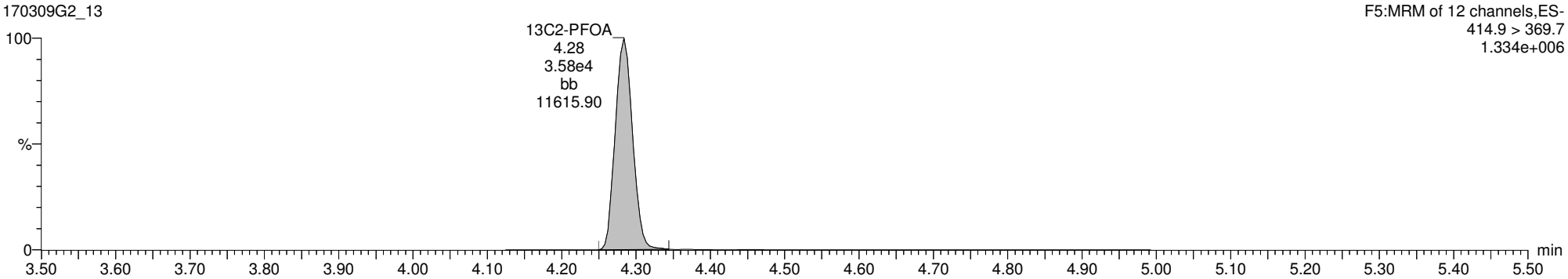
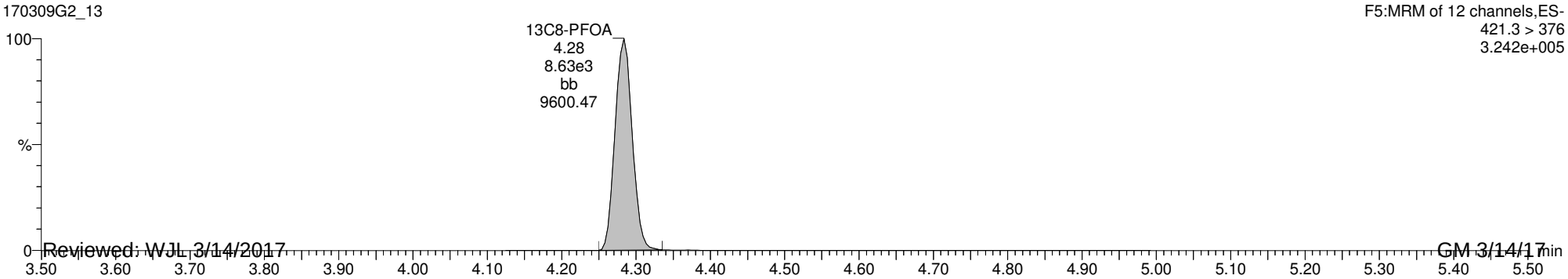


13C8-PFOA



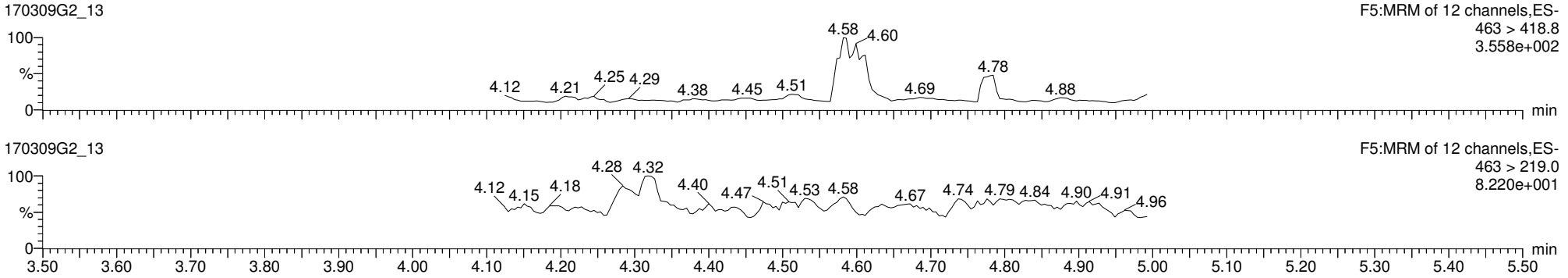
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

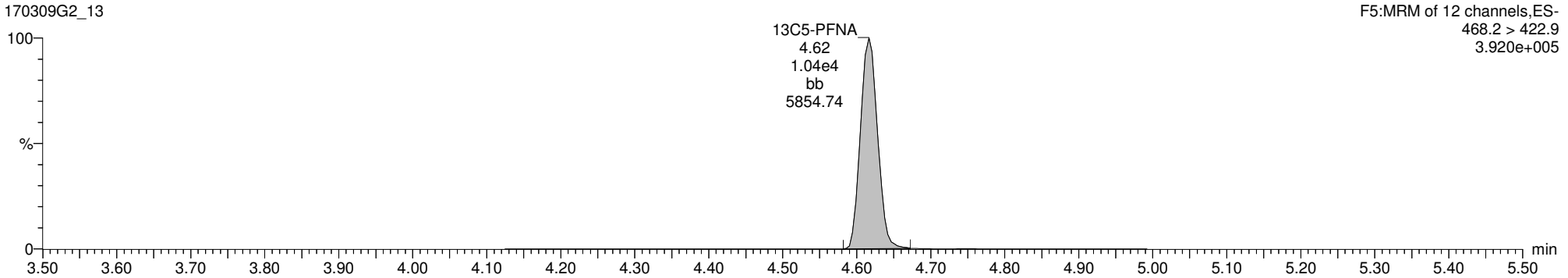
Last Altered: Tuesday, March 14, 2017 10:59:33 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27, Instrument: , Lab: , User:

PFNA



13C5-PFNA



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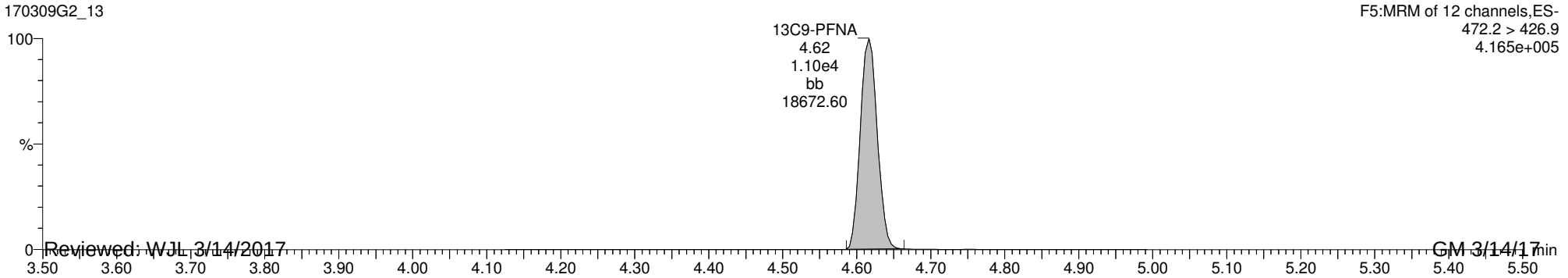


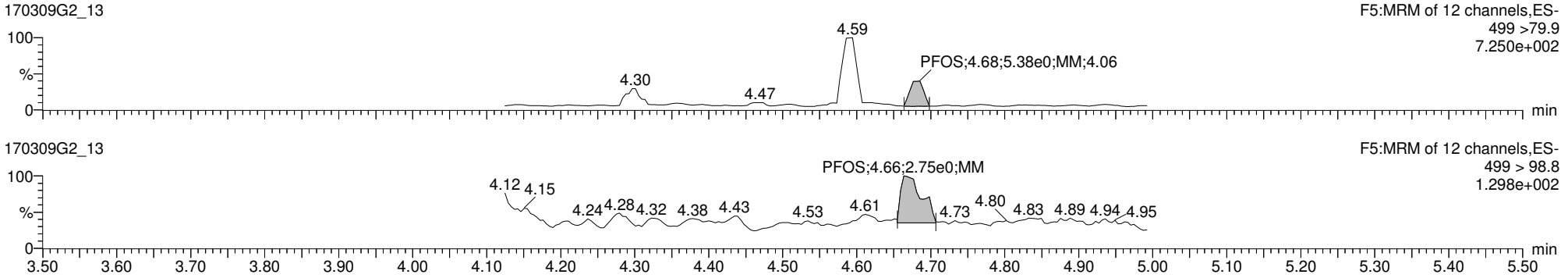
Reviewed: WJL 3/14/2017 GM 3/14/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-13.qld

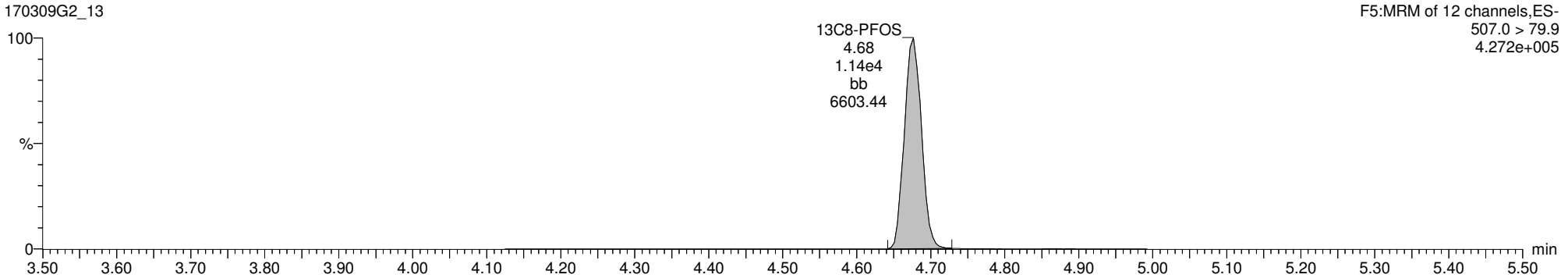
Last Altered: Tuesday, March 14, 2017 10:59:33 Pacific Daylight Time
Printed: Tuesday, March 14, 2017 11:05:18 Pacific Daylight Time

ID: 1700296-07 WI-CV-GW07M-0317 0.125, Description: WI-CV-GW07M-0317, Name: 170309G2_13, Date: 09-Mar-2017, Time: 18:06:27, Instrument: , Lab: , User:

Total PFOS



13C8-PFOS



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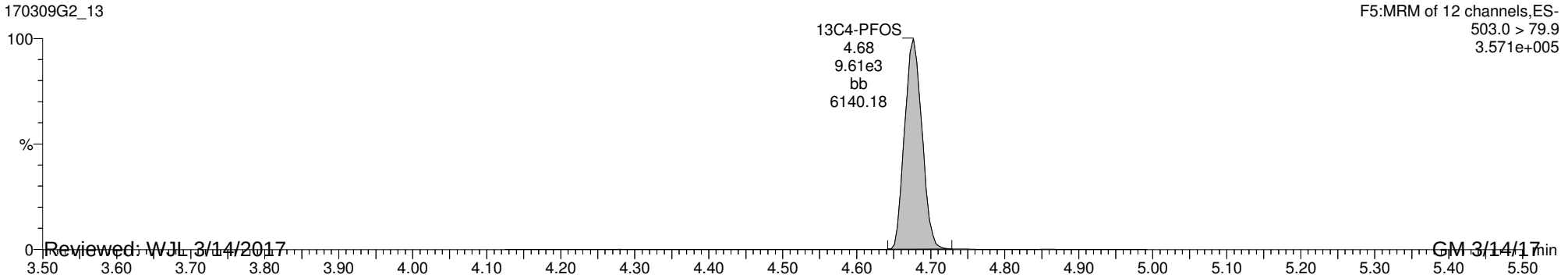

Reviewed: WJL 3/14/2017 GM 3/14/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-14.qld

Last Altered: Friday, March 10, 2017 2:46:56 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:47:14 PM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-08 WI-CV-EB14-030417 0.125, Description: WI-CV-EB14-030417, Name: 170309G2_14, Date: 09-Mar-2017, Time: 18:18:56

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.880e0	6.182e3		0.128	3.00		
2	4	PFOA	413 > 368.7	1.344e2	2.985e4		0.128	4.28		
3	6	PFOS	499 >79.9		9.086e3		0.128			
4	7	13C3-PFBS	302.0 > 98.8	6.182e3	1.367e4	0.410	0.128	3.00	108	110
5	10	13C2-PFOA	414.9 > 369.7	2.985e4	6.374e3	4.608	0.128	4.28	99.3	102
6	12	13C8-PFOS	507.0 > 79.9	9.086e3	8.332e3	0.958	0.128	4.68	111	114
7	15	13C8-PFOA	421.3 > 376	6.374e3	6.374e3	1.000	0.128	4.28	97.8	100
8	17	13C4-PFOS	503.0 > 79.9	8.332e3	8.332e3	1.000	0.128	4.68	97.8	100

Reviewed: WJL 3/14/2017 GM 3/10/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-14.qld

Last Altered: Friday, March 10, 2017 2:46:56 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:47:25 PM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-08 WI-CV-EB14-030417 0.125, Description: WI-CV-EB14-030417, Name: 170309G2_14, Date: 09-Mar-2017, Time: 18:18:56

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		7.045e3		0.128			
2	20	Total PFOA	413 > 368.7		2.985e4		0.128			
3	21	Total PFOS	499 > 79.9		9.086e3		0.128			

Vista Analytical Laboratory Q1

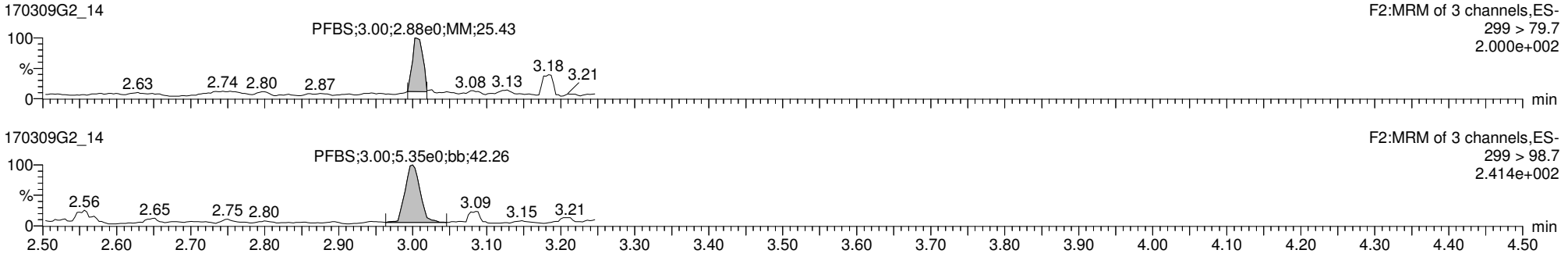
Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-14.qld

Last Altered: Friday, March 10, 2017 2:46:56 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:47:14 PM Pacific Standard Time

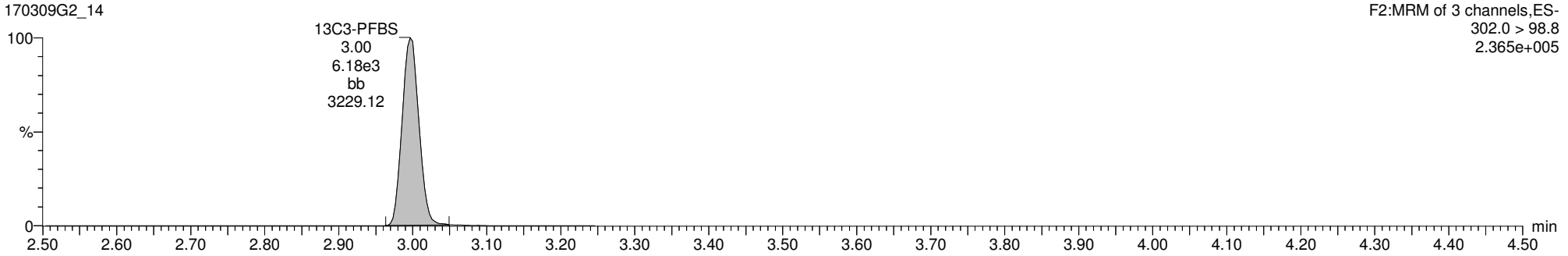
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700296-08 WI-CV-EB14-030417 0.125, Description: WI-CV-EB14-030417, Name: 170309G2_14, Date: 09-Mar-2017, Time: 18:18:56, Instrument: , Lab: , User:

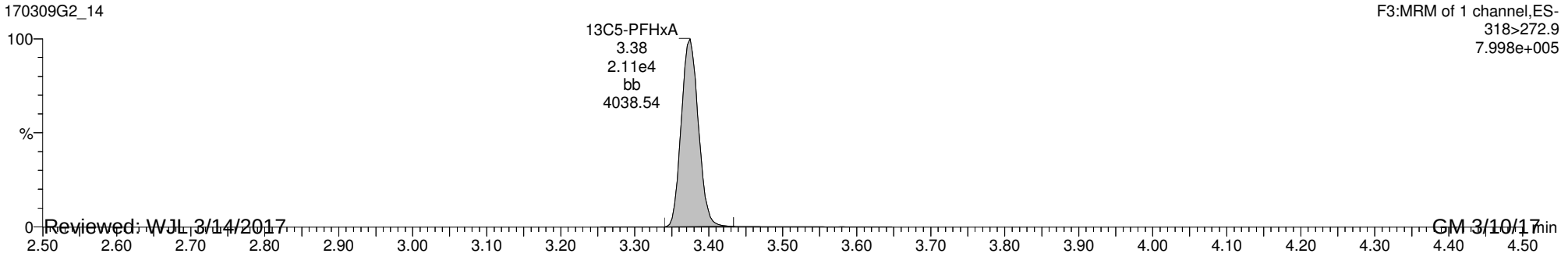
PFBS



13C3-PFBS



13C5-PFHxA



Reviewed: WJL 3/14/2017 GM 3/10/17

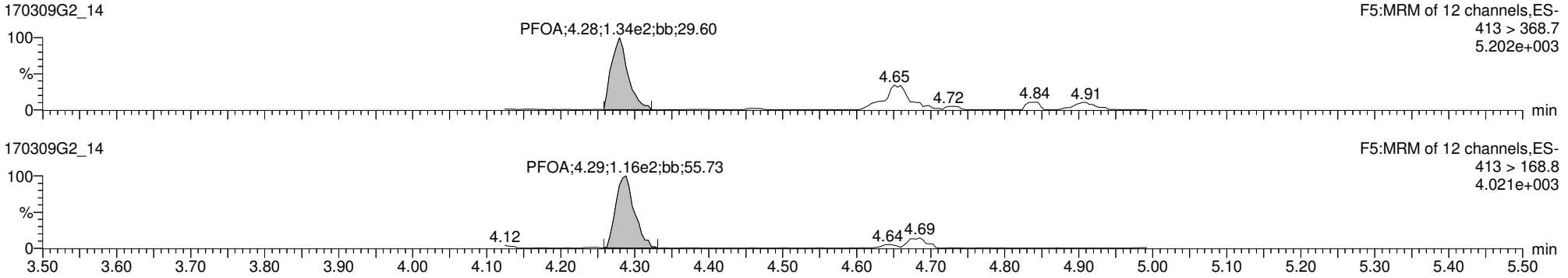
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-14.qld

Last Altered: Friday, March 10, 2017 2:46:56 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:47:14 PM Pacific Standard Time

ID: 1700296-08 WI-CV-EB14-030417 0.125, Description: WI-CV-EB14-030417, Name: 170309G2_14, Date: 09-Mar-2017, Time: 18:18:56, Instrument: , Lab: , User:

Total PFOA



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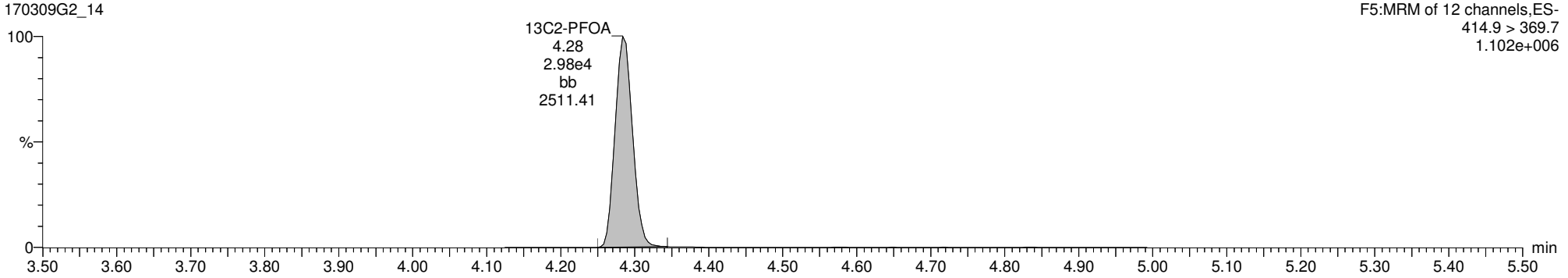
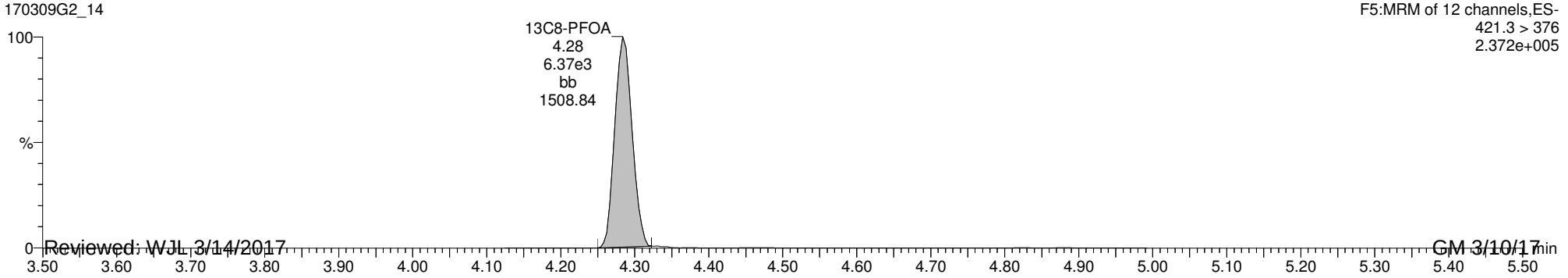


13C8-PFOA



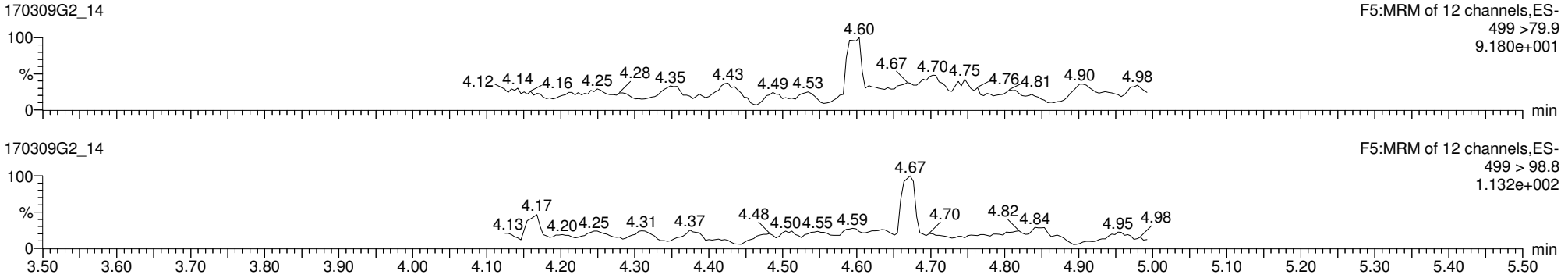
Reviewed: WJL 3/14/2017 GM 3/10/17

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-14.qld

Last Altered: Friday, March 10, 2017 2:46:56 PM Pacific Standard Time
Printed: Friday, March 10, 2017 2:47:14 PM Pacific Standard Time

ID: 1700296-08 WI-CV-EB14-030417 0.125, Description: WI-CV-EB14-030417, Name: 170309G2_14, Date: 09-Mar-2017, Time: 18:18:56, Instrument: , Lab: , User:

Total PFOS



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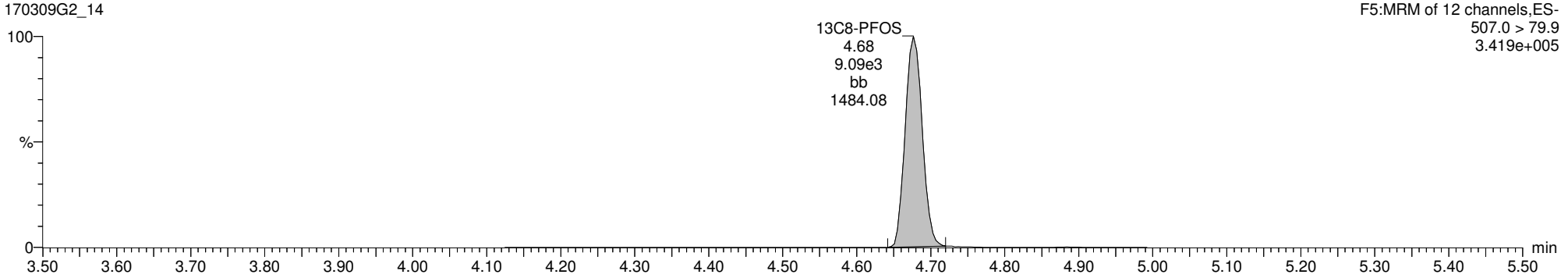
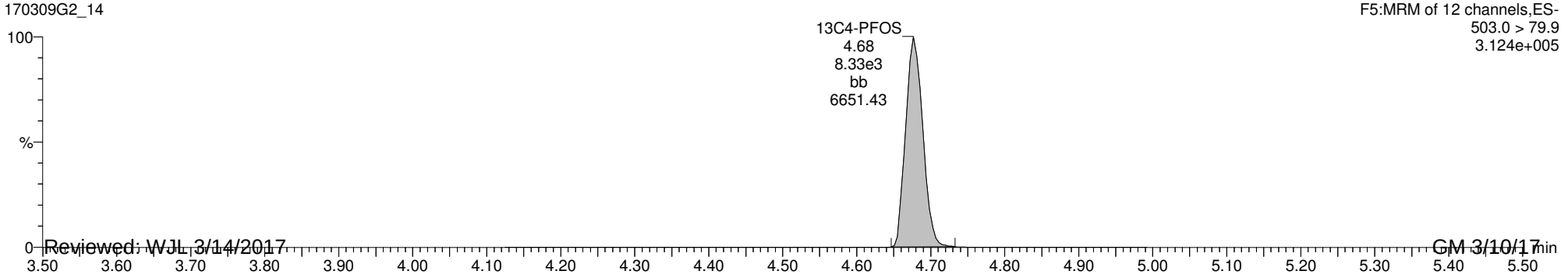


13C4-PFOS



Reviewed: WJL 3/14/2017 GM 3/10/17

CONTINUING CALIBRATION

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-2.qld

Last Altered: Friday, March 10, 2017 08:32:33 Pacific Standard Time
Printed: Friday, March 10, 2017 08:33:02 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	6.39e3	7.72e3		1.000	2.99	4.32	86.4
2	2	PFHpA	363 > 318.9	1.18e4	1.80e4		1.000	3.88	4.49	89.7
3	3	PFHxS	398.9 > 79.6	5.02e3	7.78e3		1.000	4.00	4.40	87.9
4	4	PFOA	413 > 368.7	1.18e4	3.52e4		1.000	4.28	5.02	100.4
5	5	PFNA	463 > 418.8	8.82e3	1.01e4		1.000	4.61	3.94	78.7
6	6	PFOS	499 >79.9	1.55e3	9.20e3		1.000	4.67	3.99	79.9
7	7	13C3-PFBS	302.0 > 98.8	7.72e3	1.75e4	0.410	1.000	2.99	13.5	107.8
8	8	13C4-PFHpA	367.2 > 321.8	1.80e4	1.75e4	1.098	1.000	3.88	11.7	93.7
9	9	18O2-PFHxS	403 > 102.6	7.78e3	1.75e4	0.434	1.000	4.00	12.8	102.5
10	10	13C2-PFOA	414.9 > 369.7	3.52e4	9.52e3	4.608	1.000	4.28	10.0	80.3
11	11	13C5-PFNA	468.2 > 422.9	1.01e4	1.13e4	0.867	1.000	4.62	12.9	103.3
12	12	13C8-PFOS	507.0 > 79.9	9.20e3	9.01e3	0.958	1.000	4.67	13.3	106.6
13	13	13C5-PFHxA	318>272.9	2.97e4	2.97e4	1.000	1.000	3.37	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	1.75e4	1.75e4	1.000	1.000	4.00	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	9.52e3	9.52e3	1.000	1.000	4.28	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	1.13e4	1.13e4	1.000	1.000	4.61	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	9.01e3	9.01e3	1.000	1.000	4.68	12.5	100.0

75-125
60-150
50-150
60-150
3/10/17

ES 3/10/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Friday, March 10, 2017 08:58:05 Pacific Standard Time
Printed: Friday, March 10, 2017 08:58:22 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170309G2_1	IPA	09-Mar-17	15:36:10
2	170309G2_2	ST170309G2-1 PFC CS2 17C0905	09-Mar-17	15:48:23
3	170309G2_3	IPA	09-Mar-17	16:01:07
4	170309G2_4	B7C0034-BS1 OPR 0.125	09-Mar-17	16:13:33
5	170309G2_5	IPA	09-Mar-17	16:26:02
6	170309G2_6	B7C0034-BLK1 Method Blank 0.125	09-Mar-17	16:38:38
7	170309G2_7	1700296-01 WI-CV-GW08M-0317 0.125	09-Mar-17	16:51:08
8	170309G2_8	1700296-02 WI-CV-EB12-030317 0.125	09-Mar-17	17:03:41
9	170309G2_9	1700296-03 WI-CV-GW07S-0317 0.125	09-Mar-17	17:16:14
10	170309G2_10	1700296-04 WI-CV-EB13-030417 0.125	09-Mar-17	17:28:47
11	170309G2_11	1700296-05 WI-CV-GW14M-0317 0.125	09-Mar-17	17:41:21
12	170309G2_12	1700296-06 WI-CV-GW13S-0317 0.125	09-Mar-17	17:53:53
13	170309G2_13	1700296-07 WI-CV-GW07M-0317 0.125	09-Mar-17	18:06:27
14	170309G2_14	1700296-08 WI-CV-EB14-030417 0.125	09-Mar-17	18:18:56
15	170309G2_15	1700298-01 Kitchen Sink 0.125	09-Mar-17	18:31:30
16	170309G2_16	IPA	09-Mar-17	18:44:03
17	170309G2_17	ST170309G2-2 PFC CS2 17C0905	09-Mar-17	18:56:38
18	170309G2_18	IPA	09-Mar-17	19:09:10

LC Calibration Standards Review Checklist Q1

Calibration ID		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
ST170309G2-1	L (M) H	☐ N/A	☑	☑	☑	☑	☑	☐
↓ -2	L (M) H	☐ ↓	☑	☑	☑	☑	☑	☐ ↓
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 12/7/16

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Comments:
List 6.

Reviewed By: an 3/10/17
Initials/Date

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Friday, March 10, 2017 08:27:57 Pacific Standard Time
Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

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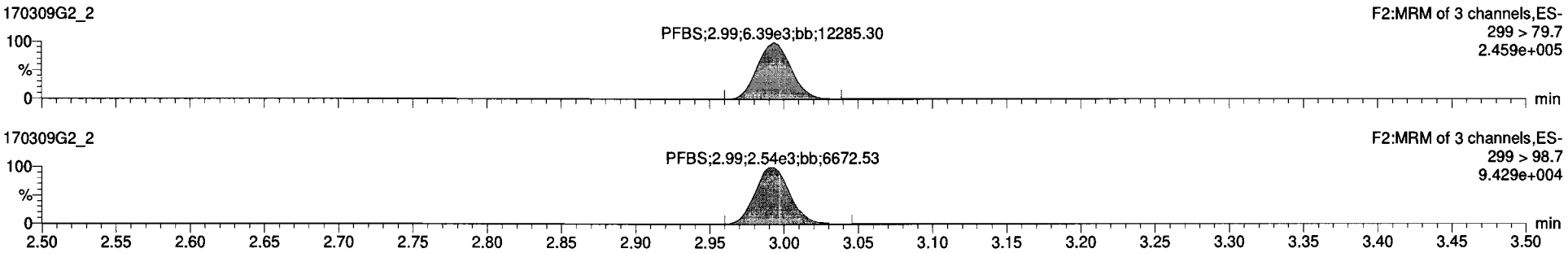
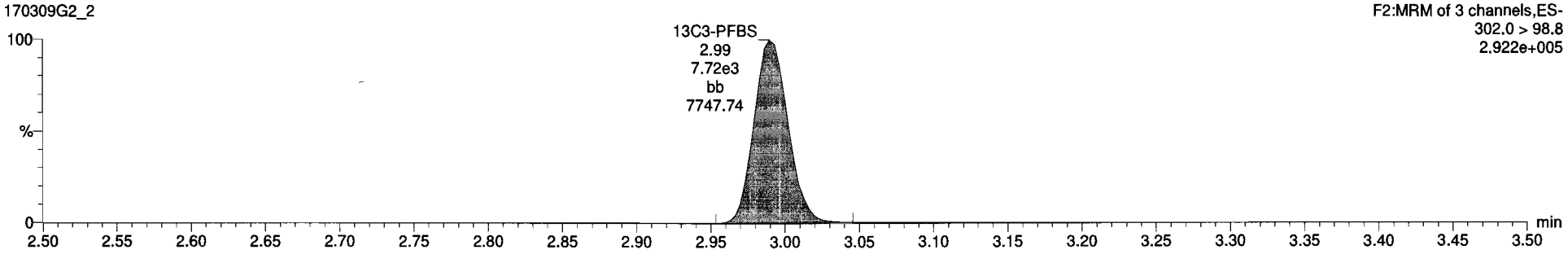
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, Instrument: , Lab: , User:

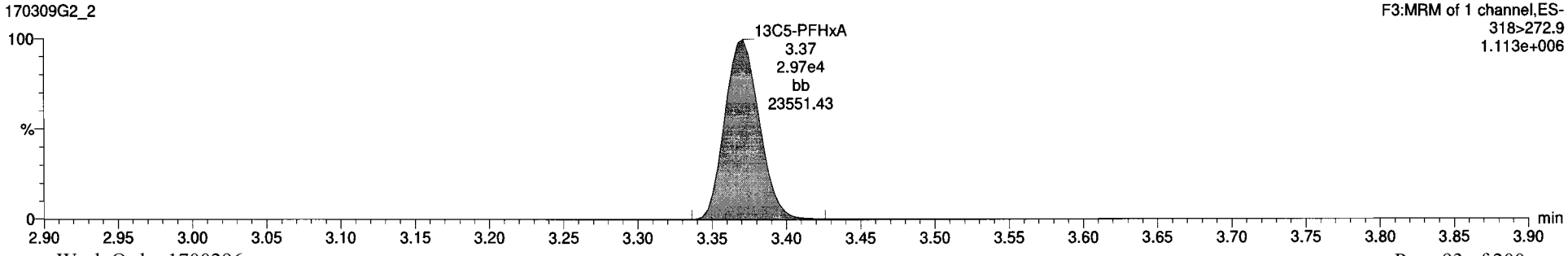
PFBS



13C3-PFBS



13C5-PFHxA



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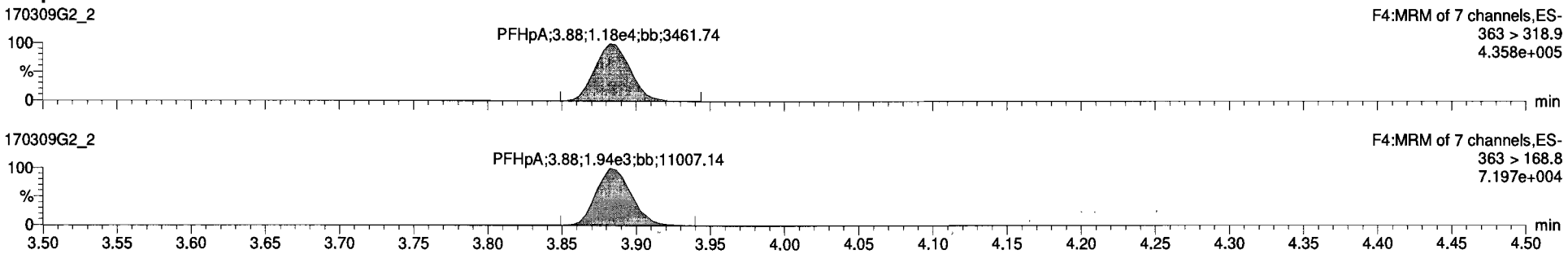
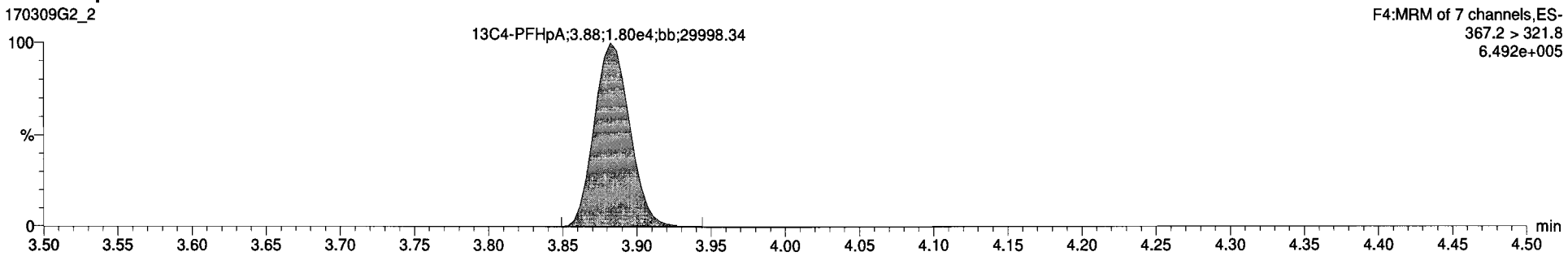
Last Altered: Friday, March 10, 2017 08:27:57 Pacific Standard Time
Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, Instrument: , Lab: , User:

PFHpA



13C4-PFHpA



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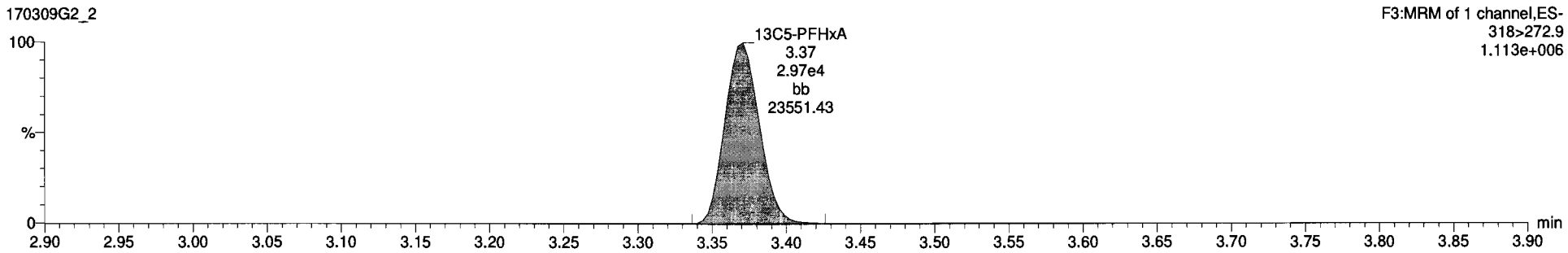

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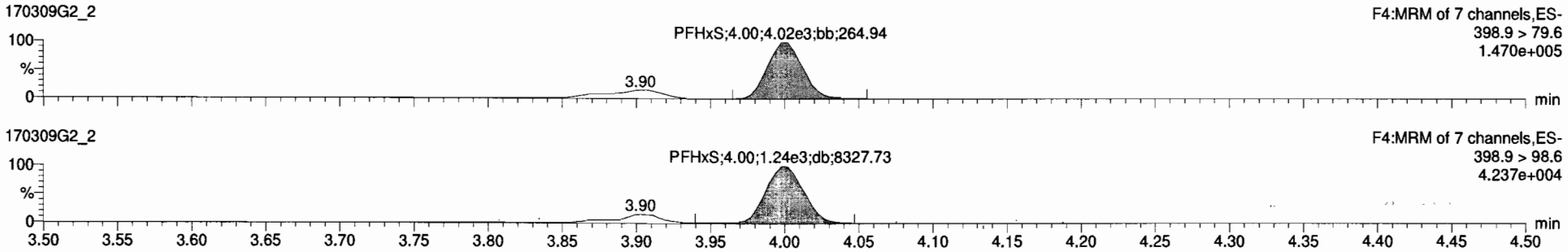
Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, Instrument: , Lab: , User:

PFHxS



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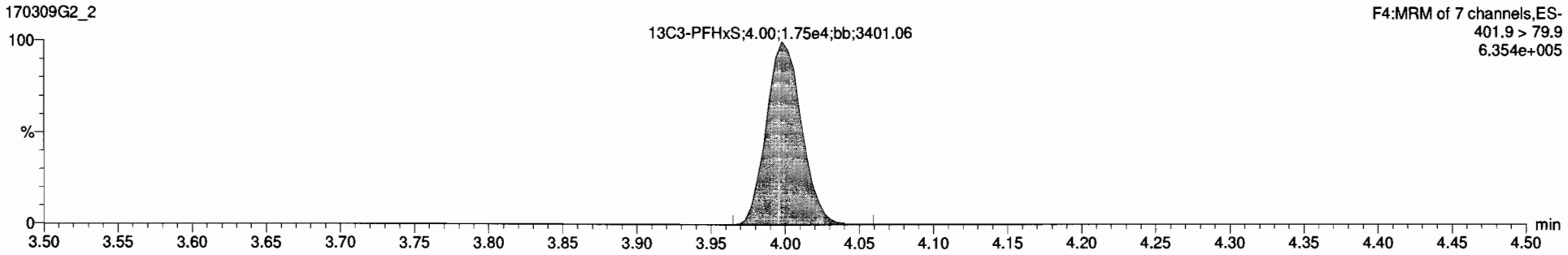
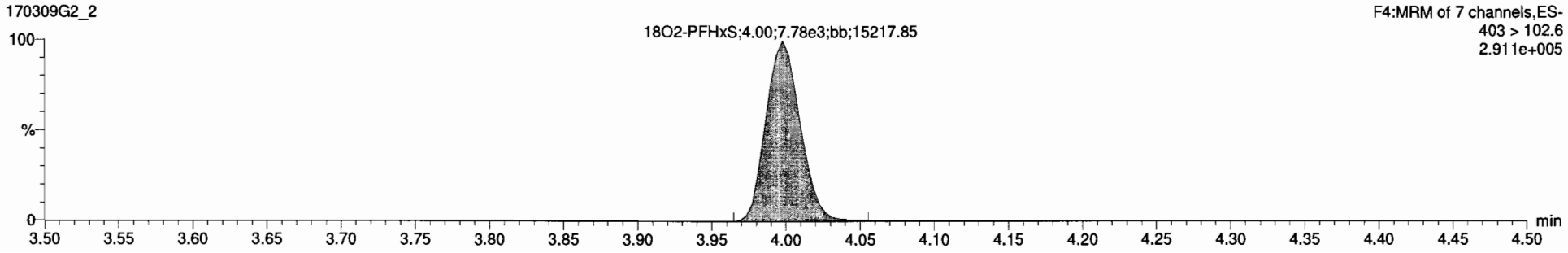
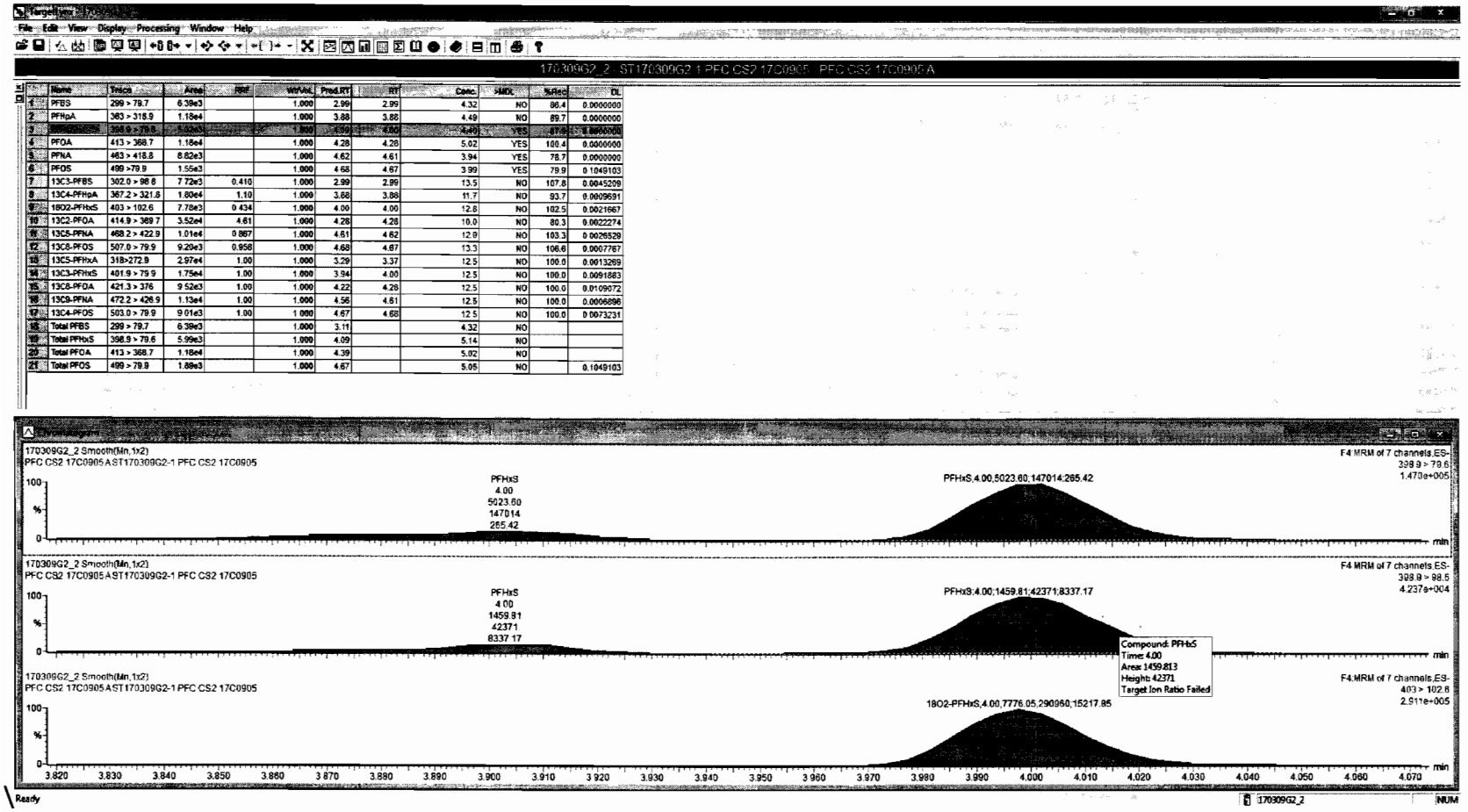


18O2-PFHxS





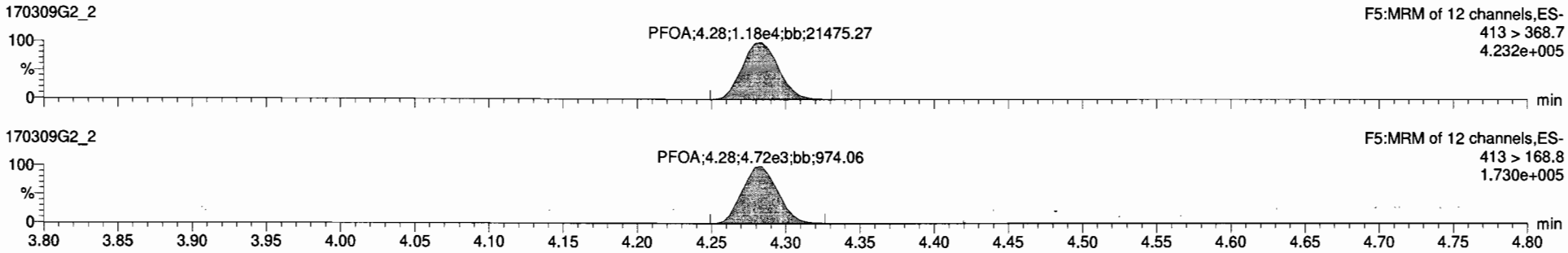
	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	HMDL	%Rec	DL
1	PFBS	299 > 79.7	6.38e3		1.000	2.99	2.99	4.32	NO	86.4	0.0000000
2	PFHpA	363 > 318.9	1.18e4		1.000	3.88	3.88	4.49	NO	89.7	0.0000000
3	PFHxS	398.9 > 79.6	1.47e5		1.000	4.00	4.00	4.40	YES	87.9	0.0000000
4	PFOA	413 > 368.7	1.18e4		1.000	4.28	4.28	5.02	YES	100.4	0.0000000
5	PFNA	463 > 418.8	8.82e3		1.000	4.62	4.61	3.94	YES	78.7	0.0000000
6	PFOS	499 >79.9	1.55e3		1.000	4.68	4.67	3.99	YES	79.9	0.1049103
7	13C3-PFBS	302.0 > 98.6	7.72e3	0.410	1.000	2.99	2.99	13.5	NO	107.8	0.0045209
8	13C4-PFHpA	367.2 > 321.8	1.60e4	1.10	1.000	3.88	3.88	11.7	NO	93.7	0.0009691
9	18O2-PFHxS	403 > 102.6	7.78e3	0.434	1.000	4.00	4.00	12.8	NO	102.5	0.0021667
10	13C2-PFOA	414.9 > 369.7	3.52e4	4.61	1.000	4.28	4.28	10.0	NO	80.3	0.0022274
11	13C5-PFNA	468.2 > 422.9	1.01e4	0.867	1.000	4.61	4.62	12.9	NO	103.3	0.0026529
12	13C8-PFOS	507.0 > 79.9	9.20e3	0.958	1.000	4.68	4.67	13.3	NO	106.6	0.0007767
13	13C5-PFHxA	318>272.9	2.97e4	1.00	1.000	3.29	3.37	12.5	NO	100.0	0.0013269
14	13C3-PFHxS	401.9 > 79.9	1.75e4	1.00	1.000	3.94	4.00	12.5	NO	100.0	0.0091883
15	13C8-PFOA	421.3 > 376	9.52e3	1.00	1.000	4.22	4.28	12.5	NO	100.0	0.0109072
16	13C9-PFNA	472.2 > 426.9	1.13e4	1.00	1.000	4.56	4.61	12.5	NO	100.0	0.0006896
17	13C4-PFOS	503.0 > 79.9	9.01e3	1.00	1.000	4.67	4.68	12.5	NO	100.0	0.0073231
18	Total PFBS	299 > 79.7	6.39e3		1.000	3.11		4.32	NO		
19	Total PFHxS	398.9 > 79.6	5.99e3		1.000	4.09		5.14	NO		
20	Total PFOA	413 > 368.7	1.18e4		1.000	4.39		5.02	NO		
21	Total PFOS	499 > 79.9	1.88e3		1.000	4.67		5.05	NO		0.1049103

Dataset: Untitled

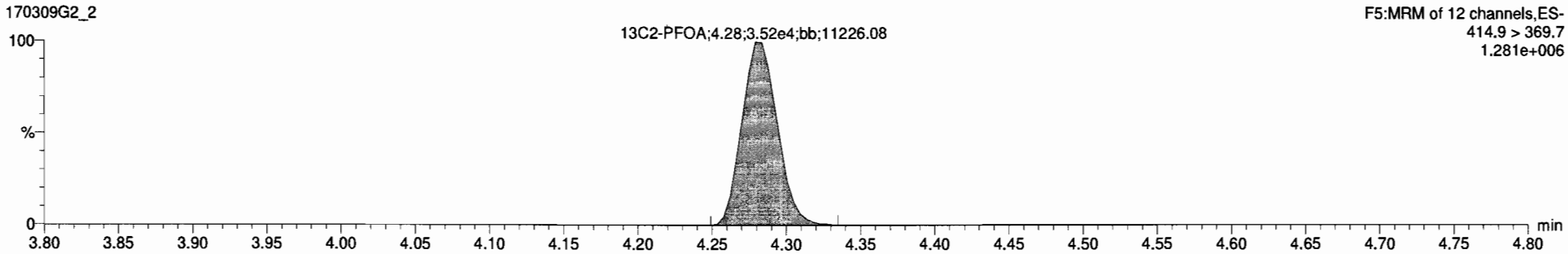
Last Altered: Friday, March 10, 2017 08:27:57 Pacific Standard Time
Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, Instrument: , Lab: , User:

PFOA



13C2-PFOA



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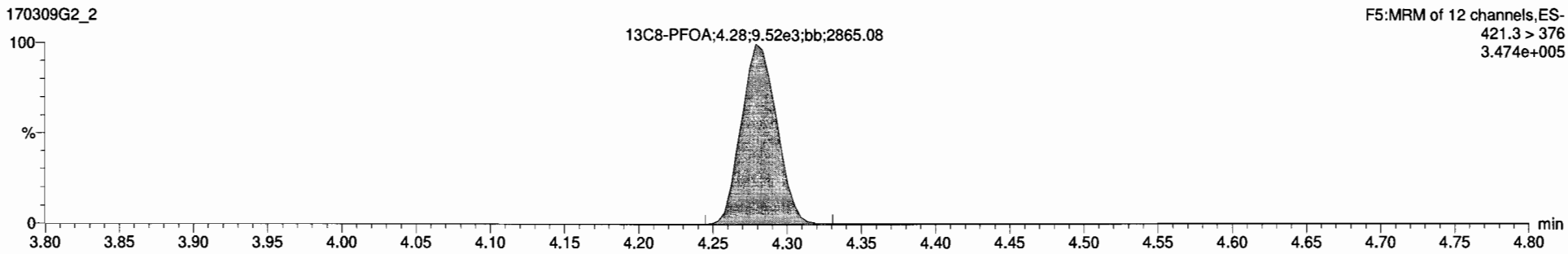

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Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

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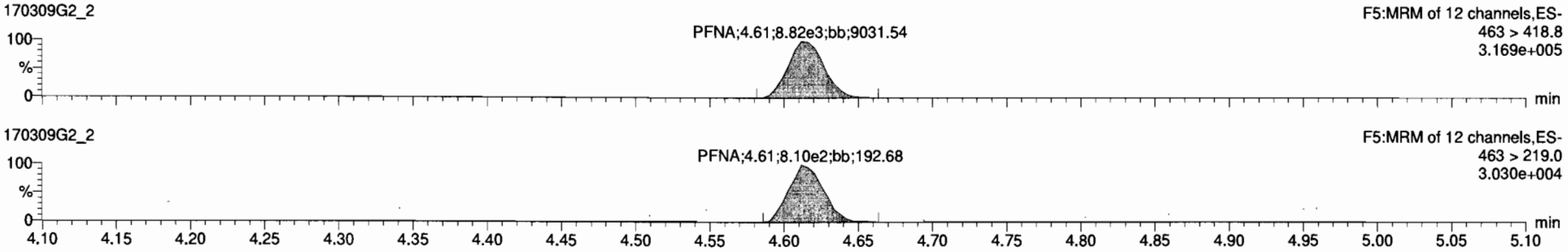
PFNA



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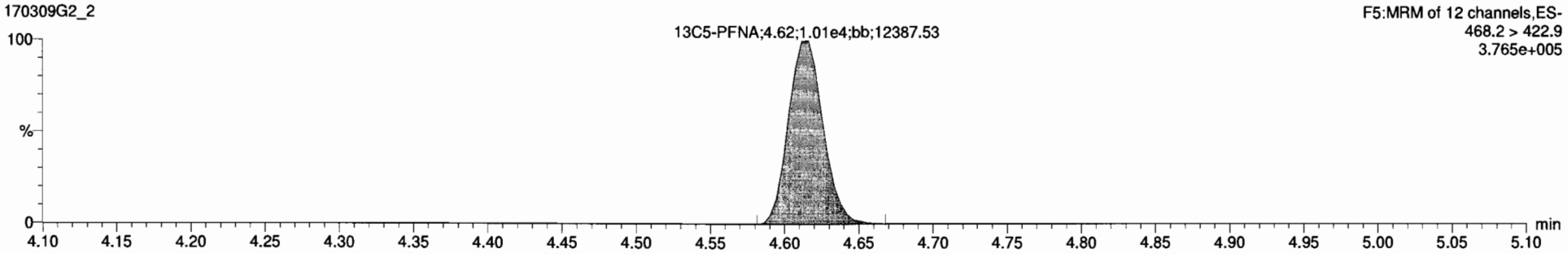

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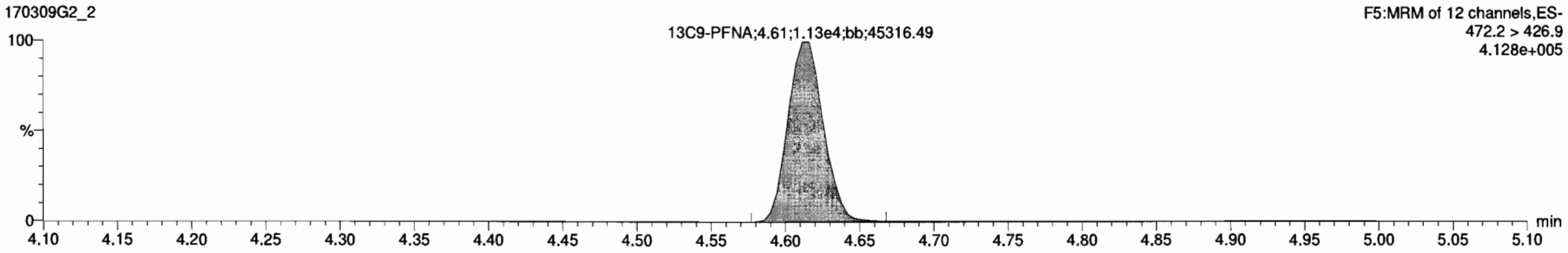

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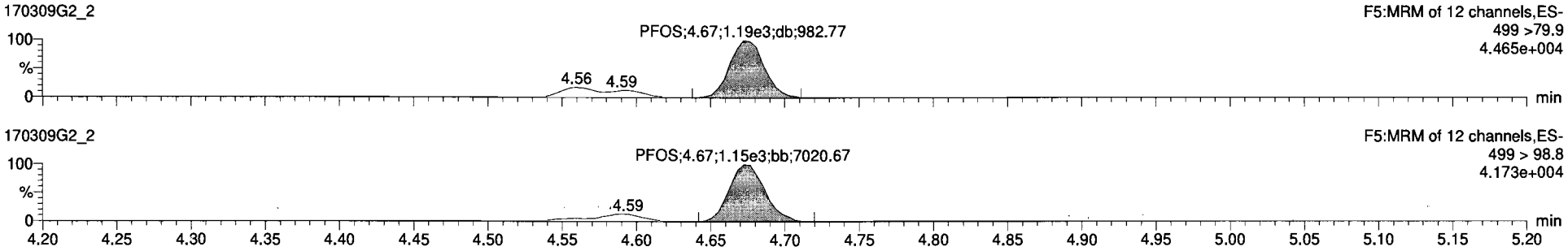
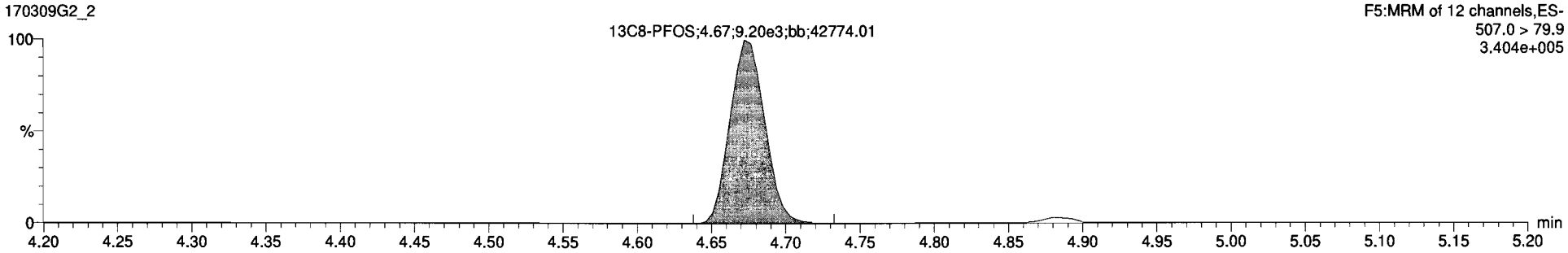
Last Altered: Friday, March 10, 2017 08:27:57 Pacific Standard Time
Printed: Friday, March 10, 2017 08:28:35 Pacific Standard Time

ID: ST170309G2-1 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_2, Date: 09-Mar-2017, Time: 15:48:23, Instrument: , Lab: , User:

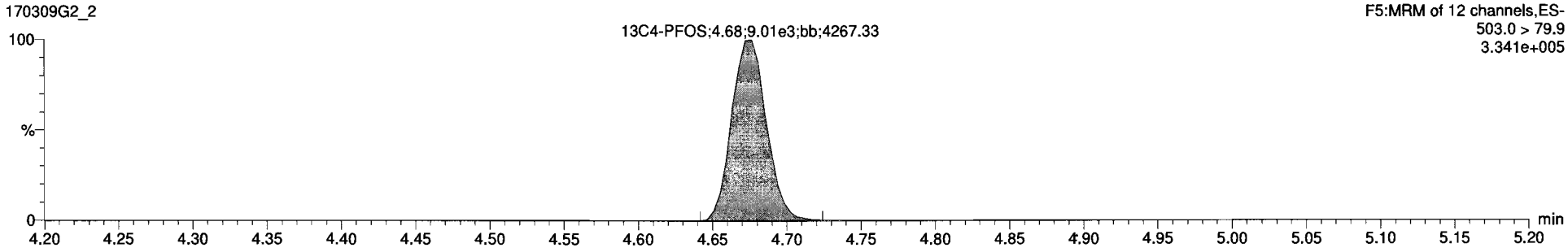
PFOS

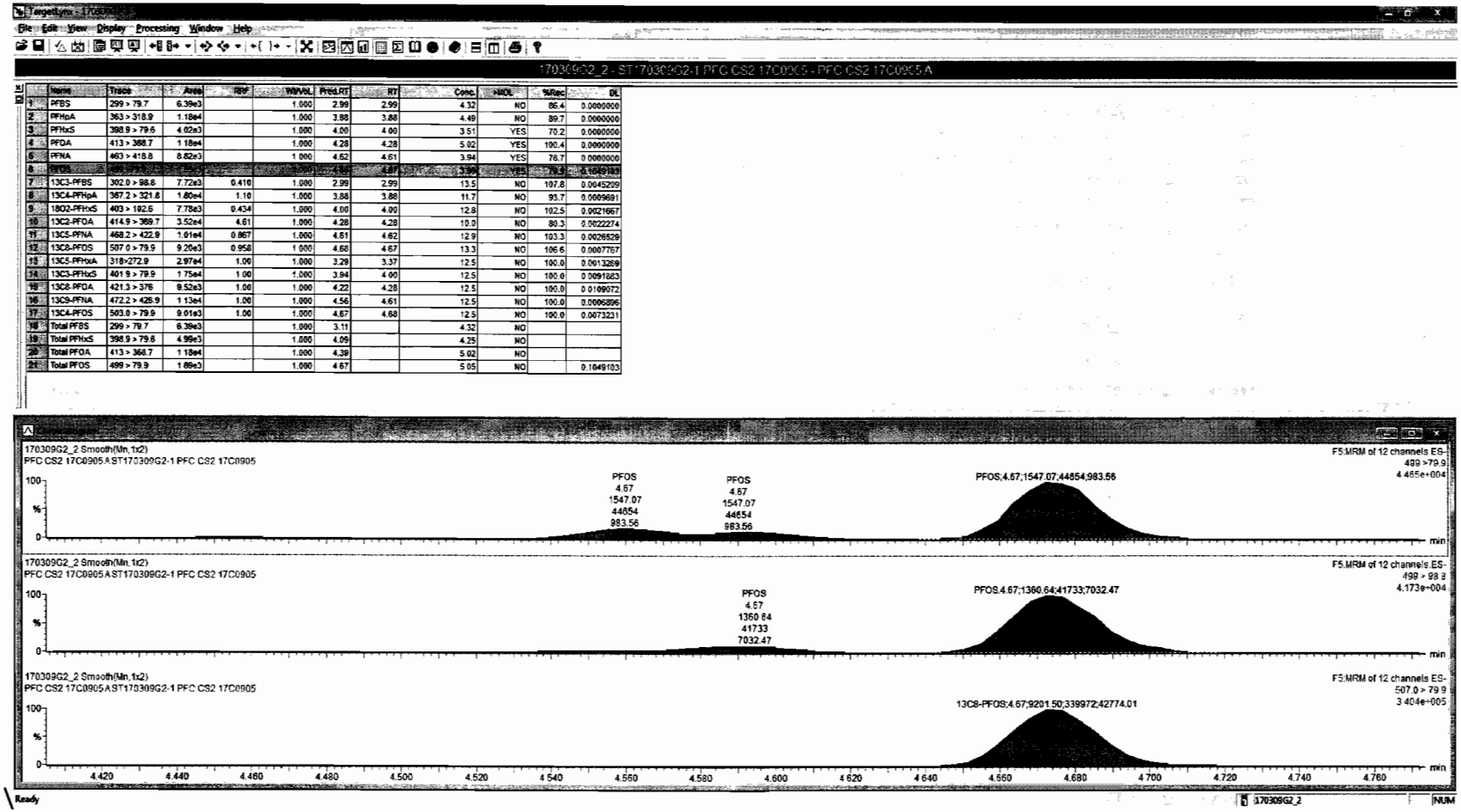


13C8-PFOS



13C4-PFOS





	Name	Trace	Area	RRF	WtVal	PredRT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	6.39e3		1.000	2.99	2.99	4.32	NO	86.4	0.0000000
2	PFHpA	363 > 318.9	1.18e4		1.000	3.88	3.88	4.49	NO	89.7	0.0000000
3	PFHxS	398.9 > 79.6	4.02e3		1.000	4.00	4.00	3.51	YES	70.2	0.0000000
4	PFOA	413 > 368.7	1.18e4		1.000	4.28	4.28	5.02	YES	100.4	0.0000000
5	PFNA	463 > 418.8	8.82e3		1.000	4.62	4.61	3.94	YES	78.7	0.0000000
6	PFOS	499 > 79.9	1.89e3		1.000	4.67	4.67	3.95	YES	79.0	0.1049103
7	13C3-PFBS	302.0 > 98.8	7.72e3	0.410	1.000	2.99	2.99	13.5	NO	107.8	0.0045209
8	13C4-PFHpA	367.2 > 321.8	1.80e4	1.10	1.000	3.88	3.88	11.7	NO	93.7	0.0009691
9	18O2-PFHxS	403 > 192.6	7.78e3	0.434	1.000	4.00	4.00	12.8	NO	102.5	0.0021667
10	13C2-PFOA	414.9 > 369.7	3.52e4	4.61	1.000	4.28	4.28	10.0	NO	80.3	0.0022274
11	13C5-PFNA	468.2 > 422.9	1.61e4	0.867	1.000	4.61	4.62	12.9	NO	103.3	0.0026529
12	13C8-PFOS	507.0 > 79.9	9.20e3	0.958	1.000	4.68	4.67	13.3	NO	106.6	0.0007767
13	13C5-PFHxA	318>272.9	2.97e4	1.00	1.000	3.29	3.37	12.5	NO	100.0	0.0013269
14	13C3-PFHxS	401.9 > 79.9	1.75e4	1.00	1.000	3.94	4.00	12.5	NO	100.0	0.0091883
15	13C8-PFOA	421.3 > 376	8.52e3	1.00	1.000	4.22	4.28	12.5	NO	100.0	0.0109072
16	13C9-PFNA	472.2 > 425.9	1.13e4	1.00	1.000	4.56	4.61	12.5	NO	100.0	0.0006896
17	13C4-PFOS	503.0 > 79.9	9.01e3	1.00	1.000	4.67	4.68	12.5	NO	100.0	0.0073231
18	Total PFBS	299 > 79.7	6.39e3		1.000	3.11		4.32	NO		
19	Total PFHxS	398.9 > 79.6	4.99e3		1.000	4.09		4.25	NO		
20	Total PFOA	413 > 368.7	1.18e4		1.000	4.39		5.02	NO		
21	Total PFOS	499 > 79.9	1.89e3		1.000	4.67		5.05	NO		0.1049103

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170309G2\170309G2-17.qld

Last Altered: Friday, March 10, 2017 08:50:53 Pacific Standard Time
Printed: Friday, March 10, 2017 08:52:35 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	7.33e3	9.09e3		1.000	3.00	4.20	84.1
2	2	PFHpA	363 > 318.9	1.57e4	2.25e4		1.000	3.89	4.78	95.7
3	3	PFHxS	398.9 > 79.6	6.26e3	9.46e3		1.000	4.00	4.50	90.0
4	4	PFOA	413 > 368.7	1.42e4	4.69e4		1.000	4.28	4.55	91.1
5	5	PFNA	463 > 418.8	1.20e4	1.30e4		1.000	4.62	4.19	83.8
6	6	PFOS	499 >79.9	2.13e3	1.22e4		1.000	4.68	4.12	82.5
7	7	13C3-PFBS	302.0 > 98.8	9.09e3	2.18e4	0.410	1.000	3.00	12.7	101.5
8	8	13C4-PFHpA	367.2 > 321.8	2.25e4	2.18e4	1.098	1.000	3.89	11.7	94.0
9	9	18O2-PFHxS	403 > 102.6	9.46e3	2.18e4	0.434	1.000	4.00	12.5	99.8
10	10	13C2-PFOA	414.9 > 369.7	4.69e4	1.24e4	4.608	1.000	4.28	10.3	82.0
11	11	13C5-PFNA	468.2 > 422.9	1.30e4	1.37e4	0.867	1.000	4.62	13.6	109.1
12	12	13C8-PFOS	507.0 > 79.9	1.22e4	1.29e4	0.958	1.000	4.68	12.4	99.3
13	13	13C5-PFHxA	318>272.9	3.55e4	3.55e4	1.000	1.000	3.37	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	2.18e4	2.18e4	1.000	1.000	4.00	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	1.24e4	1.24e4	1.000	1.000	4.28	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	1.37e4	1.37e4	1.000	1.000	4.62	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	1.29e4	1.29e4	1.000	1.000	4.68	12.5	100.0

75-125
60-150
50-150
60-150

ES 3/10/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Friday, March 10, 2017 08:58:05 Pacific Standard Time
Printed: Friday, March 10, 2017 08:58:22 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

Name	ID	Acq.Date	Acq.Time
170309G2_1	IPA	09-Mar-17	15:36:10
170309G2_2	ST170309G2-1 PFC CS2 17C0905	09-Mar-17	15:48:23
170309G2_3	IPA	09-Mar-17	16:01:07
170309G2_4	B7C0034-BS1 OPR 0.125	09-Mar-17	16:13:33
170309G2_5	IPA	09-Mar-17	16:26:02
170309G2_6	B7C0034-BLK1 Method Blank 0.125	09-Mar-17	16:38:38
170309G2_7	1700296-01 WI-CV-GW08M-0317 0.125	09-Mar-17	16:51:08
170309G2_8	1700296-02 WI-CV-EB12-030317 0.125	09-Mar-17	17:03:41
170309G2_9	1700296-03 WI-CV-GW07S-0317 0.125	09-Mar-17	17:16:14
170309G2_10	1700296-04 WI-CV-EB13-030417 0.125	09-Mar-17	17:28:47
170309G2_11	1700296-05 WI-CV-GW14M-0317 0.125	09-Mar-17	17:41:21
170309G2_12	1700296-06 WI-CV-GW13S-0317 0.125	09-Mar-17	17:53:53
170309G2_13	1700296-07 WI-CV-GW07M-0317 0.125	09-Mar-17	18:06:27
170309G2_14	1700296-08 WI-CV-EB14-030417 0.125	09-Mar-17	18:18:56
170309G2_15	1700298-01 Kitchen Sink 0.125	09-Mar-17	18:31:30
170309G2_16	IPA	09-Mar-17	18:44:03
170309G2_17	ST170309G2-2 PFC CS2 17C0905	09-Mar-17	18:56:38
170309G2_18	IPA	09-Mar-17	19:09:10

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

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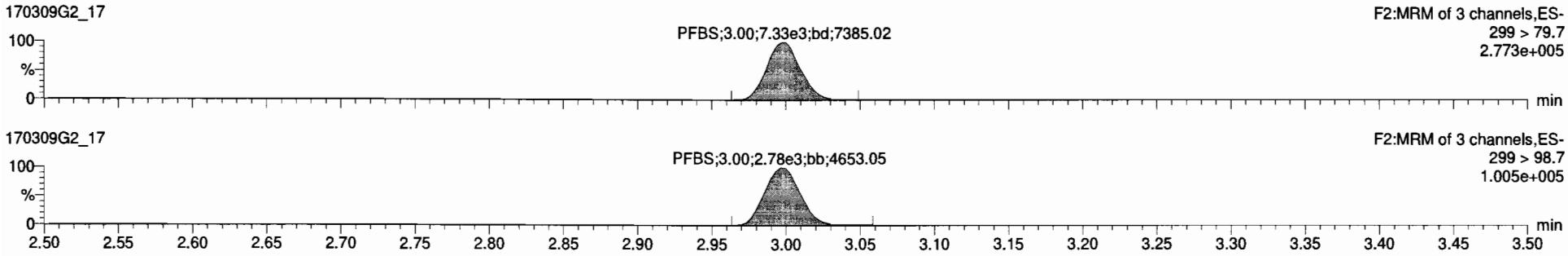
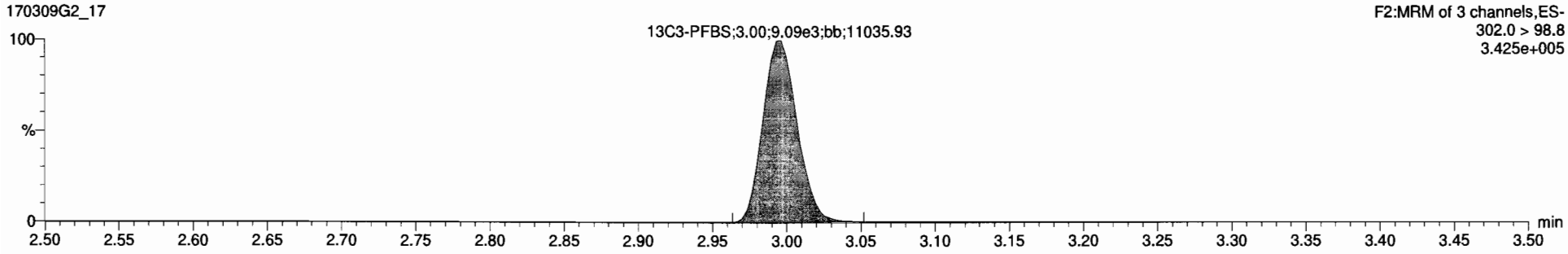
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, Instrument: , Lab: , User:

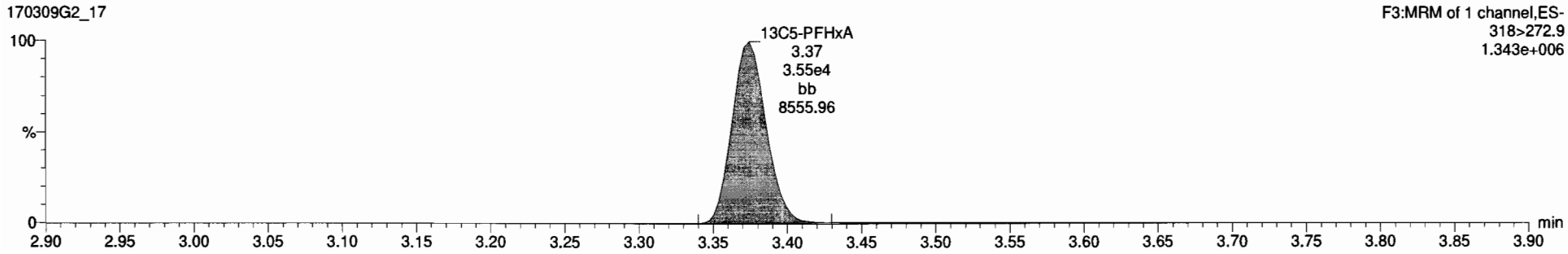
PFBS



13C3-PFBS



13C5-PFHxA



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Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

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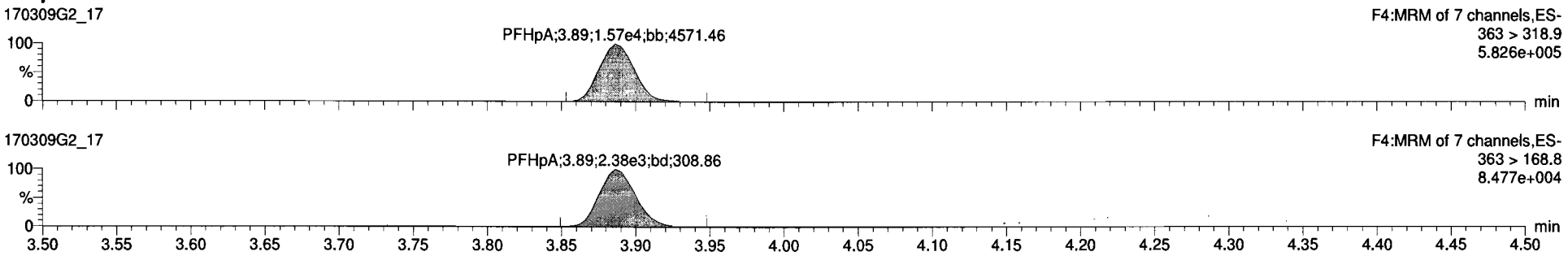
PFHpA



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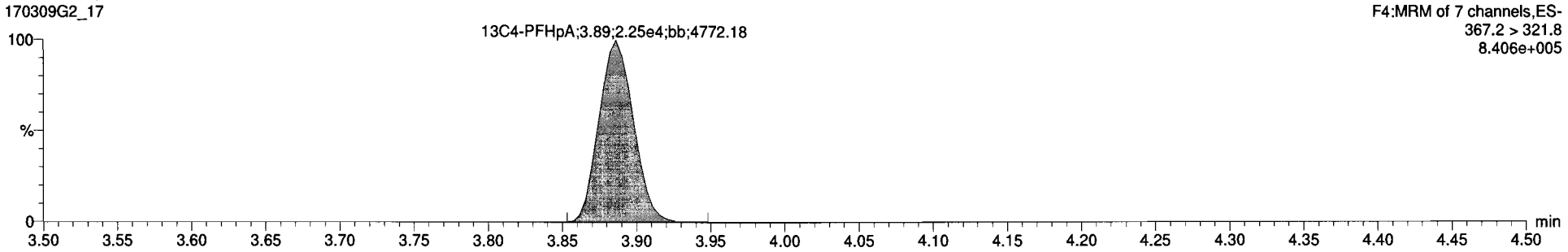
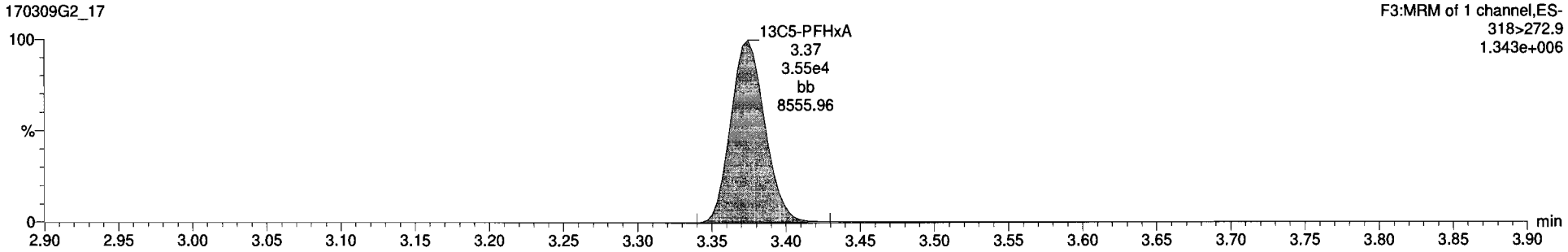


13C5-PFHxA

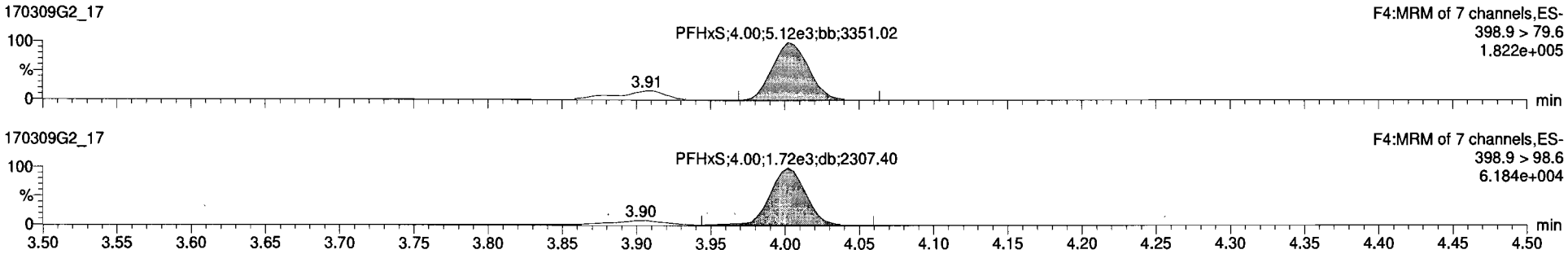


Dataset: Untitled

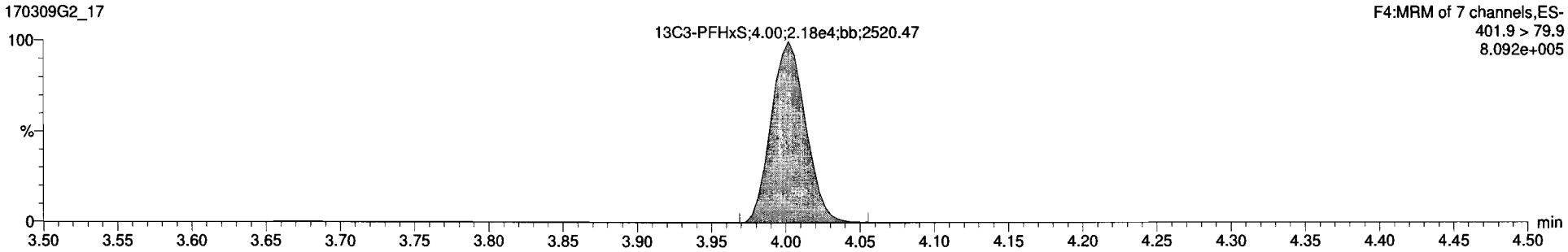
Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, Instrument: , Lab: , User:

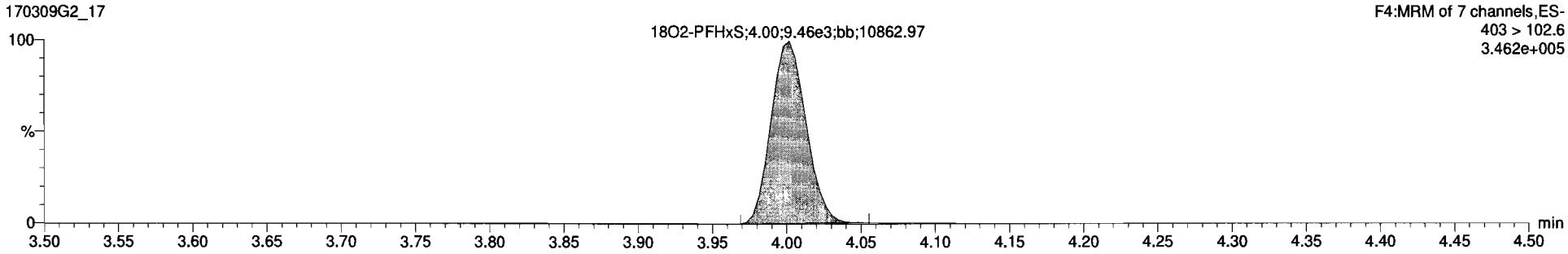
PFHxS

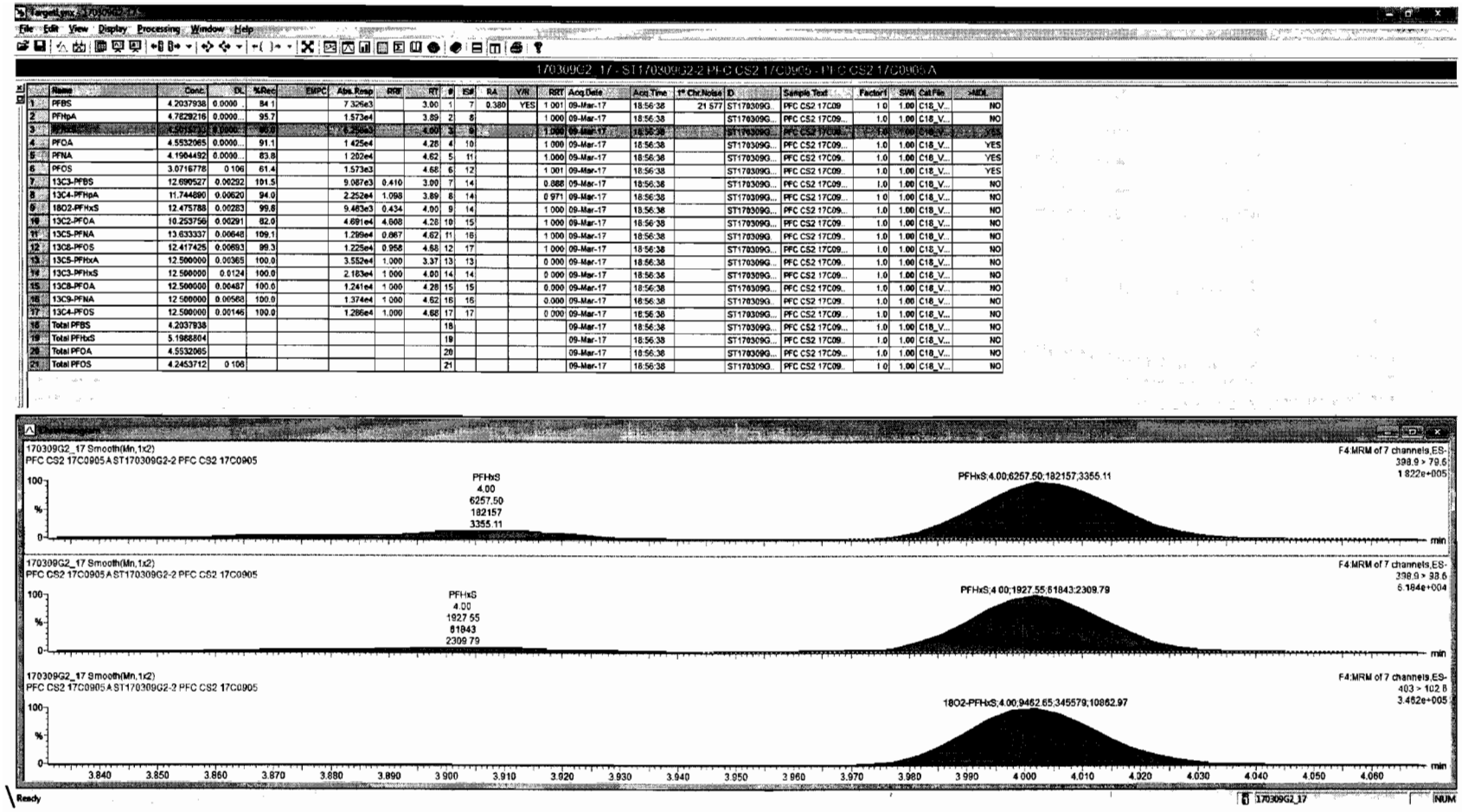


13C3-PFHxS



18O2-PFHxS





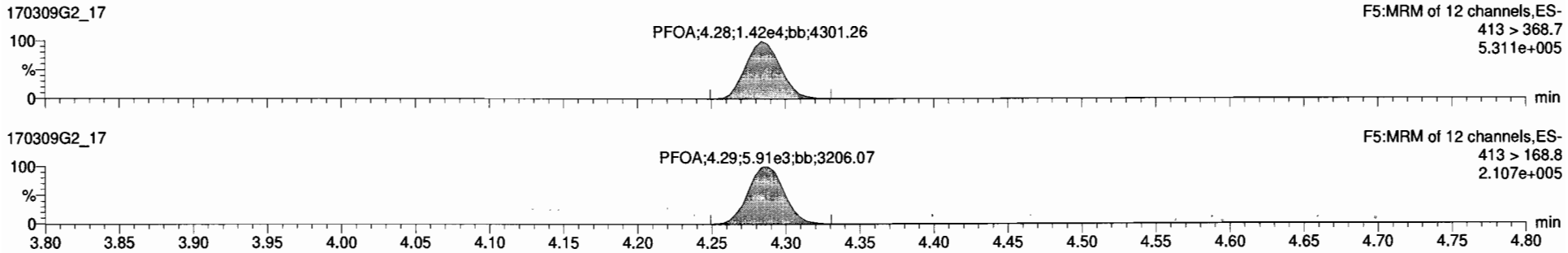
	Name	Conc.	DL	%Rec	EMPC	Abs.Resp	RRF	RT	#	IS#	RA	Y/N	RRT	Acq.Date	Acq.Time	1st Chr.Noise	ID	Sample Text	Factor	SW	Cal File	>MDL
1	PFBS	4.2037938	0.0000	84.1		7.326e3		3.00	1	7	0.380	YES	1.001	09-Mar-17	18:56:38	21.577	ST170309G...	PFC CS2 17C09	1.0	1.00	C18_V...	NO
2	PFHpA	4.7829216	0.0000	95.7		1.573e4		3.89	2	8			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
3	PFHxS	5.1968804	0.0000	90.0		6.259e3		4.00	3	9			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
4	PFOA	4.5532065	0.0000	91.1		1.425e4		4.28	4	10			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
5	PFNA	4.1904492	0.0000	83.8		1.202e4		4.62	5	11			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
6	PFOS	3.0716778	0.106	61.4		1.573e3		4.68	6	12			1.001	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	12.690527	0.00292	101.5		9.087e3	0.410	3.00	7	14			0.888	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	11.744890	0.00620	94.0		2.252e4	1.098	3.89	8	14			0.971	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
9	1802-PFHxS	12.475788	0.00283	99.8		9.483e3	0.434	4.00	9	14			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
10	13C2-PFOA	10.253756	0.00291	82.0		4.691e4	4.608	4.28	10	15			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	13.633337	0.00648	109.1		1.299e4	0.667	4.62	11	16			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
12	13C8-PFOS	12.417425	0.00693	99.3		1.225e4	0.958	4.68	12	17			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00365	100.0		3.552e4	1.000	3.37	13	13			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
14	13C3-PFHxS	12.500000	0.0124	100.0		2.183e4	1.000	4.00	14	14			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
15	13C8-PFOA	12.500000	0.00487	100.0		1.241e4	1.000	4.28	15	15			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
16	13C9-PFNA	12.500000	0.00568	100.0		1.374e4	1.000	4.62	16	16			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00146	100.0		1.286e4	1.000	4.68	17	17			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
18	Total PFBS	4.2037938							18					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
19	Total PFHxS	5.1968804							19					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
20	Total PFOA	4.5532065							20					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
21	Total PFOS	4.2453712	0.106						21					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO

Dataset: Untitled

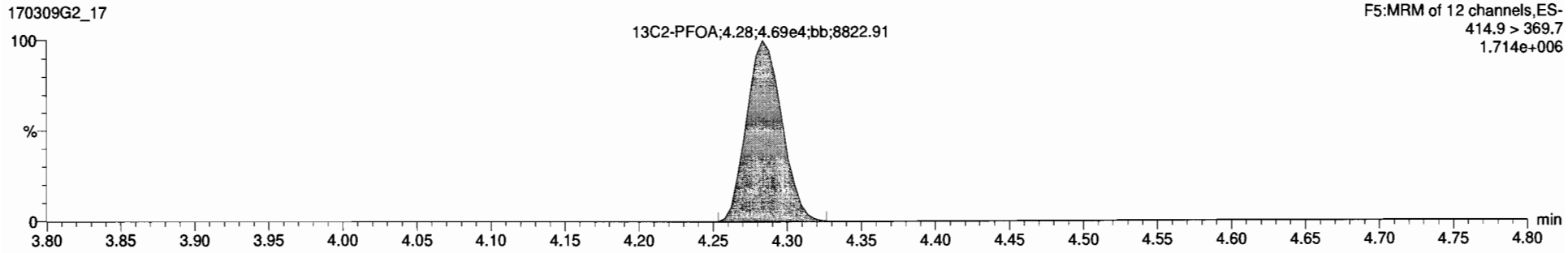
Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, Instrument: , Lab: , User:

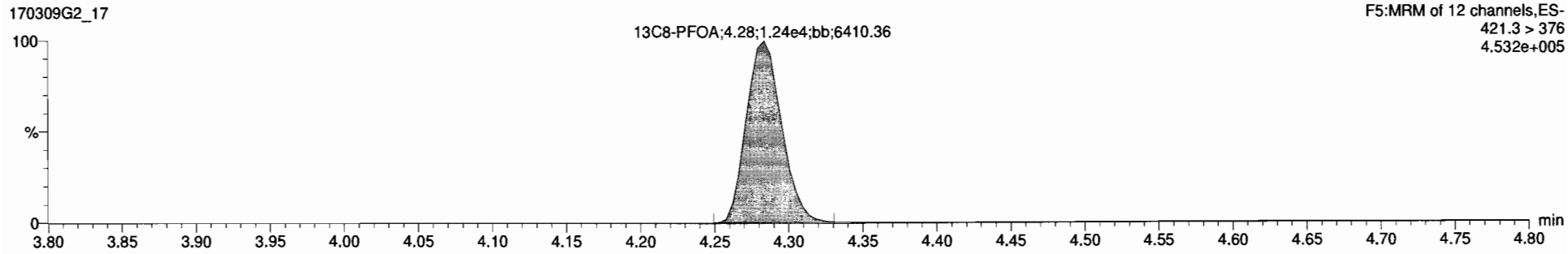
PFOA



13C2-PFOA



13C8-PFOA

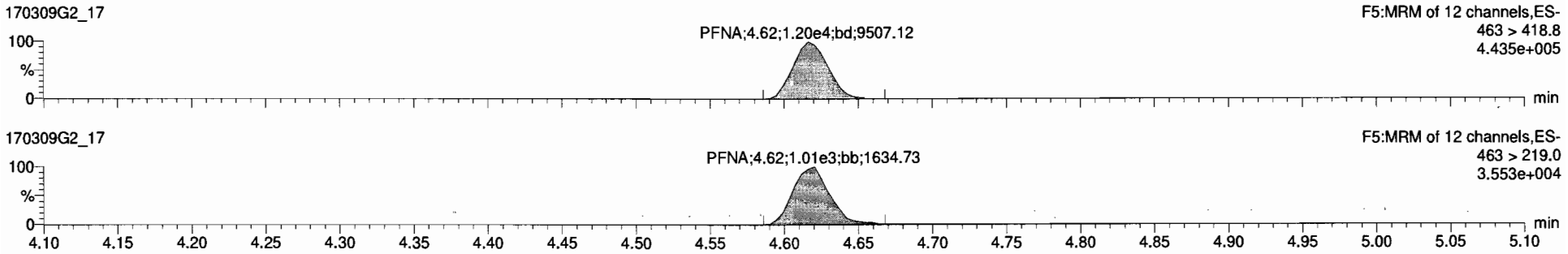


Dataset: Untitled

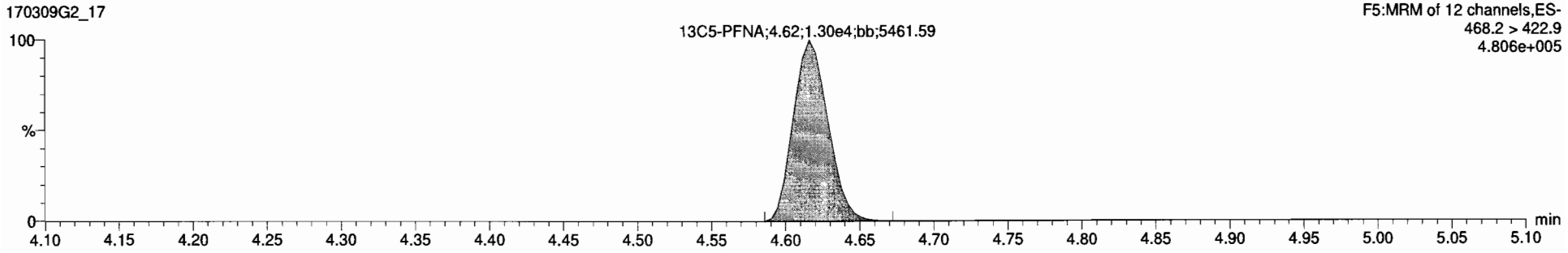
Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, Instrument: , Lab: , User:

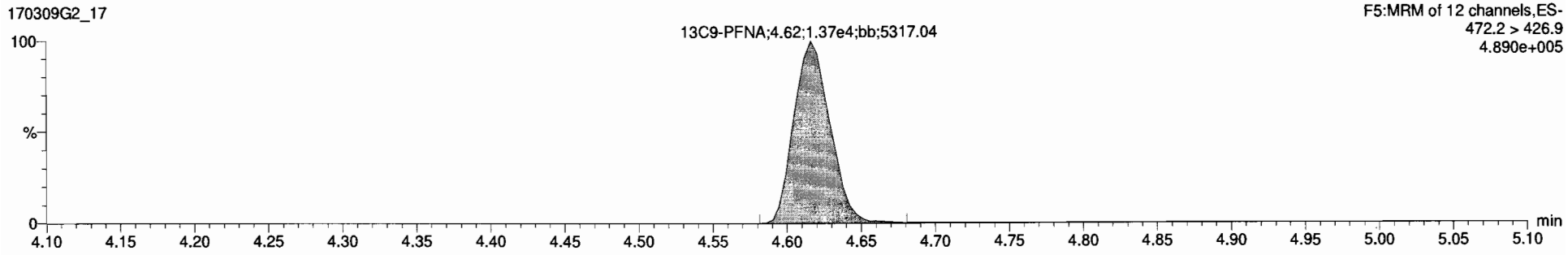
PFNA



13C5-PFNA



13C9-PFNA

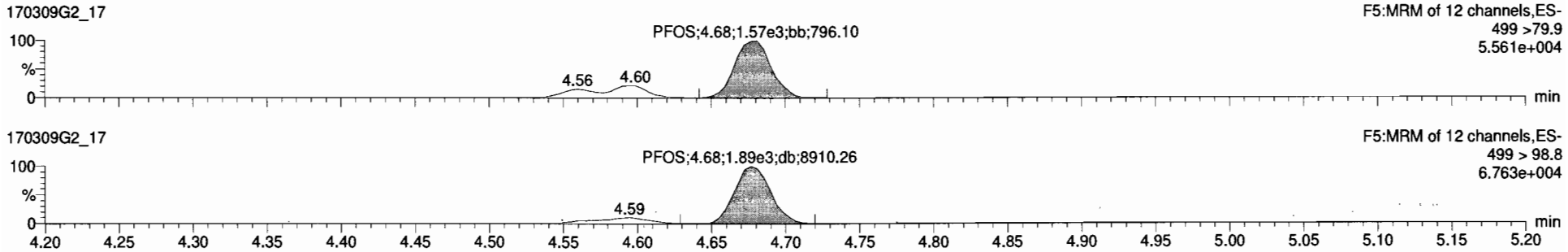


Dataset: Untitled

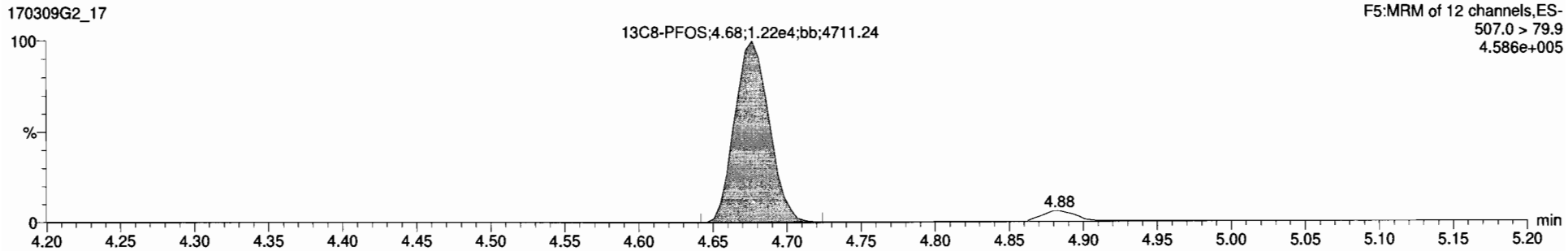
Last Altered: Friday, March 10, 2017 08:33:19 Pacific Standard Time
Printed: Friday, March 10, 2017 08:34:00 Pacific Standard Time

ID: ST170309G2-2 PFC CS2 17C0905, Description: PFC CS2 17C0905 A, Name: 170309G2_17, Date: 09-Mar-2017, Time: 18:56:38, Instrument: , Lab: , User:

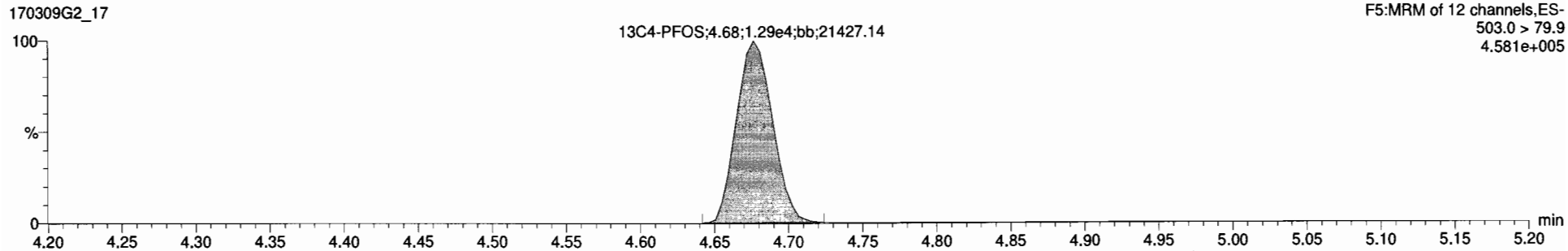
PFOS

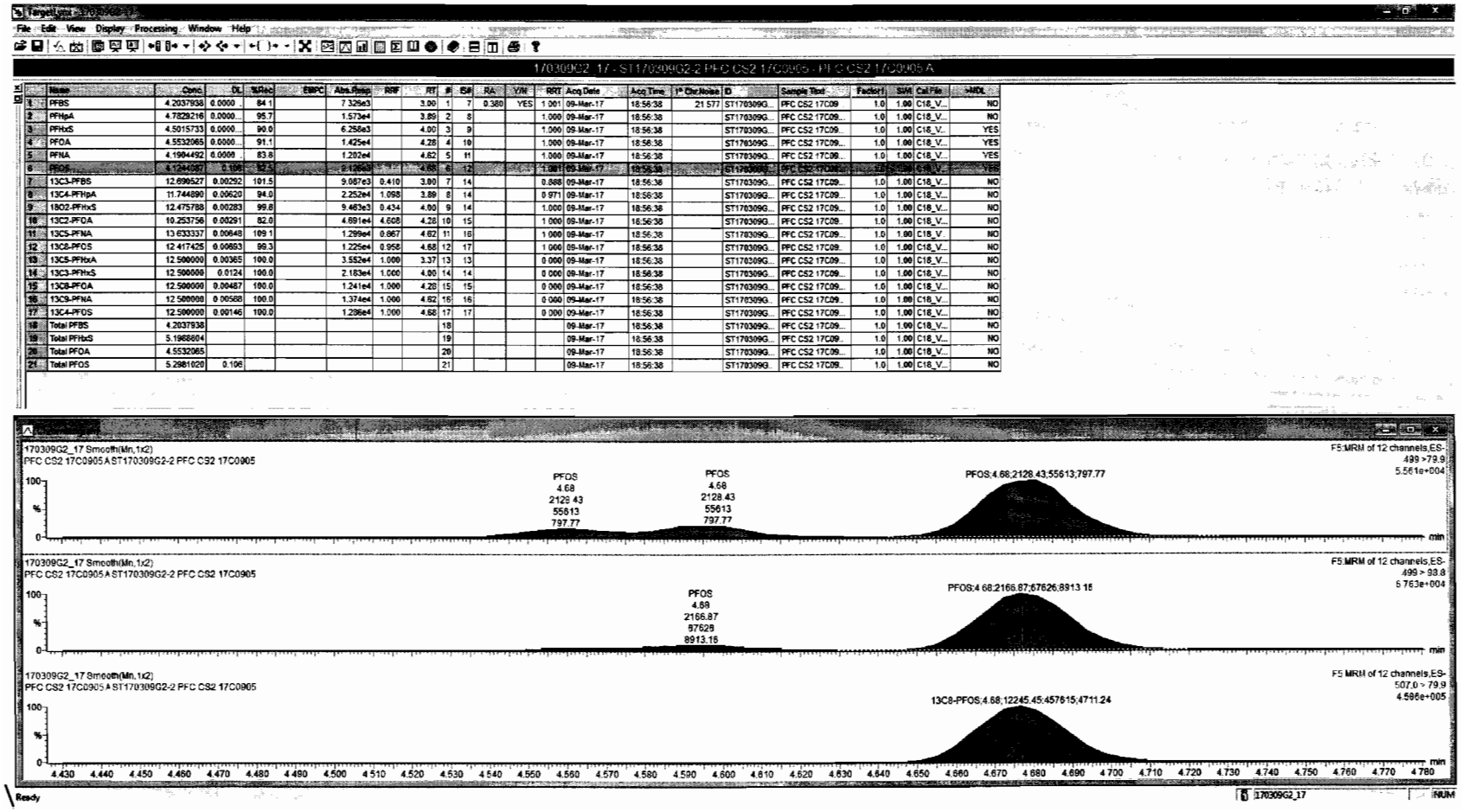


13C8-PFOS



13C4-PFOS





	Name	Conc.	DL	%Rec	EMPC	Abs.Resp	RRF	RT	#	IS#	RA	Y/N	RRT	Acq.Date	Acq.Time	1st Chr.Noise	ID	Sample Text	Factor	SW	Cal.File	>MDL
1	PFBS	4.2037938	0.0000	84.1		7.329e3		3.00	1	7	0.380	YES	1.001	09-Mar-17	18:56:38	21.577	ST170309G...	PFC CS2 17C09	1.0	1.00	C18_V...	NO
2	PFHpA	4.7829216	0.0000	95.7		1.573e4		3.89	2	8			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
3	PFHxS	4.5015733	0.0000	90.0		6.258e3		4.00	3	9			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
4	PFOA	4.5532065	0.0000	91.1		1.425e4		4.28	4	10			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
5	PFNA	4.1904492	0.0000	83.8		1.202e4		4.82	5	11			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
6	PFOS	4.1244097	0.106	82.5		2.129e3		4.68	6	12			1.001	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	12.696527	0.00252	101.5		9.087e3	0.410	3.00	7	14			0.888	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	11.744890	0.00620	94.0		2.252e4	1.058	3.89	8	14			0.971	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
9	18O2-PFHxS	12.475788	0.00283	99.8		9.463e3	0.434	4.00	9	14			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
10	13C2-PFOA	10.253756	0.00291	82.0		4.691e4	4.608	4.28	10	15			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	13.633337	0.00648	109.1		1.299e4	0.867	4.82	11	16			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
12	13C8-PFOS	12.417425	0.00893	99.3		1.225e4	0.958	4.68	12	17			1.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00365	100.0		3.552e4	1.000	3.37	13	13			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
14	13C3-PFHxS	12.500000	0.0124	100.0		2.183e4	1.000	4.00	14	14			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
15	13C8-PFOA	12.500000	0.00487	100.0		1.241e4	1.000	4.28	15	15			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
16	13C9-PFNA	12.500000	0.00568	100.0		1.374e4	1.000	4.82	16	16			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00146	100.0		1.296e4	1.000	4.68	17	17			0.000	09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
18	Total PFBS	4.2037938							18					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
19	Total PFHxS	5.1968804							19					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
20	Total PFOA	4.5532065							20					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO
21	Total PFOS	5.2981020	0.106						21					09-Mar-17	18:56:38		ST170309G...	PFC CS2 17C09...	1.0	1.00	C18_V...	NO

INITIAL CALIBRATION

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS
Correlation coefficient: r = 0.999596, r^2 = 0.999192
Calibration curve: 2.38097 * x + 0.0682571
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	3.05	3.44e2	6.21e3	0.263	5.1	2.77
2	2	170305G1_3	0.500	3.05	6.19e2	6.45e3	0.475	-5.0	2.40
3	3	170305G1_4	1.00	3.04	1.07e3	5.41e3	1.01	1.1	2.47
4	4	170305G1_5	2.00	3.03	2.78e3	7.24e3	1.99	-0.7	2.40
5	5	170305G1_6	5.00	3.03	5.91e3	6.73e3	4.58	-8.4	2.20
6	6	170305G1_7	10.0	3.03	1.12e4	5.49e3	10.7	7.2	2.56
7	7	170305G1_8	50.0	3.03	5.43e4	5.58e3	51.1	2.1	2.43
8	8	170305G1_9	100	3.03	9.61e4	5.11e3	98.6	-1.4	2.35

GB 3/6/17

Compound name: PFHpA
Correlation coefficient: r = 0.999429, r^2 = 0.998857
Calibration curve: 1.79957 * x + 0.123896
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

✓ AC 3/6/17

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	3.93	7.46e2	1.70e4	0.235	-5.8	2.19
2	2	170305G1_3	0.500	3.92	1.43e3	1.69e4	0.518	3.7	2.11
3	3	170305G1_4	1.00	3.91	2.27e3	1.52e4	0.964	-3.6	1.86
4	4	170305G1_5	2.00	3.91	5.65e3	1.86e4	2.05	2.3	1.90
5	5	170305G1_6	5.00	3.91	1.36e4	1.95e4	4.78	-4.4	1.74
6	6	170305G1_7	10.0	3.91	1.98e4	1.29e4	10.6	6.4	1.93
7	7	170305G1_8	50.0	3.91	1.16e5	1.55e4	51.9	3.8	1.87
8	8	170305G1_9	100	3.91	1.99e5	1.42e4	97.6	-2.4	1.76

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: PFHxS
Correlation coefficient: r = 0.999200, r^2 = 0.998401
Calibration curve: 1.81334 * x + 0.103191
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	4.04	3.26e2	7.11e3	0.259	3.8	2.29
2	2	170305G1_3	0.500	4.03	5.47e2	6.83e3	0.496	-0.9	2.00
3	3	170305G1_4	1.00	4.03	8.97e2	5.85e3	1.00	0.1	1.92
4	4	170305G1_5	2.00	4.03	2.23e3	7.43e3	2.01	0.5	1.87
5	5	170305G1_6	5.00	4.03	5.17e3	7.64e3	4.60	-8.0	1.69
6	6	170305G1_7	10.0	4.03	6.69e3	4.52e3	10.1	1.5	1.85
7	7	170305G1_8	50.0	4.03	4.78e4	6.24e3	52.8	5.6	1.92
8	8	170305G1_9	100	4.03	8.33e4	5.89e3	97.4	-2.6	1.77

Compound name: PFOA
Correlation coefficient: r = 0.998804, r^2 = 0.997609
Calibration curve: 0.794457 * x + 0.179058
Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	4.32	1.04e3	3.51e4	0.241	-3.7	1.48
2	2	170305G1_3	0.500	4.31	1.52e3	3.53e4	0.452	-9.6	1.08
3	3	170305G1_4	1.00	4.30	2.09e3	2.91e4	0.908	-9.2	0.901
4	4	170305G1_5	2.00	4.30	5.39e3	3.70e4	2.06	3.1	0.909
5	5	170305G1_6	5.00	4.30	1.24e4	3.46e4	5.43	8.5	0.898
6	6	170305G1_7	10.0	4.30	1.56e4	2.18e4	11.0	9.8	0.890
7	7	170305G1_8	50.0	4.30	1.10e5	3.30e4	52.3	4.6	0.835
8	8	170305G1_9	100	4.30	1.98e5	3.22e4	96.4	-3.6	0.767

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
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Compound name: PFNA
Correlation coefficient: r = 0.999011, r^2 = 0.998022
Calibration curve: 2.73664 * x + 0.0966541
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	4.65	5.06e2	8.36e3	0.241	-3.5	3.03
2	2	170305G1_3	0.500	4.64	8.81e2	7.67e3	0.489	-2.1	2.87
3	3	170305G1_4	1.00	4.63	1.26e3	5.74e3	0.968	-3.2	2.75
4	4	170305G1_5	2.00	4.63	3.17e3	6.97e3	2.04	2.0	2.84
5	5	170305G1_6	5.00	4.63	7.77e3	7.48e3	4.71	-5.8	2.60
6	6	170305G1_7	10.0	4.63	7.05e3	2.88e3	11.1	11.4	3.06
7	7	170305G1_8	50.0	4.63	7.41e4	6.50e3	52.1	4.1	2.85
8	8	170305G1_9	100	4.63	1.56e5	7.35e3	97.1	-2.9	2.66

Compound name: PFOS
Coefficient of Determination: R^2 = 0.997963
Calibration curve: -0.000185224 * x^2 + 0.54028 * x + -0.0525057
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	4.62	3.72e1	6.28e3	0.234	-6.3	0.296 (A)
2	2	170305G1_3	0.500	4.71	7.39e1	6.57e3	0.358	-28.5	0.281
3	3	170305G1_4	1.00	4.69	1.82e2	4.73e3	0.989	-1.1	0.482
4	4	170305G1_5	2.00	4.69	5.28e2	5.18e3	2.46	23.0	0.638
5	5	170305G1_6	5.00	4.69	1.23e3	5.64e3	5.14	2.8	0.544
6	6	170305G1_7	10.0	4.69	8.60e2	1.88e3	10.7	7.1	0.571
7	7	170305G1_8	50.0	4.69	1.04e4	5.14e3	47.8	-4.4	0.507
8	8	170305G1_9	100	4.69	2.64e4	6.26e3	101	1.1	0.527

(A) Point excluded.
ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C3-PFBS
Response Factor: 0.40994
RRF SD: 0.0411734, Relative SD: 10.0438
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	3.05	6.21e3	1.48e4	12.8	2.4	0.420
2	2	170305G1_3	12.5	3.05	6.45e3	1.61e4	12.2	-2.5	0.400
3	3	170305G1_4	12.5	3.03	5.41e3	1.44e4	11.5	-8.1	0.377
4	4	170305G1_5	12.5	3.03	7.24e3	1.74e4	12.7	1.2	0.415
5	5	170305G1_6	12.5	3.03	6.73e3	1.72e4	11.9	-4.7	0.391
6	6	170305G1_7	12.5	3.03	5.49e3	1.09e4	15.4	23.0	0.504
7	7	170305G1_8	12.5	3.03	5.58e3	1.48e4	11.5	-7.9	0.378
8	8	170305G1_9	12.5	3.03	5.11e3	1.29e4	12.1	-3.5	0.396

Compound name: 13C4-PFHpA
Response Factor: 1.09794
RRF SD: 0.0510391, Relative SD: 4.64862
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	3.92	1.70e4	1.48e4	13.1	5.0	1.15
2	2	170305G1_3	12.5	3.92	1.69e4	1.61e4	11.9	-4.5	1.05
3	3	170305G1_4	12.5	3.91	1.52e4	1.44e4	12.1	-3.4	1.06
4	4	170305G1_5	12.5	3.91	1.86e4	1.74e4	12.1	-3.1	1.06
5	5	170305G1_6	12.5	3.91	1.95e4	1.72e4	12.9	3.0	1.13
6	6	170305G1_7	12.5	3.91	1.29e4	1.09e4	13.4	7.6	1.18
7	7	170305G1_8	12.5	3.91	1.55e4	1.48e4	11.9	-4.4	1.05
8	8	170305G1_9	12.5	3.91	1.42e4	1.29e4	12.5	-0.2	1.10

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 18O2-PFHxS
Response Factor: 0.434252
RRF SD: 0.0243573, Relative SD: 5.60903
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.04	7.11e3	1.48e4	13.8	10.7	0.481
2	2	170305G1_3	12.5	4.03	6.83e3	1.61e4	12.2	-2.6	0.423
3	3	170305G1_4	12.5	4.03	5.85e3	1.44e4	11.7	-6.2	0.407
4	4	170305G1_5	12.5	4.02	7.43e3	1.74e4	12.3	-1.8	0.426
5	5	170305G1_6	12.5	4.02	7.64e3	1.72e4	12.8	2.2	0.444
6	6	170305G1_7	12.5	4.02	4.52e3	1.09e4	12.0	-4.4	0.415
7	7	170305G1_8	12.5	4.02	6.24e3	1.48e4	12.1	-2.8	0.422
8	8	170305G1_9	12.5	4.02	5.89e3	1.29e4	13.1	5.0	0.456

Compound name: 13C2-PFOA
Response Factor: 4.60838
RRF SD: 0.269705, Relative SD: 5.85249
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.32	3.51e4	7.77e3	12.2	-2.0	4.51
2	2	170305G1_3	12.5	4.31	3.53e4	8.14e3	11.8	-5.8	4.34
3	3	170305G1_4	12.5	4.31	2.91e4	6.38e3	12.4	-1.0	4.56
4	4	170305G1_5	12.5	4.30	3.70e4	8.23e3	12.2	-2.4	4.50
5	5	170305G1_6	12.5	4.30	3.46e4	7.88e3	11.9	-4.6	4.40
6	6	170305G1_7	12.5	4.30	2.18e4	4.25e3	13.9	11.6	5.14
7	7	170305G1_8	12.5	4.30	3.30e4	7.29e3	12.3	-1.8	4.53
8	8	170305G1_9	12.5	4.30	3.22e4	6.59e3	13.3	6.0	4.89

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C5-PFNA
Response Factor: 0.867114
RRF SD: 0.0501317, Relative SD: 5.78144
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.64	8.36e3	8.87e3	13.6	8.7	0.943
2	2	170305G1_3	12.5	4.64	7.67e3	8.20e3	13.5	7.9	0.936
3	3	170305G1_4	12.5	4.63	5.74e3	7.15e3	11.6	-7.4	0.803
4	4	170305G1_5	12.5	4.63	6.97e3	8.16e3	12.3	-1.4	0.855
5	5	170305G1_6	12.5	4.63	7.48e3	8.62e3	12.5	0.0	0.867
6	6	170305G1_7	12.5	4.63	2.88e3	3.54e3	11.7	-6.0	0.815
7	7	170305G1_8	12.5	4.63	6.50e3	7.60e3	12.3	-1.3	0.856
8	8	170305G1_9	12.5	4.63	7.35e3	8.52e3	12.4	-0.5	0.863

Compound name: 13C8-PFOS
Response Factor: 0.95832
RRF SD: 0.0597595, Relative SD: 6.23587
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.70	6.28e3	6.73e3	12.2	-2.5	0.934
2	2	170305G1_3	12.5	4.70	6.57e3	7.11e3	12.1	-3.6	0.924
3	3	170305G1_4	12.5	4.69	4.73e3	5.19e3	11.9	-4.7	0.913
4	4	170305G1_5	12.5	4.69	5.18e3	5.45e3	12.4	-0.9	0.950
5	5	170305G1_6	12.5	4.69	5.64e3	6.31e3	11.7	-6.8	0.894
6	6	170305G1_7	12.5	4.69	1.88e3	1.74e3	14.1	12.8	1.08
7	7	170305G1_8	12.5	4.69	5.14e3	5.13e3	13.1	4.4	1.00
8	8	170305G1_9	12.5	4.69	6.26e3	6.45e3	12.7	1.3	0.971

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	3.43	2.72e4	2.72e4	12.5	0.0	1.00
2	2	170305G1_3	12.5	3.43	2.95e4	2.95e4	12.5	0.0	1.00
3	3	170305G1_4	12.5	3.41	2.60e4	2.60e4	12.5	0.0	1.00
4	4	170305G1_5	12.5	3.41	3.17e4	3.17e4	12.5	0.0	1.00
5	5	170305G1_6	12.5	3.41	3.10e4	3.10e4	12.5	0.0	1.00
6	6	170305G1_7	12.5	3.41	2.37e4	2.37e4	12.5	0.0	1.00
7	7	170305G1_8	12.5	3.41	2.69e4	2.69e4	12.5	0.0	1.00
8	8	170305G1_9	12.5	3.41	2.39e4	2.39e4	12.5	0.0	1.00

Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.04	1.48e4	1.48e4	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.03	1.61e4	1.61e4	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.03	1.44e4	1.44e4	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.02	1.74e4	1.74e4	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.02	1.72e4	1.72e4	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.03	1.09e4	1.09e4	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.02	1.48e4	1.48e4	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.02	1.29e4	1.29e4	12.5	0.0	1.00

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.32	7.77e3	7.77e3	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.31	8.14e3	8.14e3	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.30	6.38e3	6.38e3	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.30	8.23e3	8.23e3	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.30	7.88e3	7.88e3	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.30	4.25e3	4.25e3	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.30	7.29e3	7.29e3	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.30	6.59e3	6.59e3	12.5	0.0	1.00

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.64	8.87e3	8.87e3	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.64	8.20e3	8.20e3	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.63	7.15e3	7.15e3	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.63	8.16e3	8.16e3	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.63	8.62e3	8.62e3	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.63	3.54e3	3.54e3	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.63	7.60e3	7.60e3	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.63	8.52e3	8.52e3	12.5	0.0	1.00

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	12.5	4.70	6.73e3	6.73e3	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.70	7.11e3	7.11e3	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.69	5.19e3	5.19e3	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.69	5.45e3	5.45e3	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.69	6.31e3	6.31e3	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.69	1.74e3	1.74e3	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.69	5.13e3	5.13e3	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.69	6.45e3	6.45e3	12.5	0.0	1.00

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:13:54 Pacific Standard Time
Printed: Monday, March 06, 2017 09:14:12 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170305G1_1	IPA	05-Mar-17	12:34:35
2	170305G1_2	ST170305G1-1 PFC CS-2 17C0501	05-Mar-17	12:46:48
3	170305G1_3	ST170305G1-2 PFC CS-1 17C0502	05-Mar-17	12:59:15
4	170305G1_4	ST170305G1-3 PFC CS0 17C0503	05-Mar-17	13:11:49
5	170305G1_5	ST170305G1-4 PFC CS1 17C0504	05-Mar-17	13:24:21
6	170305G1_6	ST170305G1-5 PFC CS2 17C0505	05-Mar-17	13:36:55
7	170305G1_7	ST170305G1-6 PFC CS3 17C0506	05-Mar-17	13:49:29
8	170305G1_8	ST170305G1-7 PFC CS4 17C0507	05-Mar-17	14:02:00
9	170305G1_9	ST170305G1-8 PFC CS5 17C0508	05-Mar-17	14:14:34
10	170305G1_10	IPA	05-Mar-17	14:27:08
11	170305G1_11	SS170305G1-1 PFC SSS 17C0509	05-Mar-17	14:39:40
12	170305G1_12	IPA	05-Mar-17	14:52:09
13	170305G1_13	B7C0012-BS1 OPR 0.125	05-Mar-17	15:04:45
14	170305G1_14	B7C0010-BS1 OPR 0.125	05-Mar-17	15:17:15
15	170305G1_15	IPA	05-Mar-17	15:29:48
16	170305G1_16	B7C0012-BLK1 Method Blank 0.125	05-Mar-17	15:42:23
17	170305G1_17	B7C0010-BLK1 Method Blank 0.125	05-Mar-17	15:54:54
18	170305G1_18	1700268-02RE1 WI-CV-GW05M-0217 0.125	05-Mar-17	16:07:28
19	170305G1_19	1700268-04RE1 WI-CV-GW11M-0217 0.125	05-Mar-17	16:20:00
20	170305G1_20	1700280-01 WI-CV-GW03M-0217 0.125	05-Mar-17	16:32:34
21	170305G1_21	1700280-02 WI-CV-GW03D-0217 0.125	05-Mar-17	16:45:07
22	170305G1_22	1700280-03 WI-CV-EB07-022717 0.125	05-Mar-17	16:57:36
23	170305G1_23	1700280-04 WI-CV-GW04M-0217 0.125	05-Mar-17	17:10:09
24	170305G1_24	1700280-05 WI-CV-GW01M-0217 0.125	05-Mar-17	17:22:42
25	170305G1_25	1700280-06 WI-CV-EB08-022817 0.125	05-Mar-17	17:35:16
26	170305G1_26	1700280-07 WI-CV-GW01D-0217 0.125	05-Mar-17	17:47:49
27	170305G1_27	1700277-01 MILK-022717 0.005	05-Mar-17	18:00:22
28	170305G1_28	IPA	05-Mar-17	18:12:56
29	170305G1_29	ST170305G1-9 PFC CS3 17C0506	05-Mar-17	18:25:28
30	170305G1_30	IPA	05-Mar-17	18:38:01

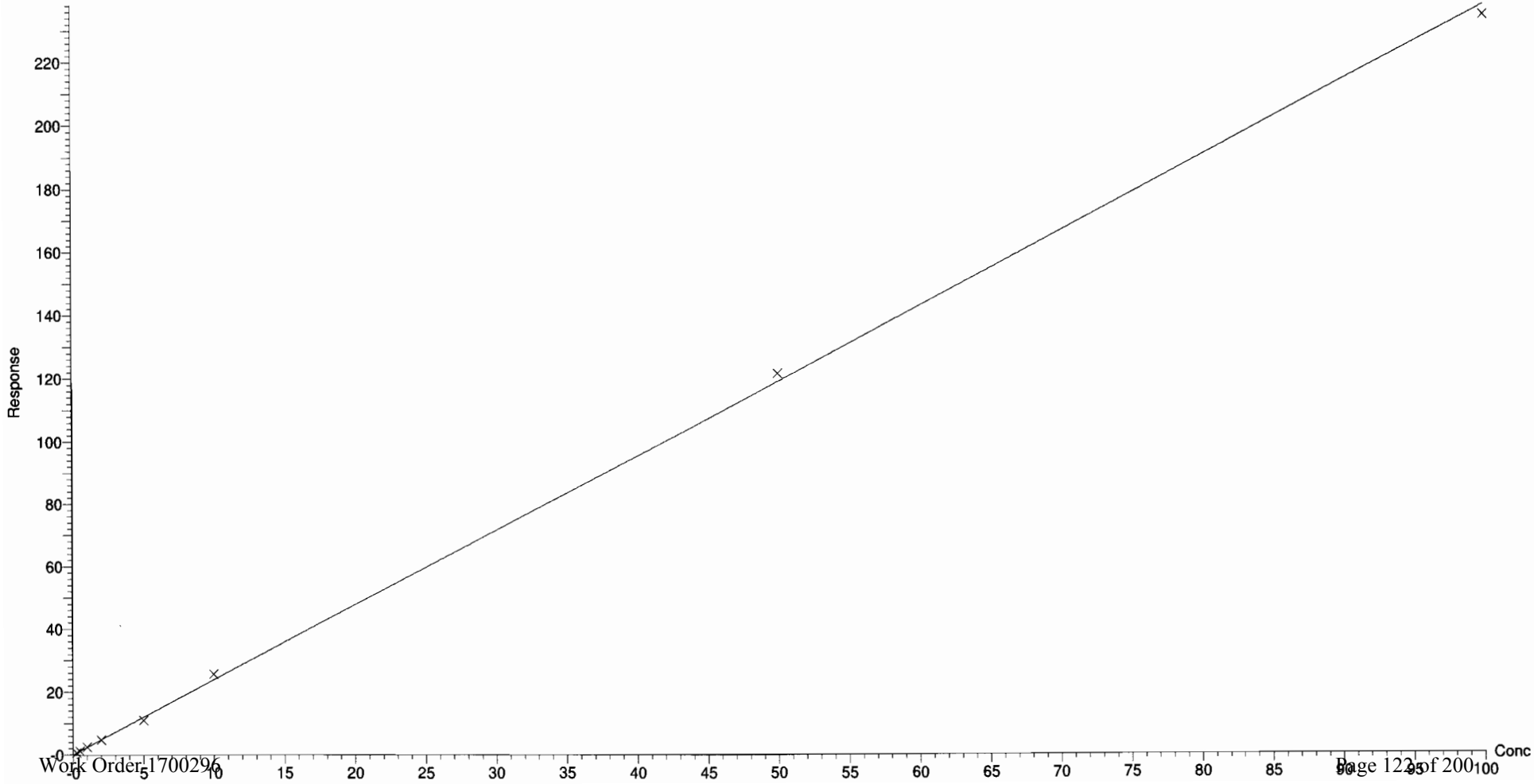
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS
Correlation coefficient: r = 0.999596, r^2 = 0.999192
Calibration curve: 2.38097 * x + 0.0682571
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFHpA
Correlation coefficient: r = 0.999429, r^2 = 0.998857
Calibration curve: 1.79957 * x + 0.123896
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
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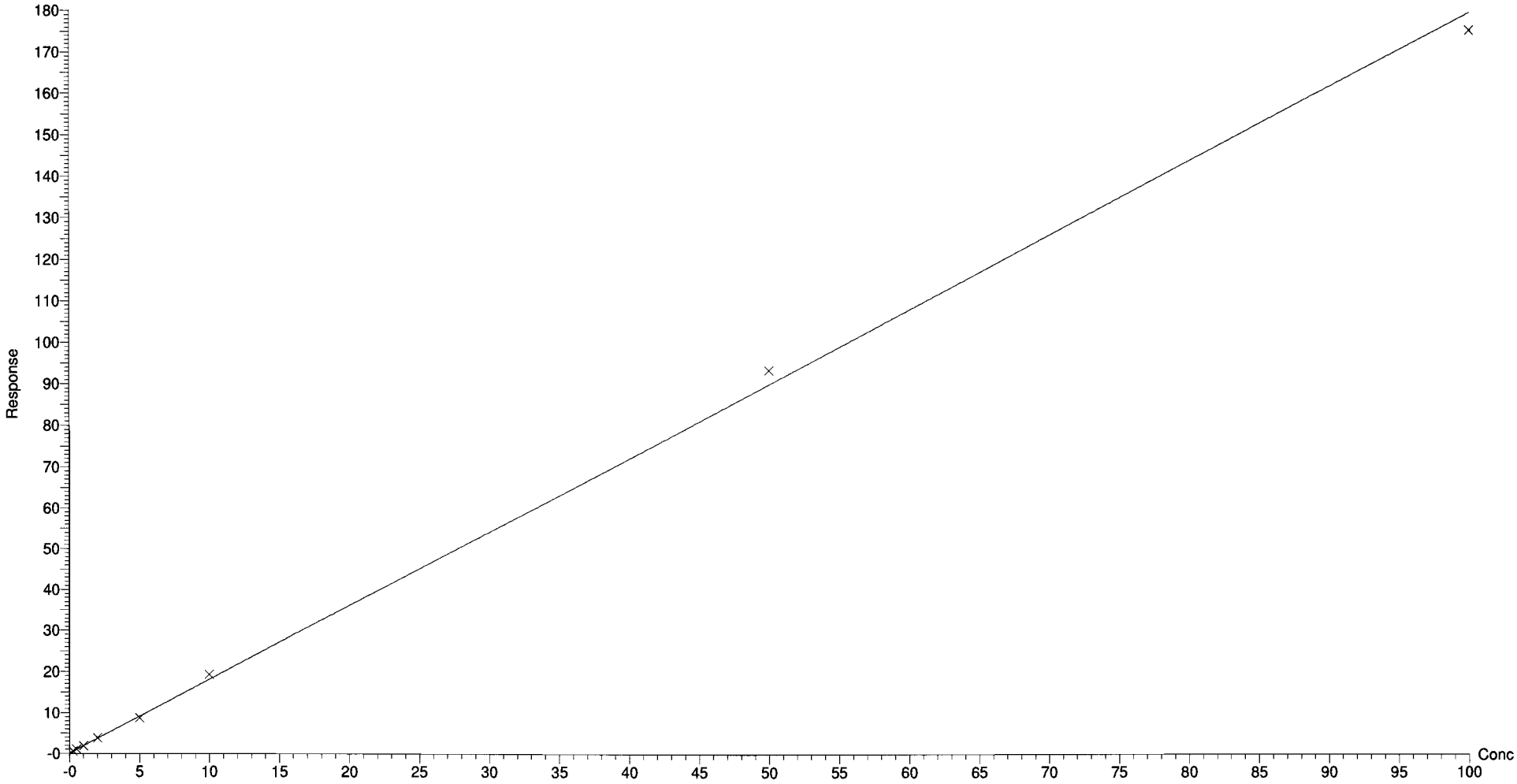

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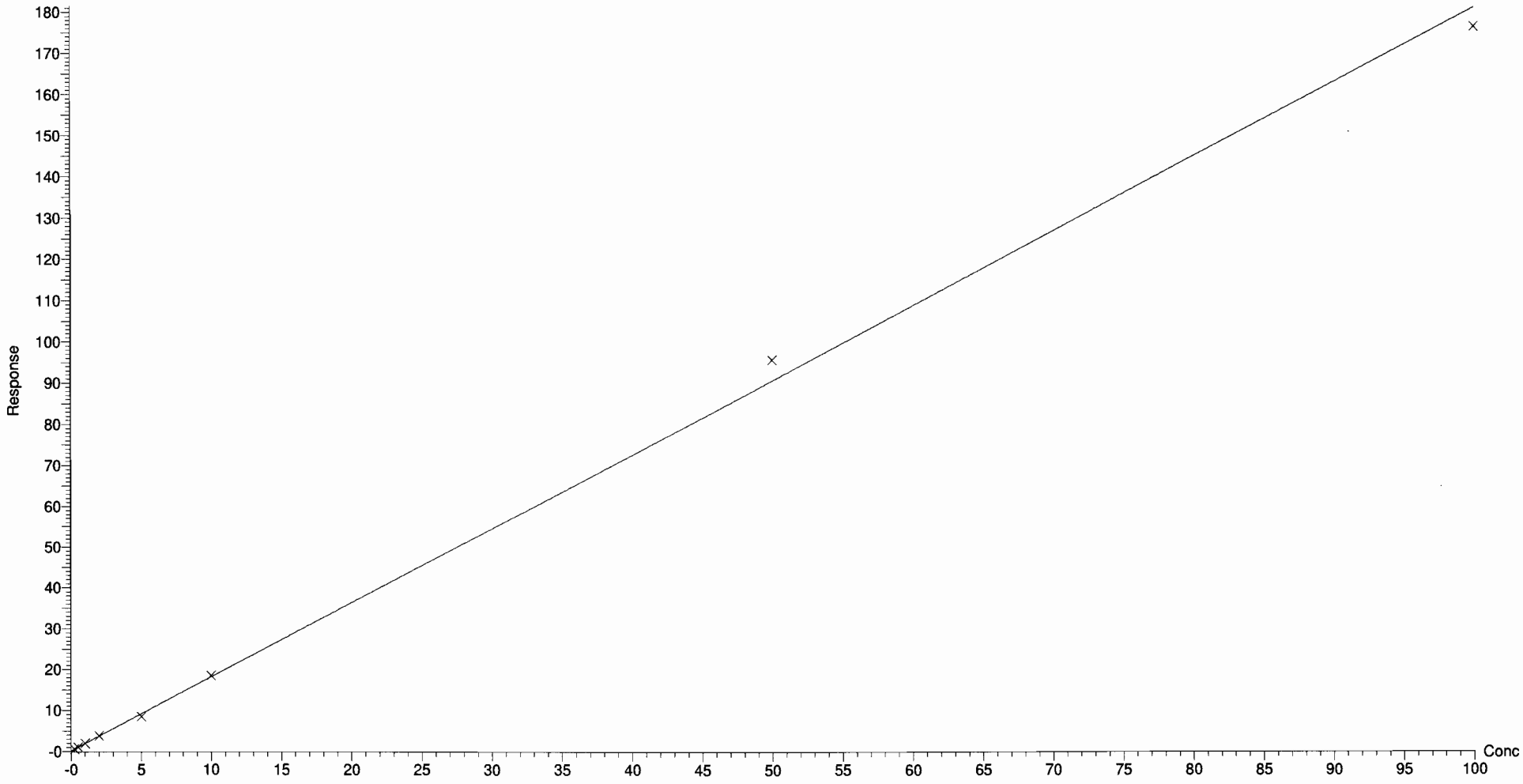
Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFHxS
Correlation coefficient: r = 0.999200, r^2 = 0.998401
Calibration curve: 1.81334 * x + 0.103191
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

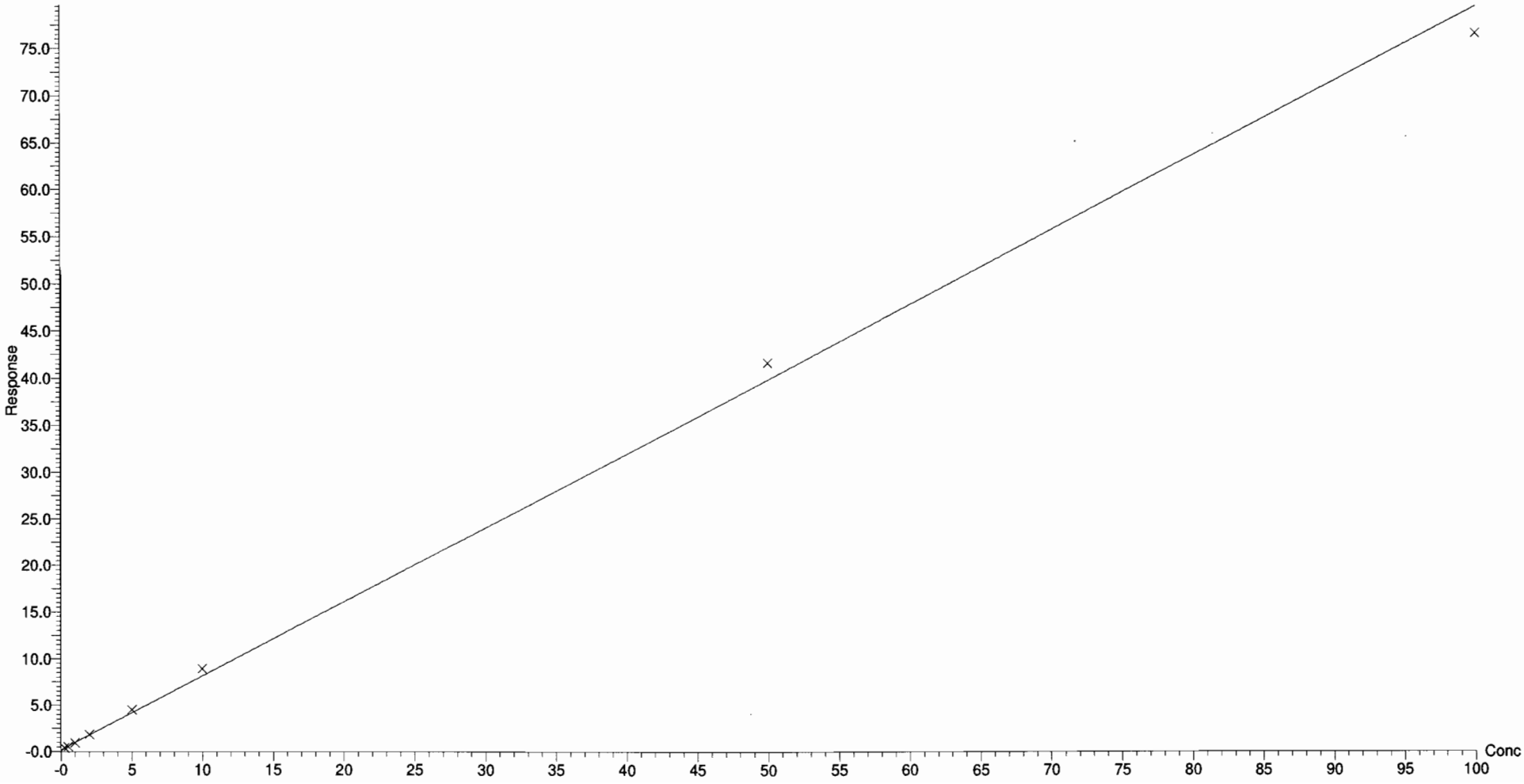


Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFOA
Correlation coefficient: r = 0.998804, r^2 = 0.997609
Calibration curve: 0.794457 * x + 0.179058
Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

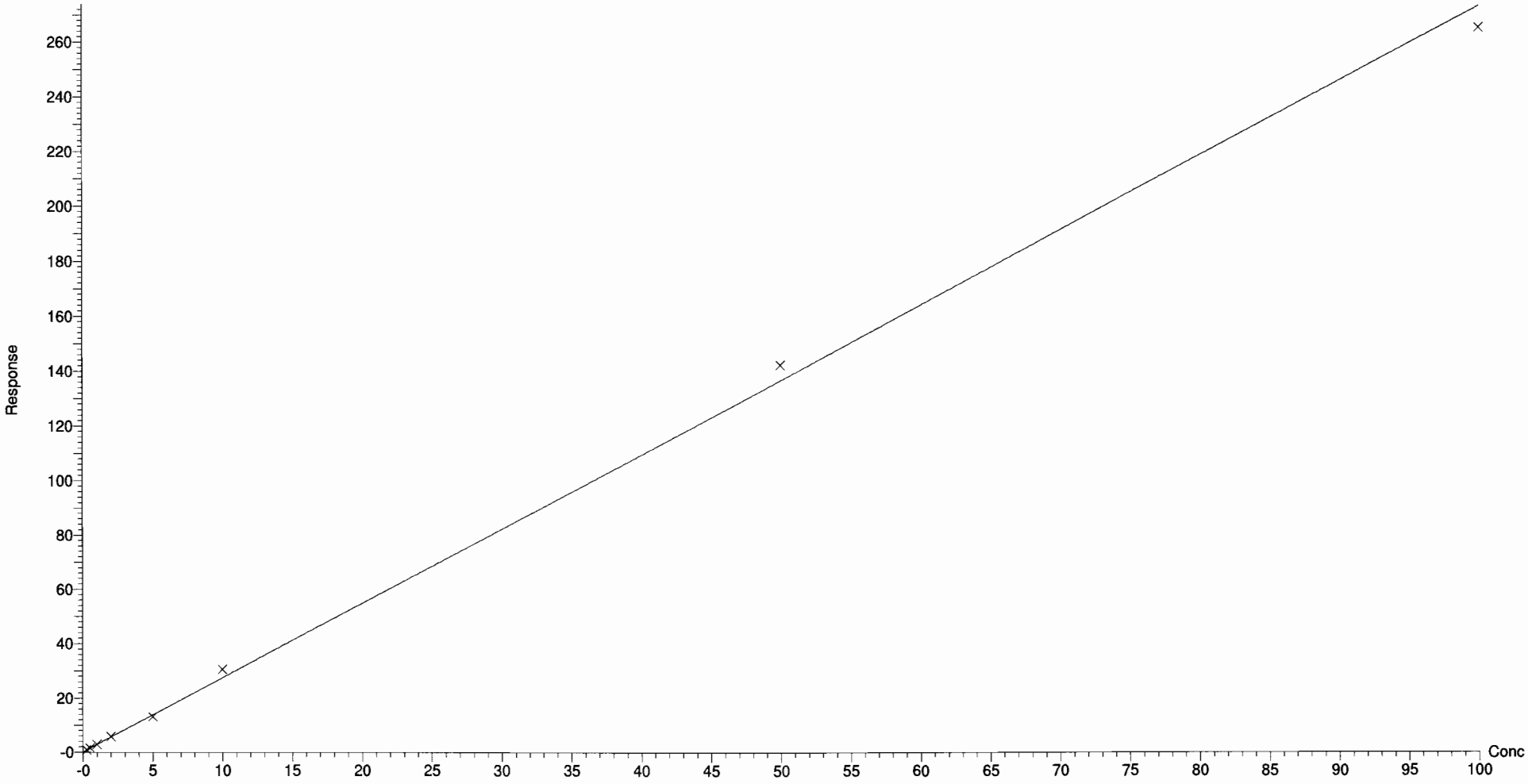


Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFNA
Correlation coefficient: r = 0.999011, r^2 = 0.998022
Calibration curve: 2.73664 * x + 0.0966541
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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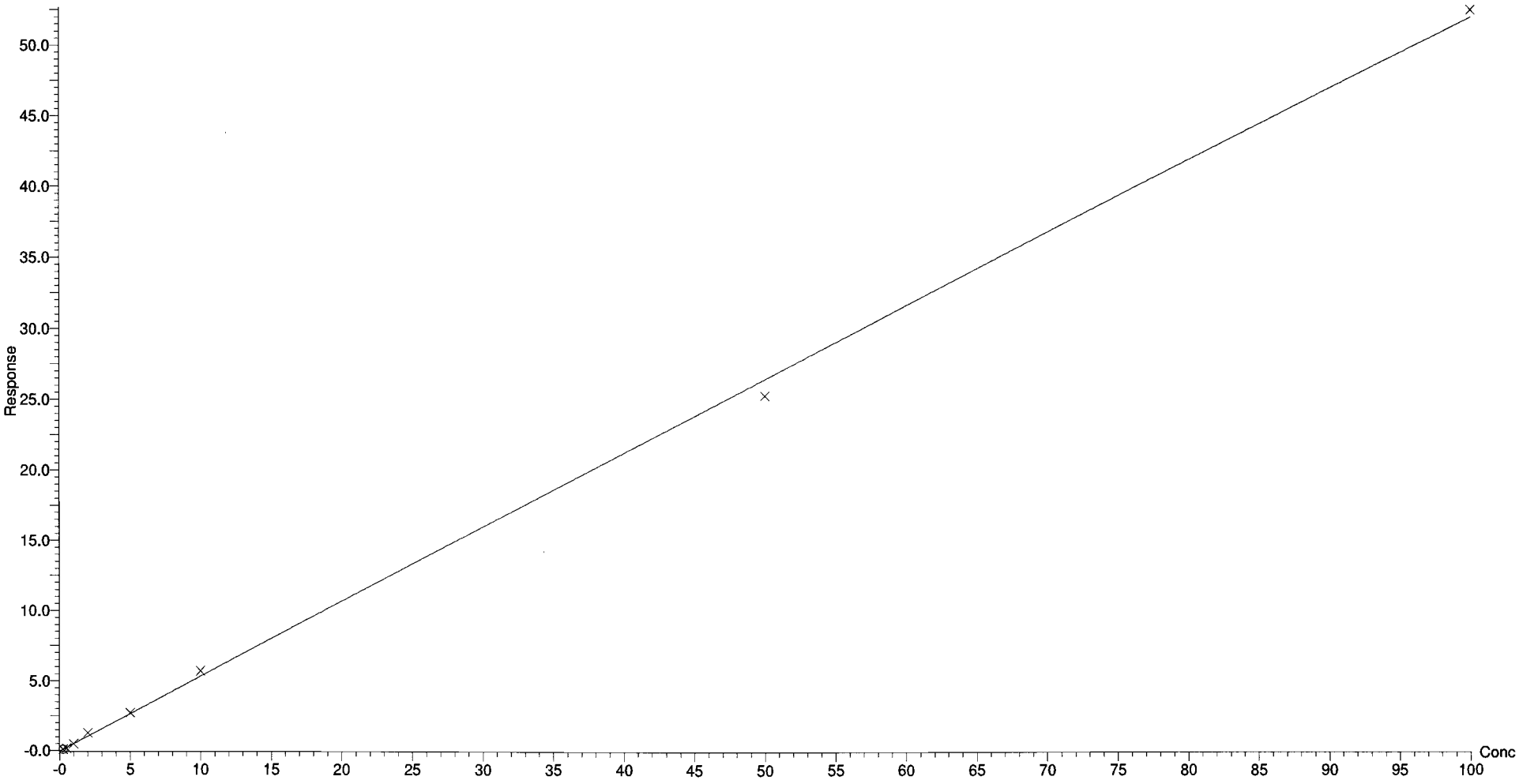
Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.997963
Calibration curve: -0.000185224 * x^2 + 0.54028 * x + -0.0525057
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory Q1

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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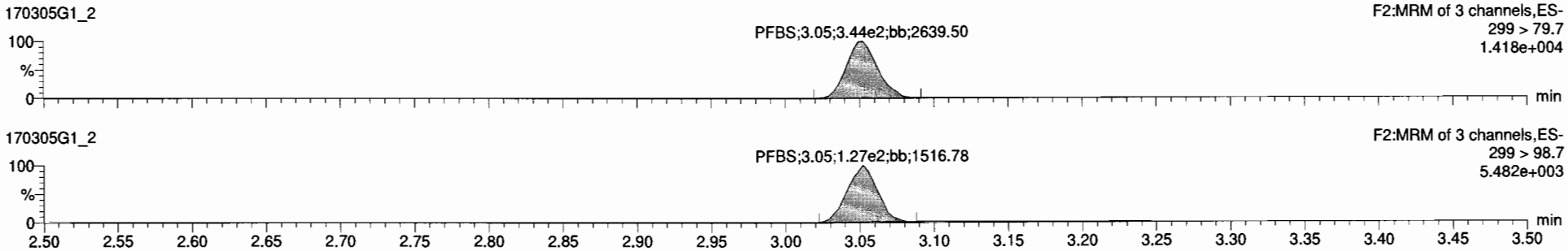
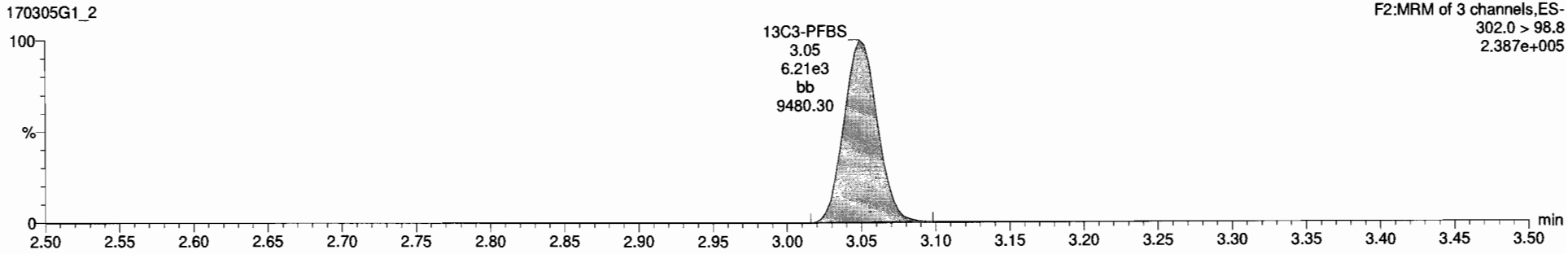
Calibration: 06 Mar 2017 08:36:20

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

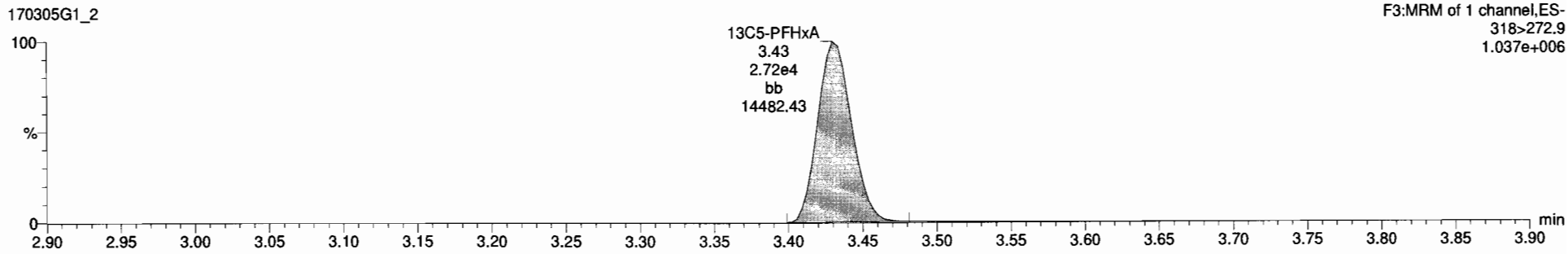
PFBS



13C3-PFBS



13C5-PFHxA



Vista Analytical Laboratory Q1

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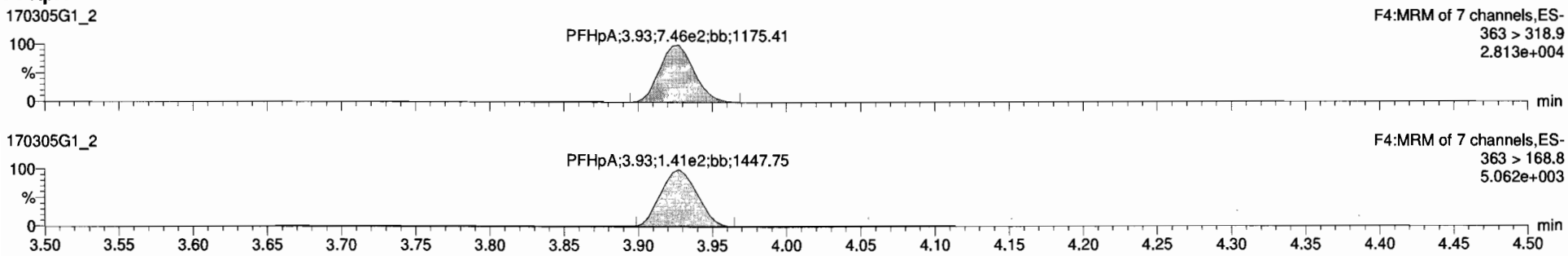
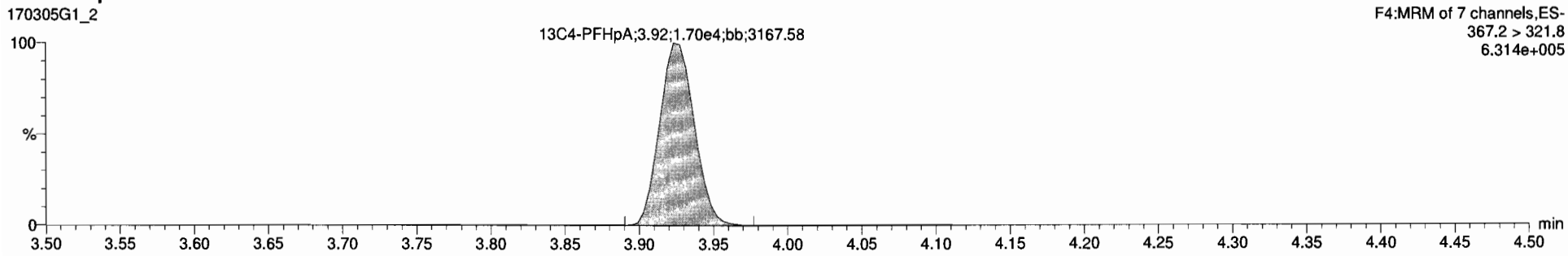
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

PFHpA



13C4-PFHpA



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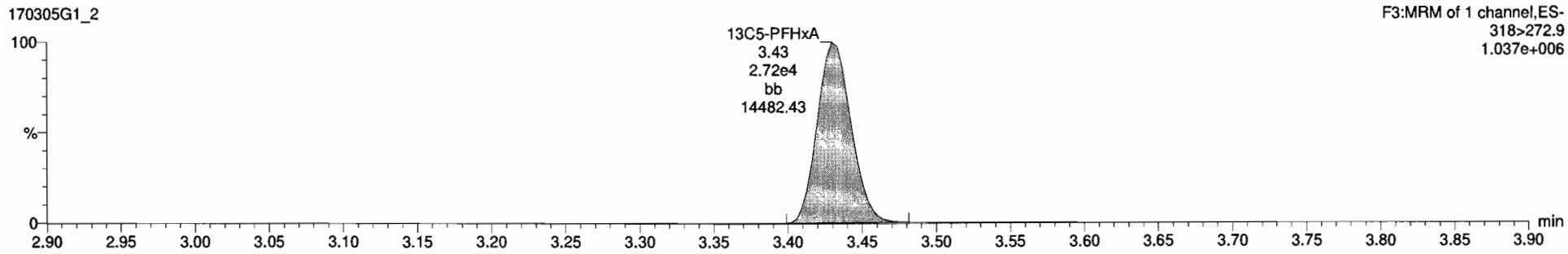

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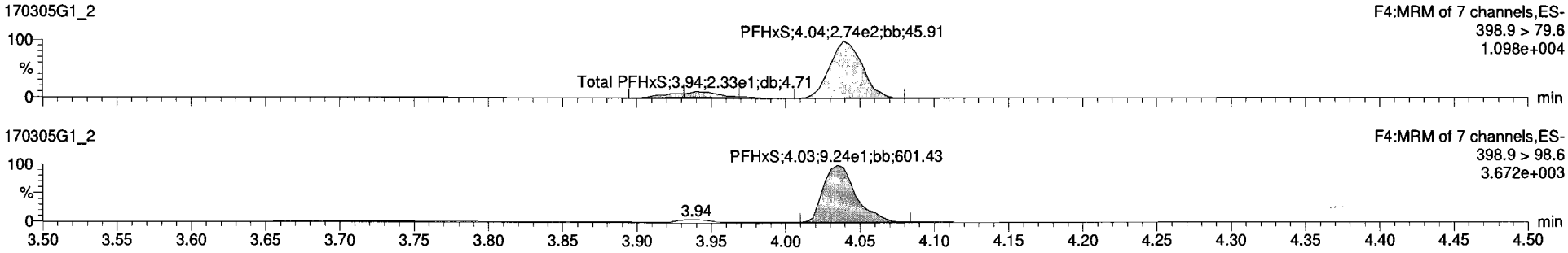
Total PFHxS



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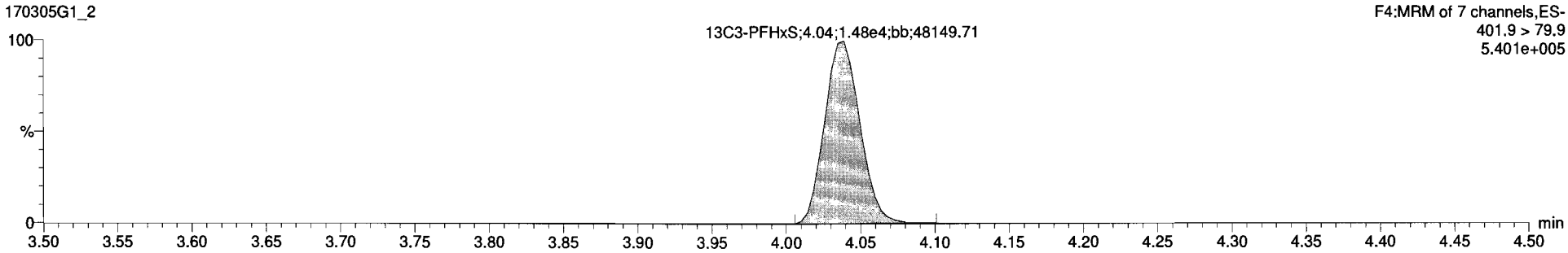
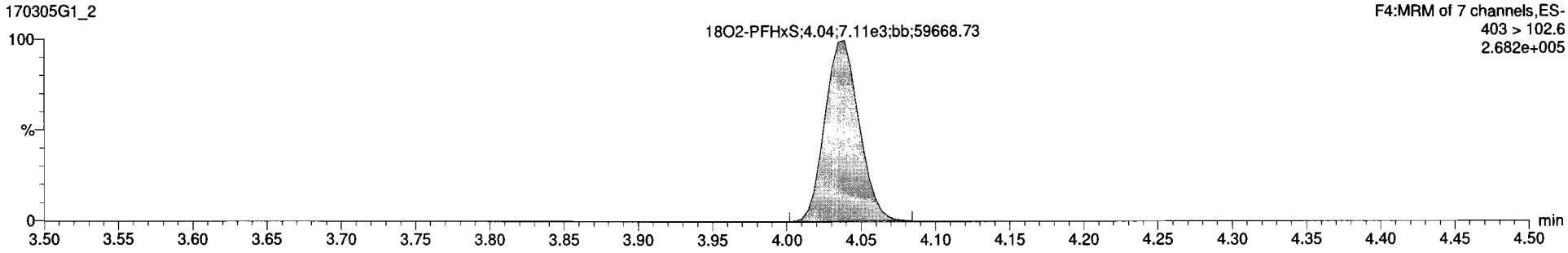
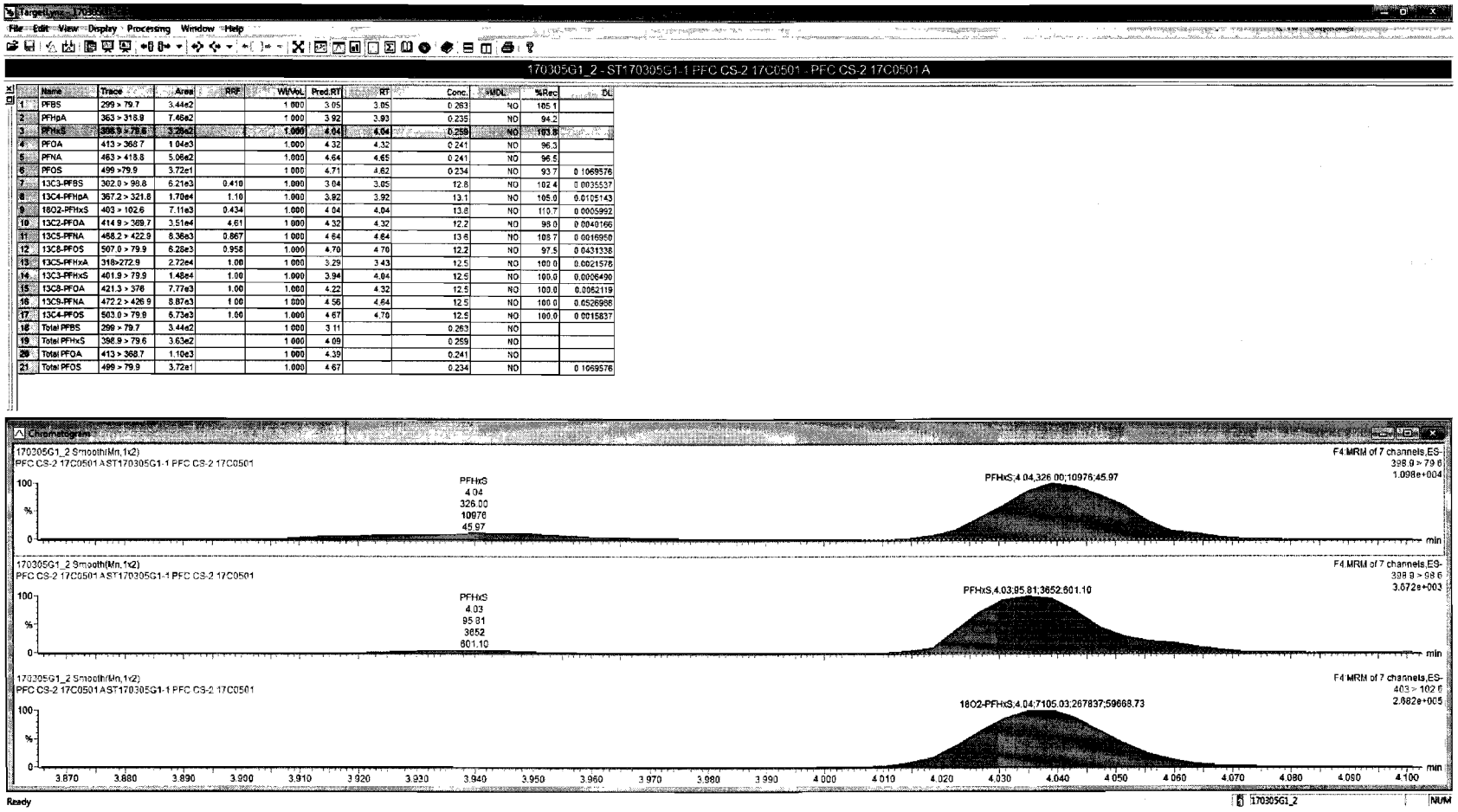


18O2-PFHxS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	MDL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.05	3.05	0.263	NO	105.1	
2	PFHpA	363 > 318.8	7.46e2		1.000	3.92	3.93	0.235	NO	94.2	
3	PFHxS	398.9 > 79.6	3.29e2		1.000	4.04	4.04	0.259	NO	103.8	
4	PFOA	413 > 368.7	1.04e3		1.000	4.32	4.32	0.241	NO	96.3	
5	PFNA	463 > 418.8	5.06e2		1.000	4.64	4.65	0.241	NO	96.5	
6	PFOS	499 >79.9	3.72e1		1.000	4.71	4.62	0.234	NO	93.7	0.1069576
7	13C3-PFBS	302.0 > 98.8	6.21e3	0.410	1.000	3.04	3.05	12.8	NO	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.70e4	1.10	1.000	3.92	3.92	13.1	NO	105.0	0.0105143
9	18O2-PFHxS	403 > 102.6	7.11e3	0.434	1.000	4.04	4.04	13.8	NO	110.7	0.0005992
10	13C2-PFOA	414.9 > 369.7	3.51e4	4.61	1.000	4.32	4.32	12.2	NO	98.0	0.0040166
11	13C5-PFNA	468.2 > 422.9	8.36e3	0.867	1.000	4.64	4.64	13.6	NO	108.7	0.0016950
12	13C8-PFOS	507.0 > 79.9	6.28e3	0.958	1.000	4.70	4.70	12.2	NO	97.5	0.0431338
13	13C5-PFHxA	318>272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0021578
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.04	12.5	NO	100.0	0.0006490
15	13C8-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	NO	100.0	0.0052119
16	13C9-PFNA	472.2 > 426.9	8.87e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0526998
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0015837
18	Total PFBS	299 > 79.7	3.44e2		1.000	3.11		0.263	NO		
19	Total PFHxS	398.9 > 79.6	3.63e2		1.000	4.09		0.259	NO		
20	Total PFOA	413 > 368.7	1.10e3		1.000	4.39		0.241	NO		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	NO		0.1069576

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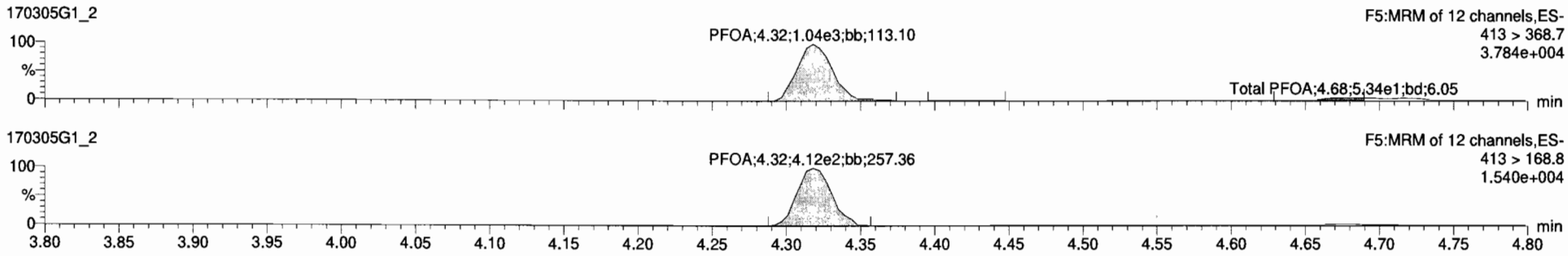
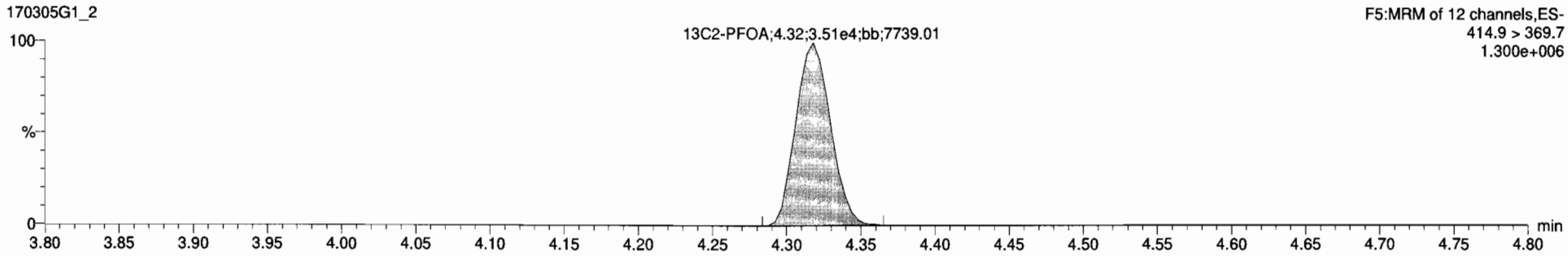
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

Total PFOA



13C2-PFOA



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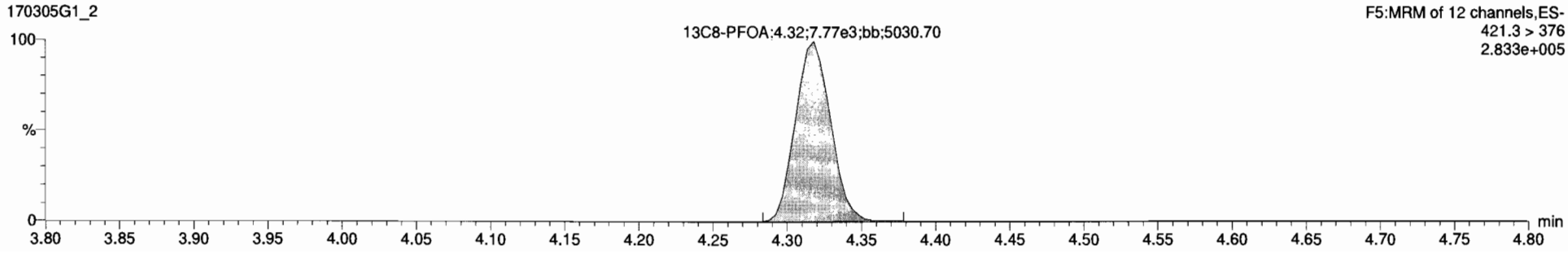

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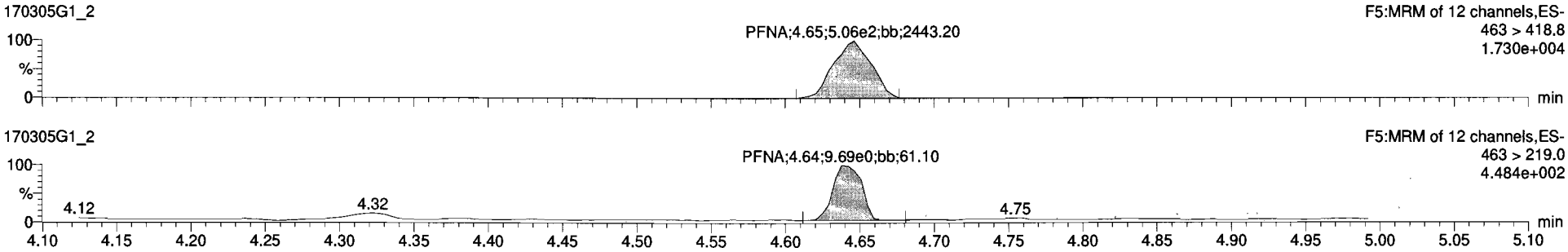
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

PFNA



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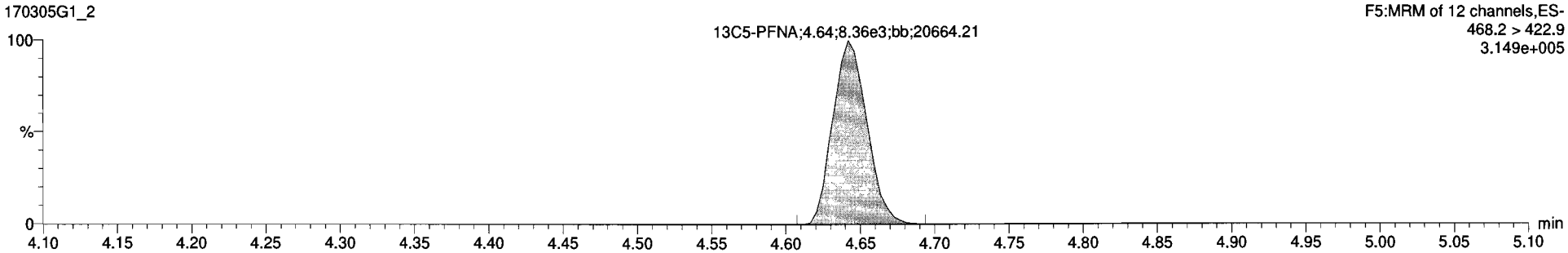

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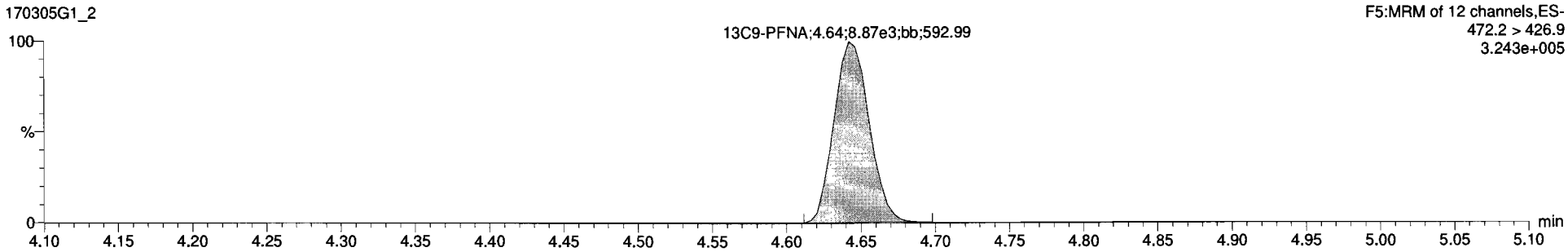

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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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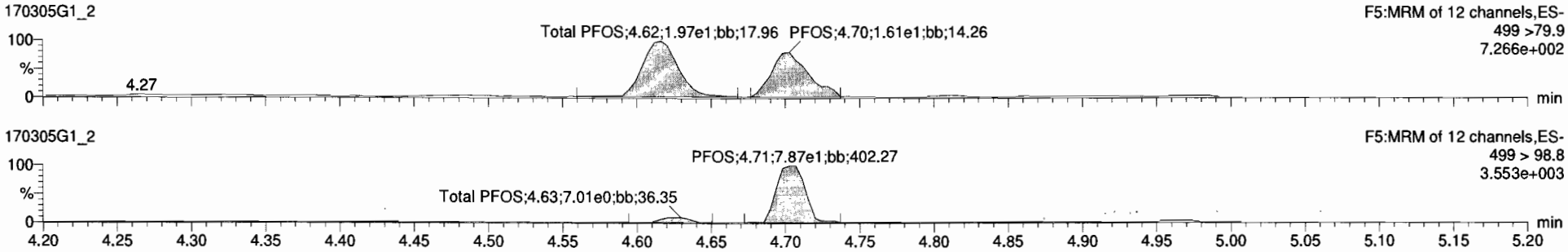
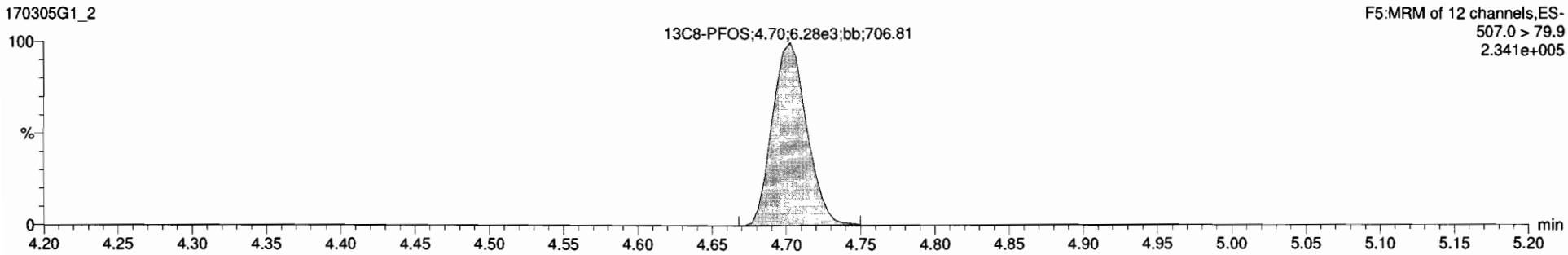
Total PFOS



13C8-PFOS



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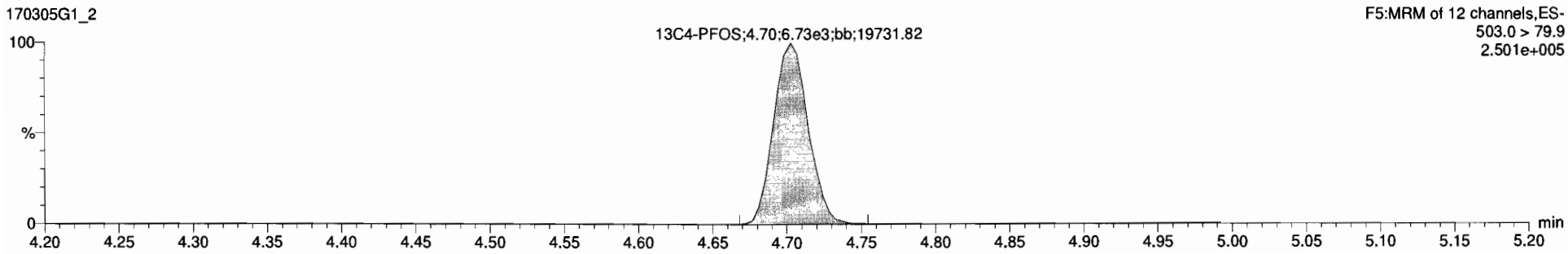

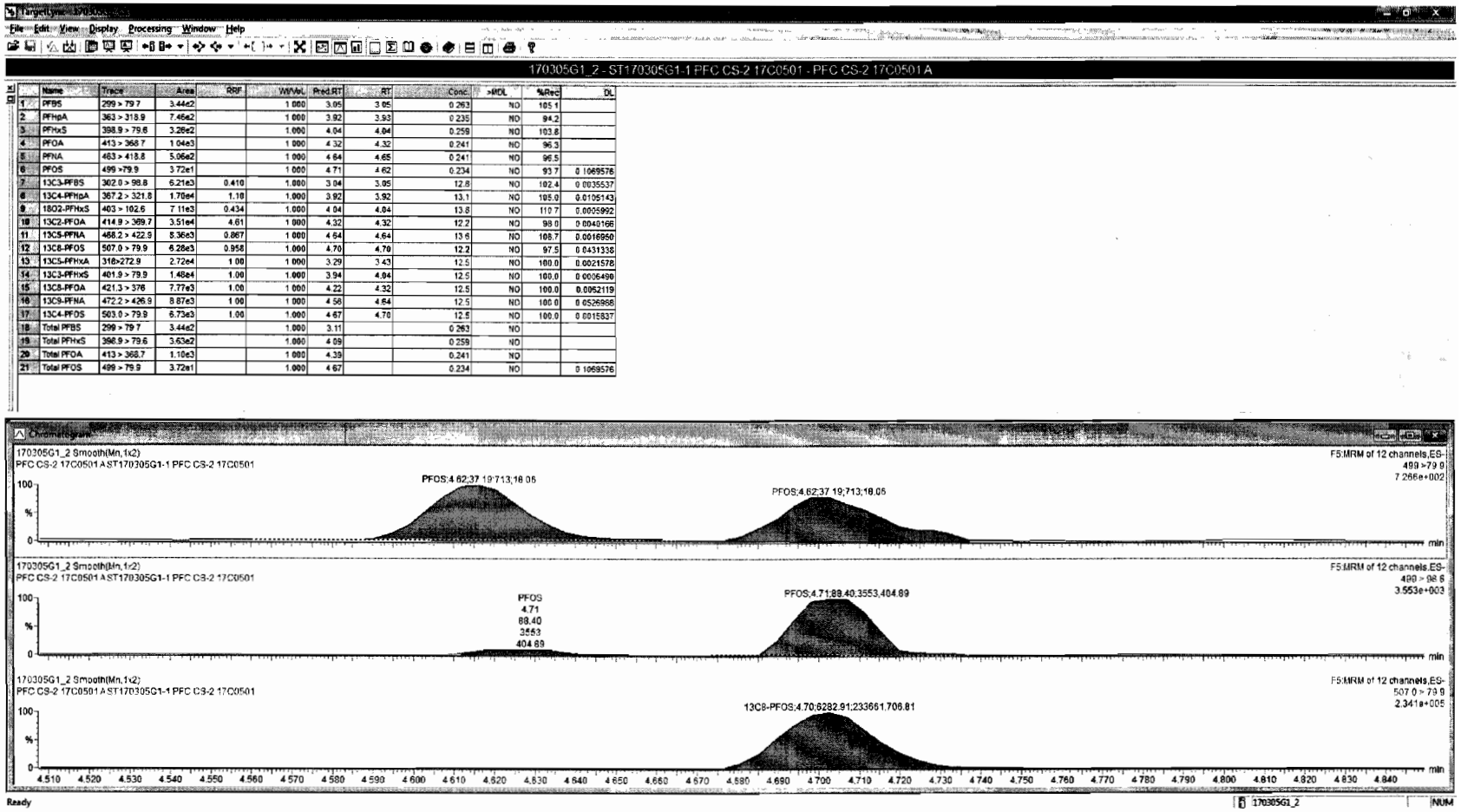
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170305G1_2 - ST170305G1-1 PFC CS-2 17C0501 - PFC CS-2 17C0501 A
Chromatogram
170305G1_2 Smooth(Mn,1x2)
PFC CS-2 17C0501 A ST170305G1-1 PFC CS-2 17C0501
PFOS;4.62;37.19;713;18.05
PFOS;4.62;37.19;713;18.05
F5:MRM of 12 channels,ES-
499 > 79.9
7.266e+002
PFOS
4.71
88.40
3553
404.89
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F5:MRM of 12 channels,ES-
499 > 98.6
3.553e+003
13C8-PFOS;4.70;6282.91;233661.706;81
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2.341e+005
min
Ready
170305G1_2
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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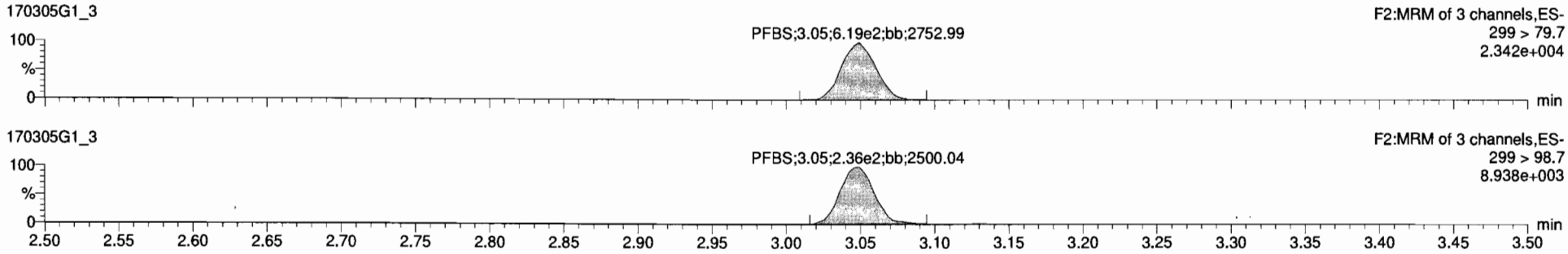
PFBS



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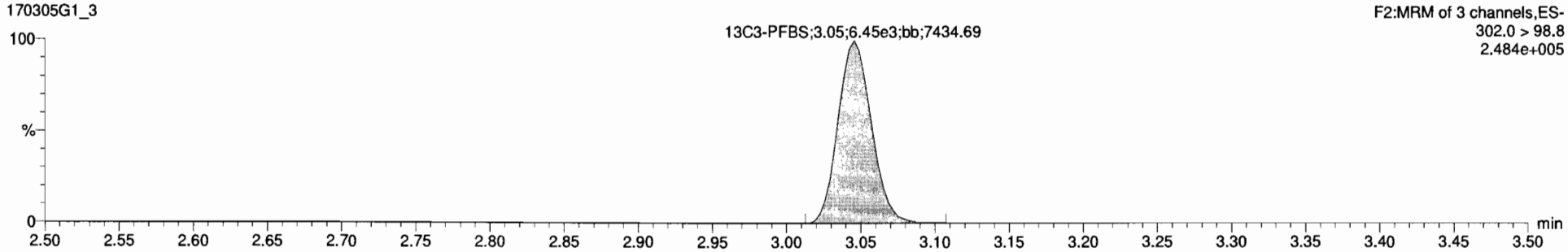
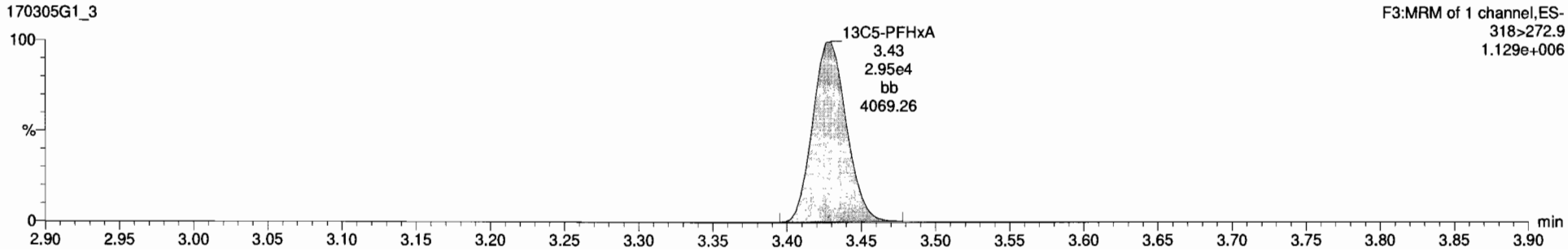


13C5-PFHxA



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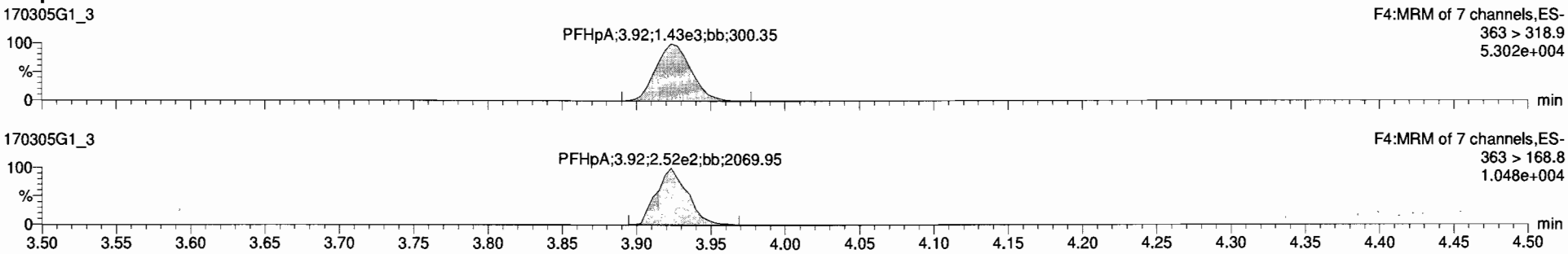
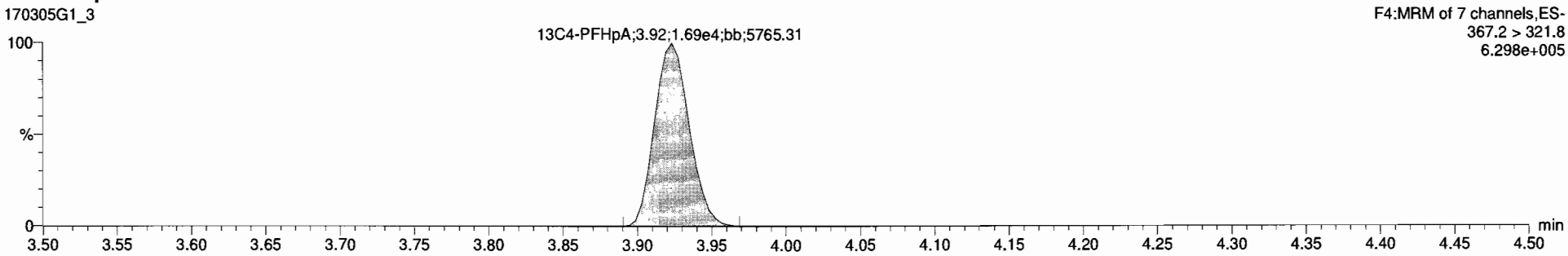
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

PFHpA



13C4-PFHpA



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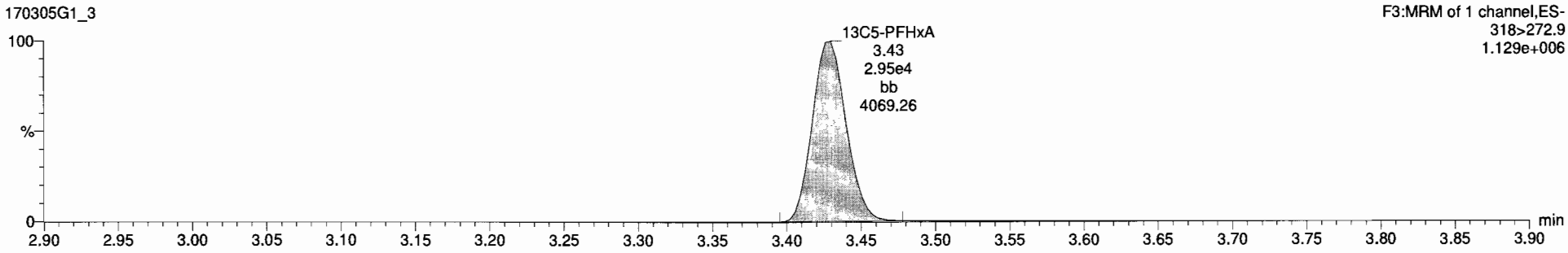

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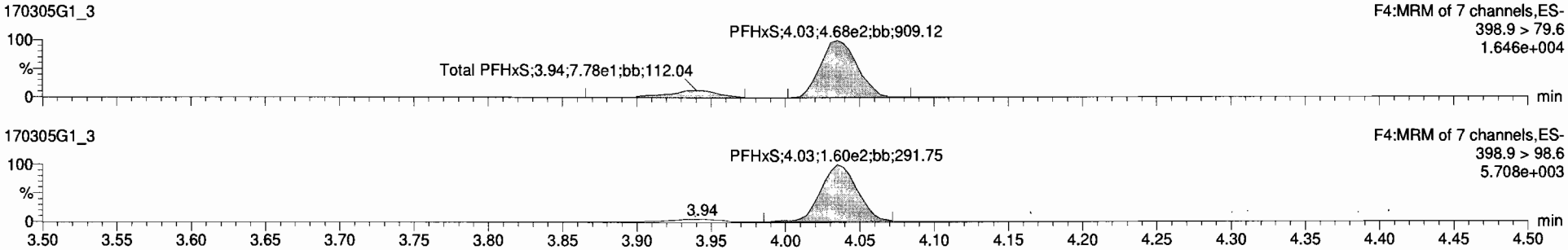
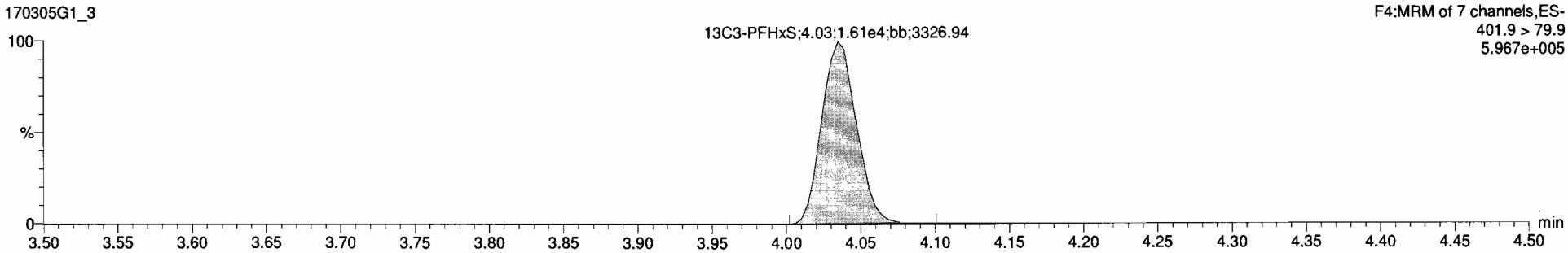
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

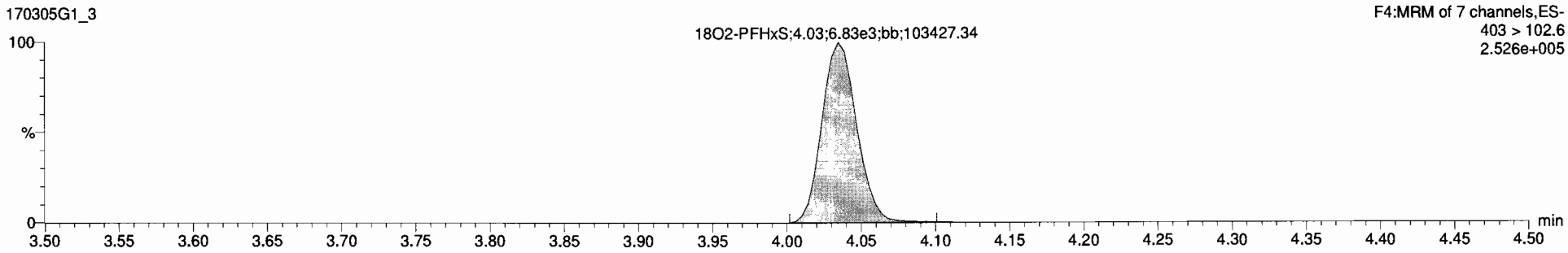
Total PFHxS

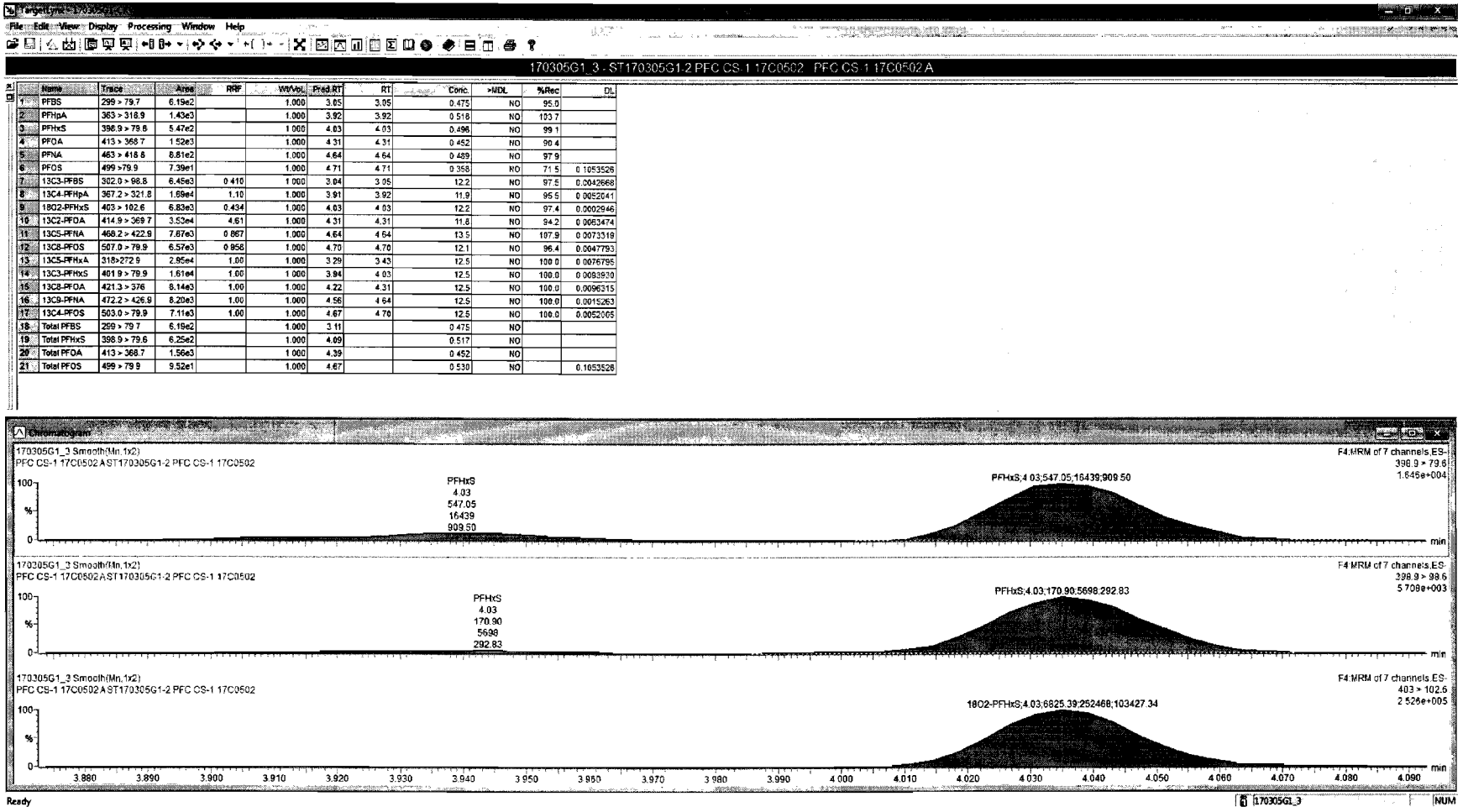


13C3-PFHxS



18O2-PFHxS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	6.19e2		1.000	3.05	3.05	0.475	NO	95.0	
2	PFHpA	363 > 318.9	1.43e3		1.000	3.92	3.92	0.518	NO	103.7	
3	PFHxS	398.9 > 79.6	5.47e2		1.000	4.03	4.03	0.496	NO	99.1	
4	PFOA	413 > 368.7	1.52e3		1.000	4.31	4.31	0.452	NO	90.4	
5	PFNA	463 > 418.8	8.81e2		1.000	4.64	4.64	0.489	NO	97.9	
6	PFOS	499 >79.9	7.39e1		1.000	4.71	4.71	0.358	NO	71.5	0.1053526
7	13C3-PFBS	302.0 > 98.8	6.45e3	0.410	1.000	3.04	3.05	12.2	NO	97.5	0.0042668
8	13C4-PFHpA	367.2 > 321.8	1.69e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041
9	18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002946
10	13C2-PFOA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0063474
11	13C5-PFNA	468.2 > 422.9	7.67e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319
12	13C8-PFOS	507.0 > 79.9	6.57e3	0.956	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13	13C5-PFHxA	318>272.9	2.85e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795
14	13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0093930
15	13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.0096315
16	13C9-PFNA	472.2 > 426.9	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0015263
17	13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052065
18	Total PFBS	299 > 79.7	6.19e2		1.000	3.11		0.475	NO		
19	Total PFHxS	398.9 > 79.6	6.25e2		1.000	4.09		0.517	NO		
20	Total PFOA	413 > 368.7	1.56e3		1.000	4.39		0.452	NO		
21	Total PFOS	499 > 79.9	9.52e1		1.000	4.67		0.530	NO		0.1053526

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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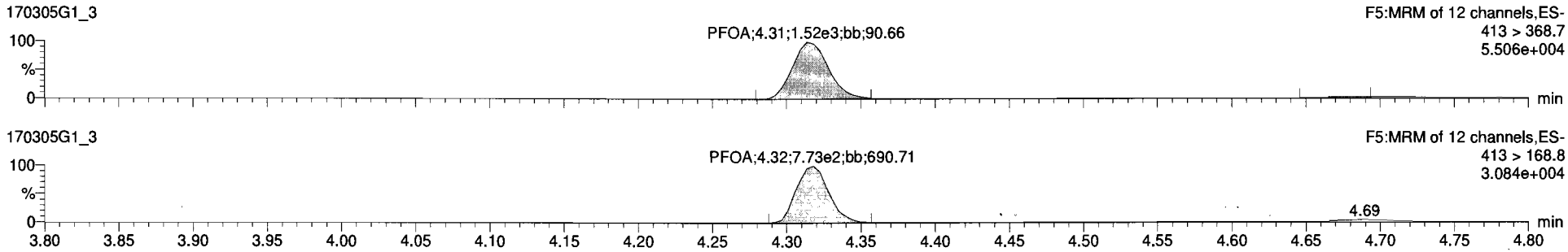
ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

Total PFOA



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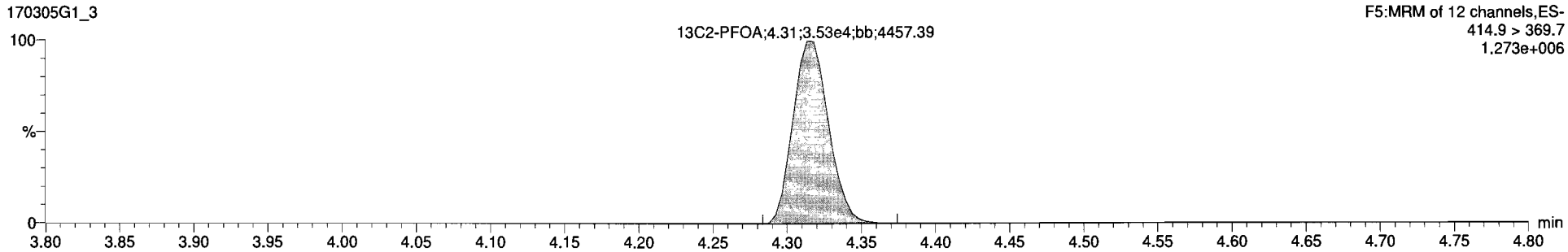

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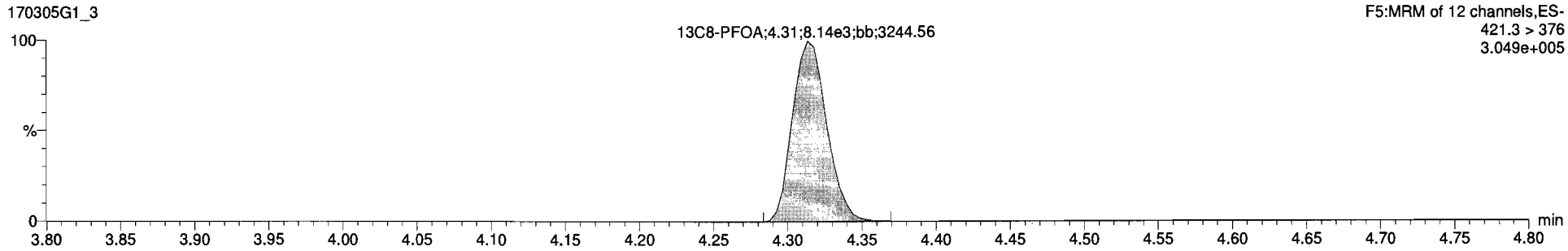

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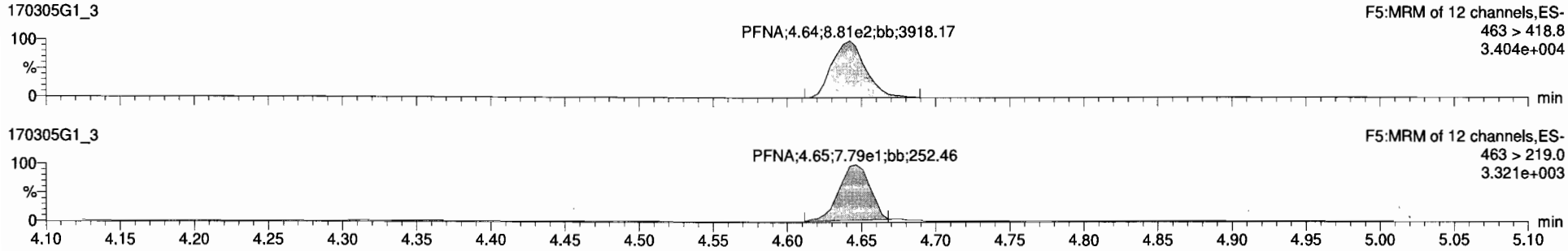

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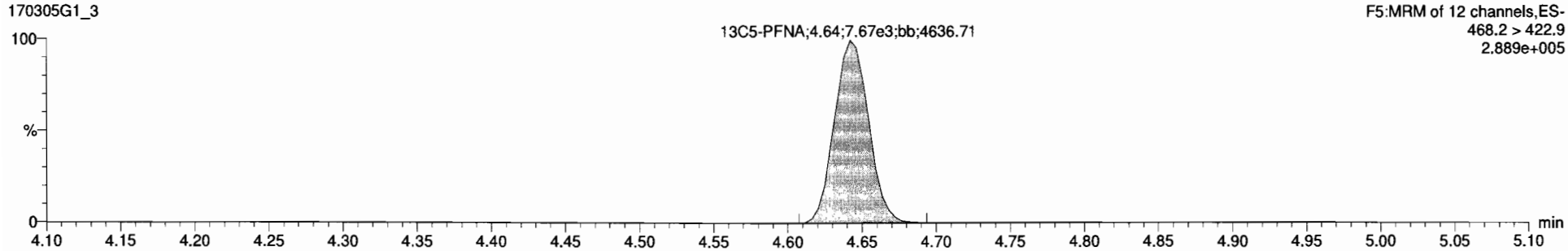

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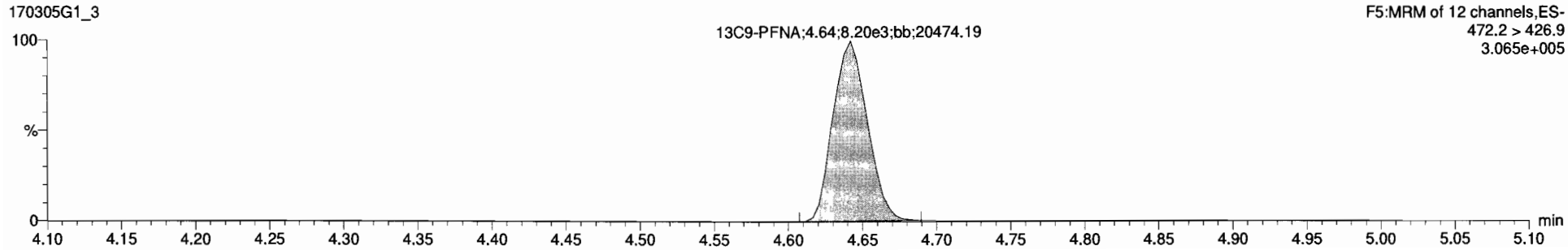

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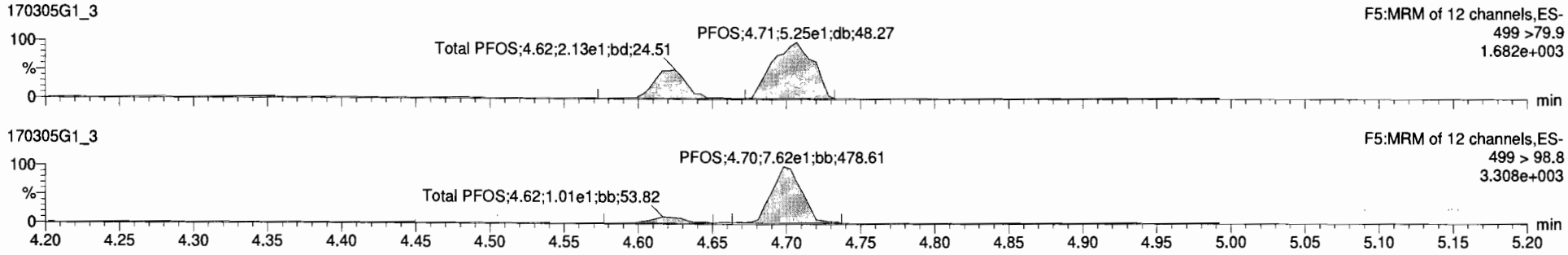
Total PFOS



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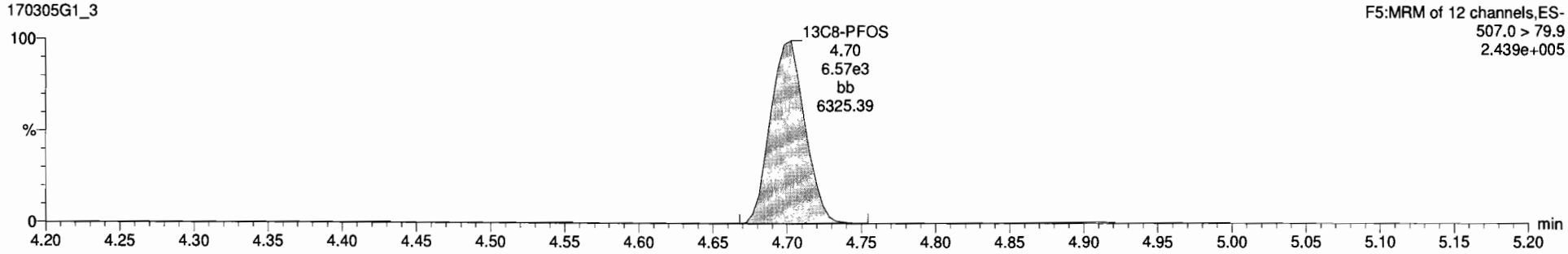

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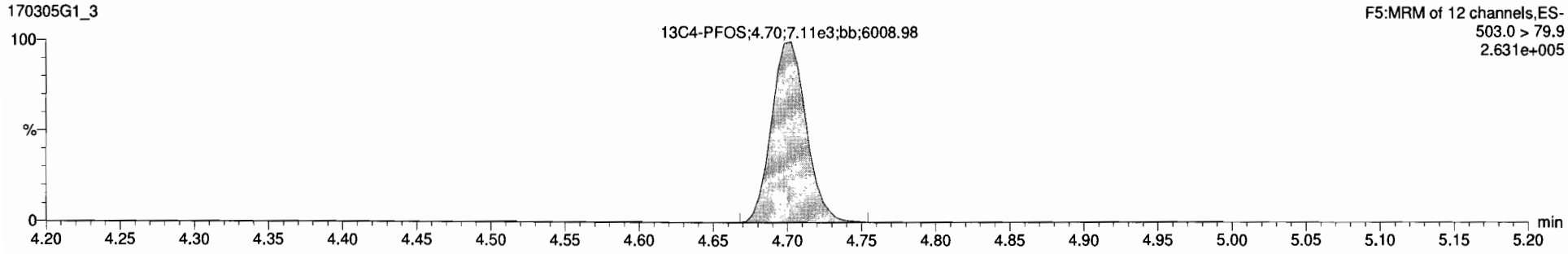

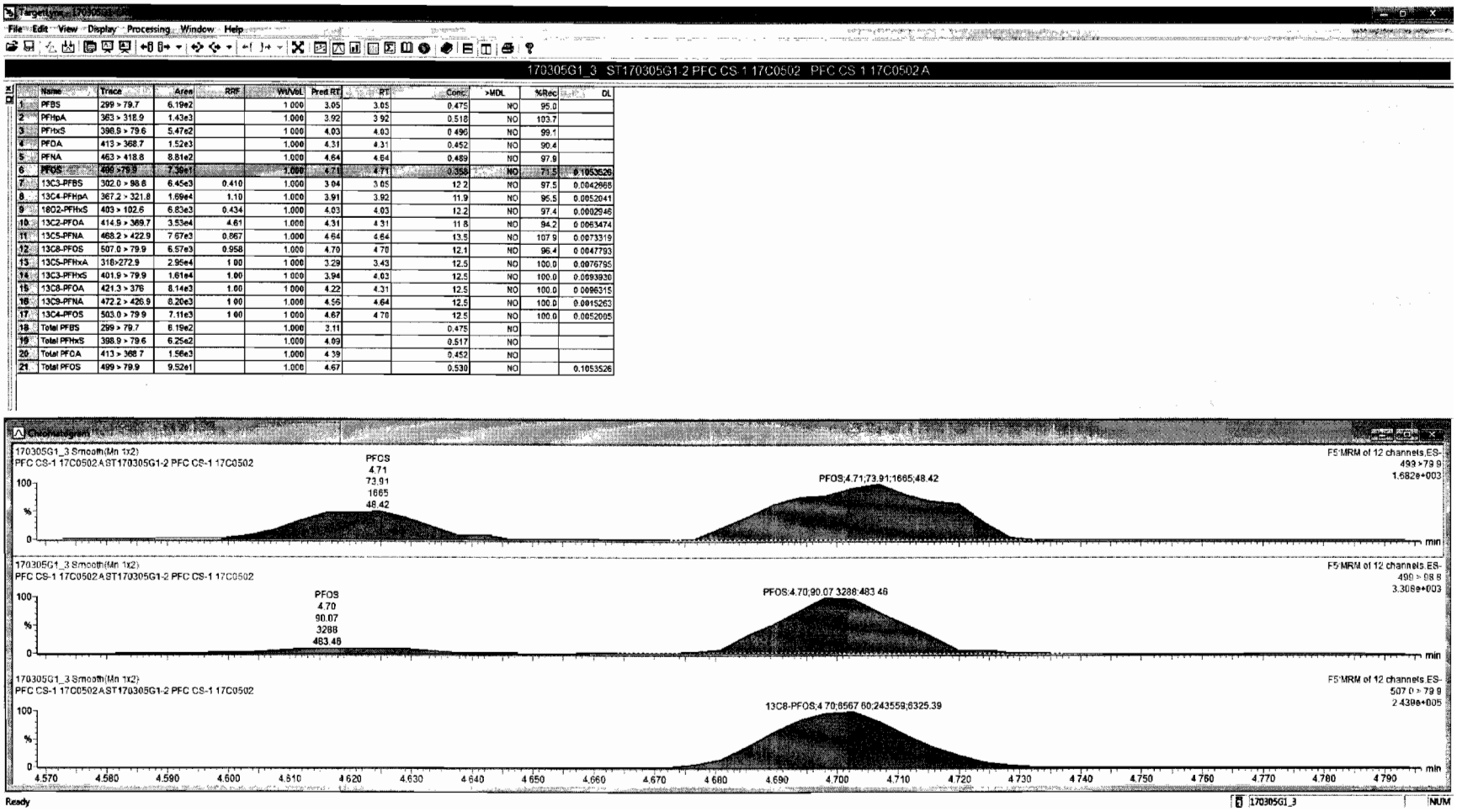

	Name	Trace	Area	RRF	Wt/Vol	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	6.19e2		1.000	3.05	3.05	0.475	NO	95.0	
2	PFHpA	363 > 318.9	1.43e3		1.000	3.92	3.92	0.518	NO	103.7	
3	PFHxS	398.9 > 79.6	5.47e2		1.000	4.03	4.03	0.496	NO	99.1	
4	PFOA	413 > 368.7	1.52e3		1.000	4.31	4.31	0.452	NO	90.4	
5	PFNA	463 > 418.8	8.81e2		1.000	4.64	4.64	0.489	NO	97.9	
6	PFOS	499 > 79.9	7.39e1		1.000	4.71	4.71	0.358	NO	71.5	0.1053526
7	13C3-PFBS	302.0 > 98.6	6.45e3	0.410	1.000	3.04	3.05	12.2	NO	97.5	0.0042868
8	13C4-PFHpA	367.2 > 321.8	1.69e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041
9	18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002946
10	13C2-PFOA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0063474
11	13C5-PFNA	468.2 > 422.9	7.57e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319
12	13C8-PFOS	507.0 > 79.9	6.57e3	0.958	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13	13C5-PFHxA	318>272.9	2.95e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795
14	13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0093930
15	13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.0096315
16	13C9-PFNA	472.2 > 426.9	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0015263
17	13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005
18	Total PFBS	299 > 79.7	6.19e2		1.000	3.11		0.475	NO		
19	Total PFHxS	398.9 > 79.6	6.25e2		1.000	4.09		0.517	NO		
20	Total PFOA	413 > 368.7	1.56e3		1.000	4.39		0.452	NO		
21	Total PFOS	499 > 79.9	9.52e1		1.000	4.67		0.530	NO		0.1053526

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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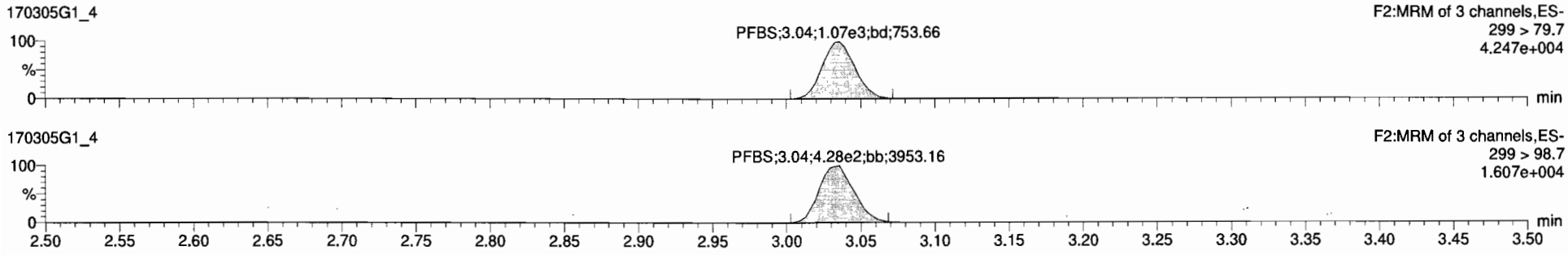
ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

PFBS



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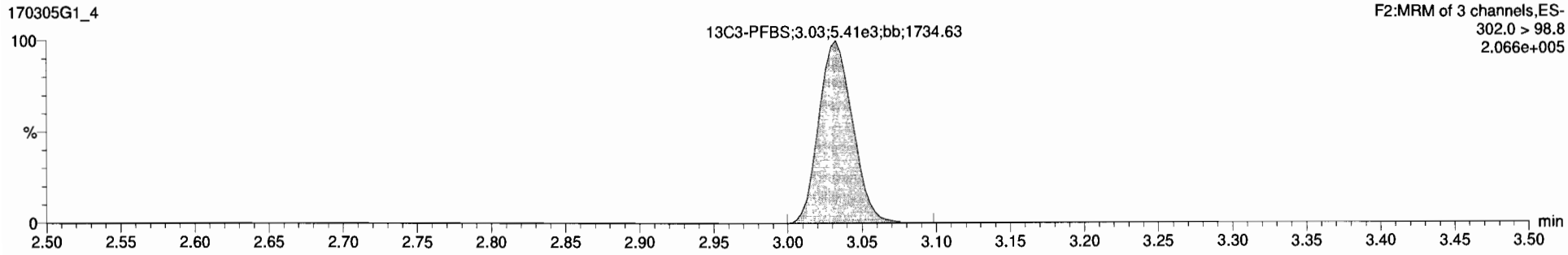

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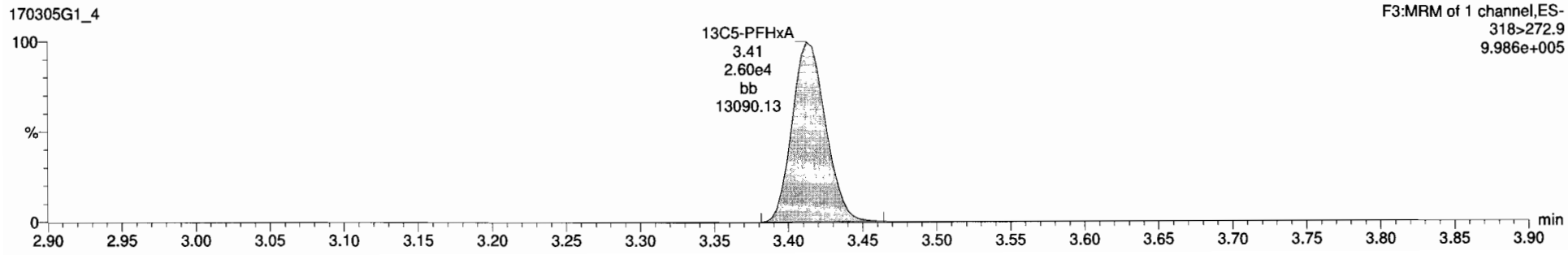

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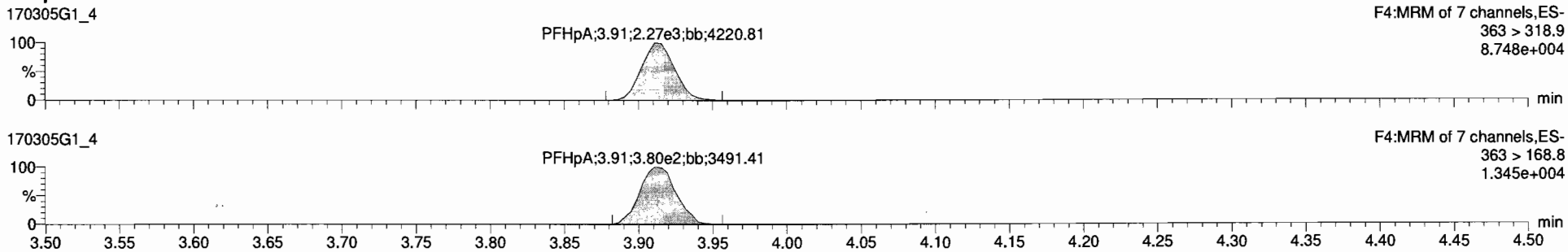

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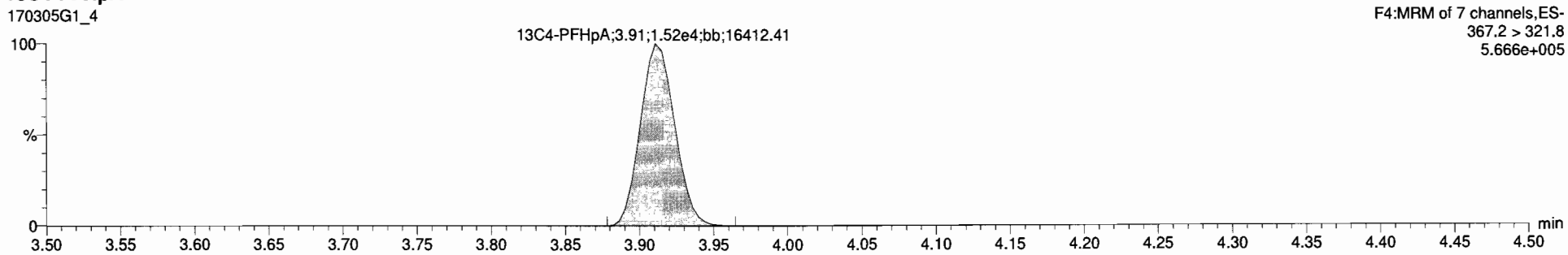

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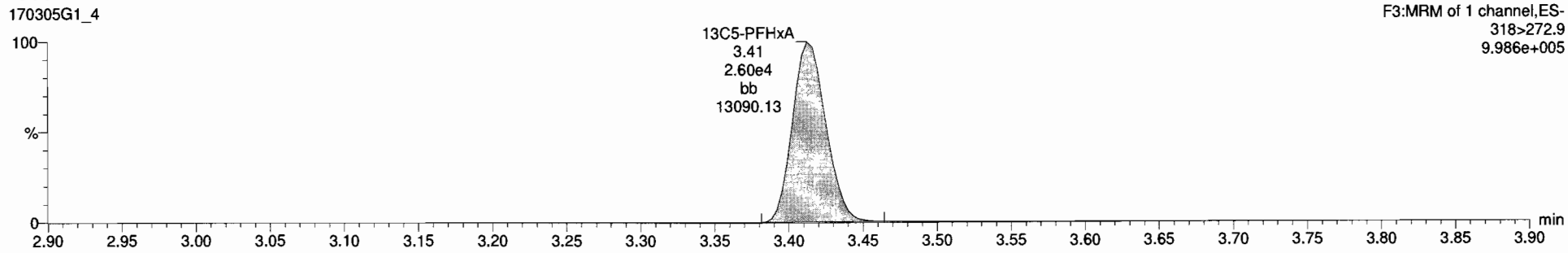

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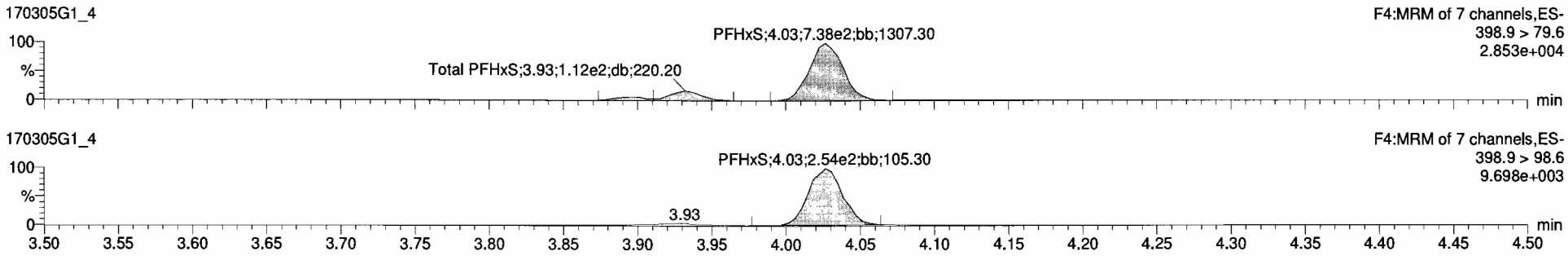
Total PFHxS



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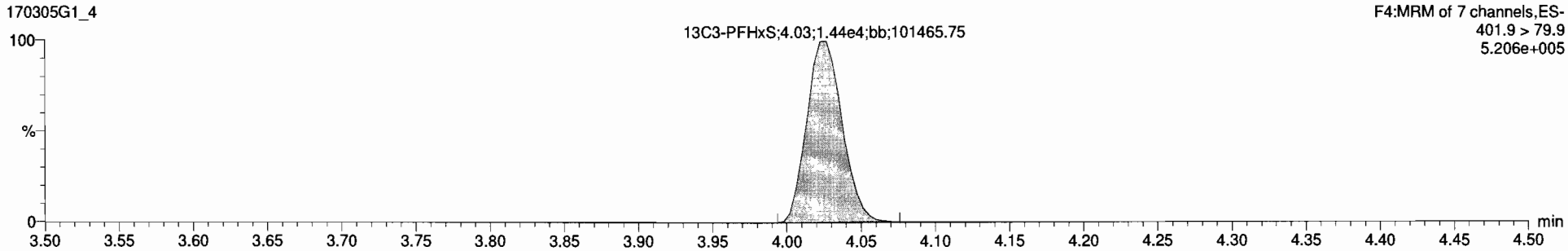

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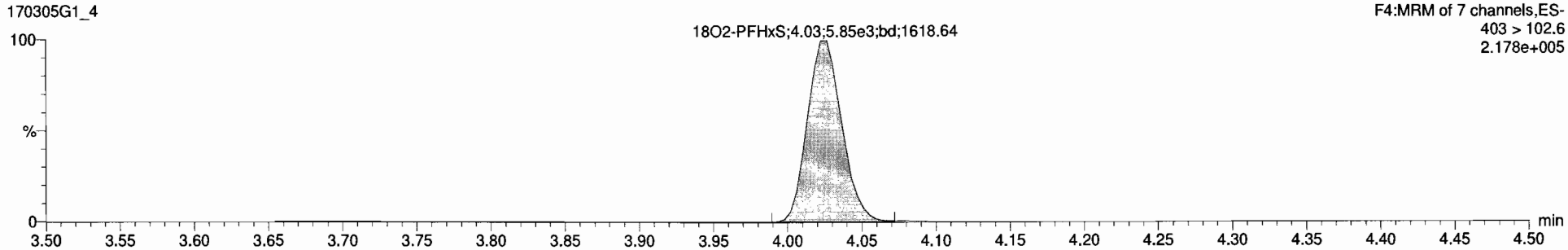

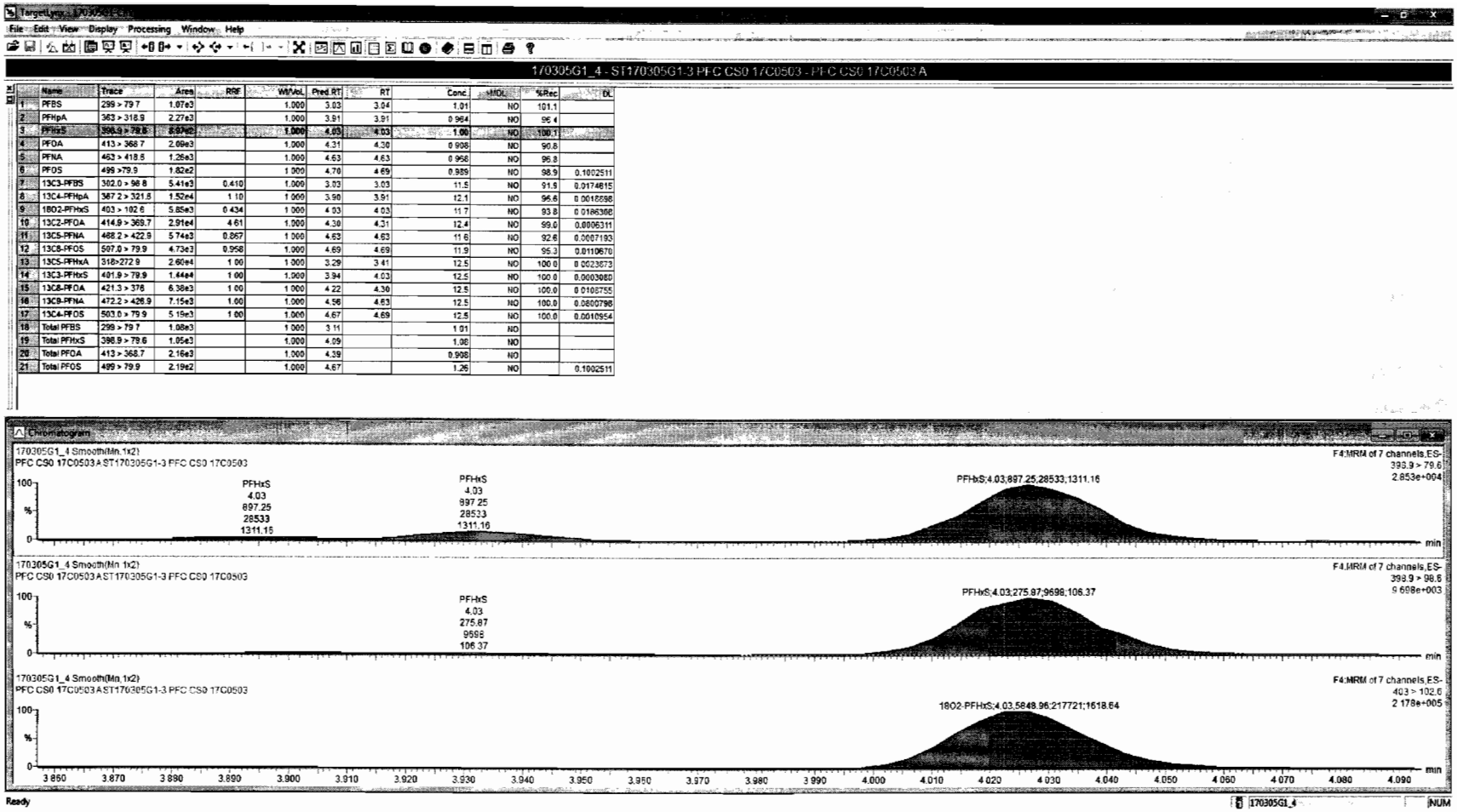

	Name	Trace	Area	RRF	Wt/Vol.	Pred.RT	RT	Conc.	MDL	%Rec	DL
1	PFBS	299 > 79.7	1.07e3		1.000	3.03	3.04	1.01	NO	101.1	
2	PFHpA	363 > 318.9	2.27e3		1.000	3.91	3.91	0.964	NO	96.4	
3	PFHxS	398.9 > 79.6	8.97e2		1.000	4.03	4.03	1.00	NO	100.1	
4	PFOA	413 > 368.7	2.09e3		1.000	4.31	4.30	0.908	NO	90.8	
5	PFNA	463 > 418.8	1.26e3		1.000	4.63	4.63	0.958	NO	95.8	
6	PFOS	499 >79.9	1.82e2		1.000	4.70	4.69	0.989	NO	98.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	NO	91.9	0.0174815
8	13C4-PFHpA	367.2 > 321.8	1.52e4	1.10	1.000	3.90	3.91	12.1	NO	96.6	0.0018598
9	18O2-PFHxS	403 > 102.6	5.85e3	0.434	1.000	4.03	4.03	11.7	NO	93.8	0.0186366
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.30	4.31	12.4	NO	99.0	0.0006311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.867	1.000	4.63	4.63	11.6	NO	92.6	0.0007193
12	13C8-PFOS	507.0 > 79.9	4.73e3	0.958	1.000	4.69	4.69	11.9	NO	95.3	0.0110670
13	13C5-PFHxA	318>272.9	2.60e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0023673
14	13C3-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0003080
15	13C8-PFOA	421.3 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0108755
16	13C9-PFNA	472.2 > 426.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0600798
17	13C4-PFOS	503.0 > 79.9	5.19e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0010554
18	Total PFBS	299 > 79.7	1.08e3		1.000	3.11		1.01	NO		
19	Total PFHxS	398.9 > 79.6	1.05e3		1.000	4.09		1.06	NO		
20	Total PFOA	413 > 368.7	2.16e3		1.000	4.39		0.998	NO		
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67		1.26	NO		0.1002511

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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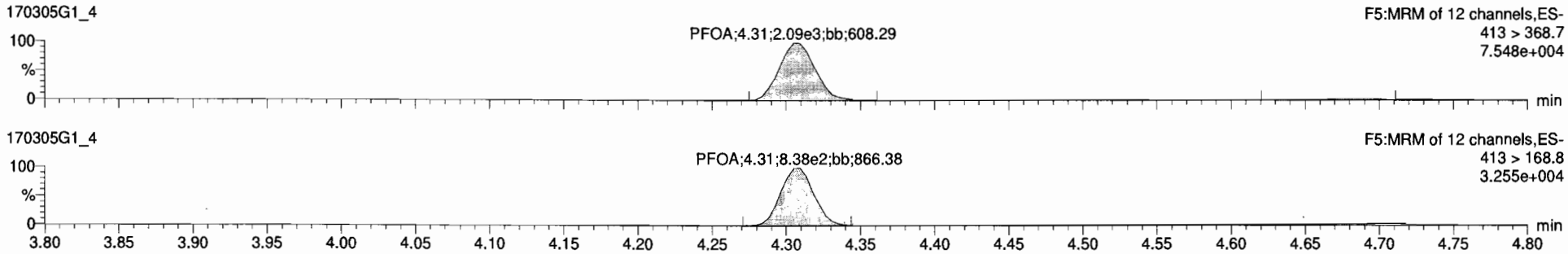
ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

Total PFOA



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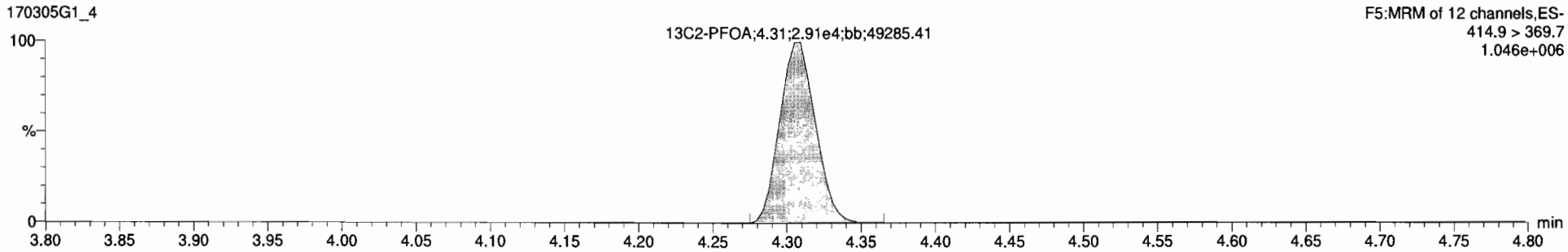

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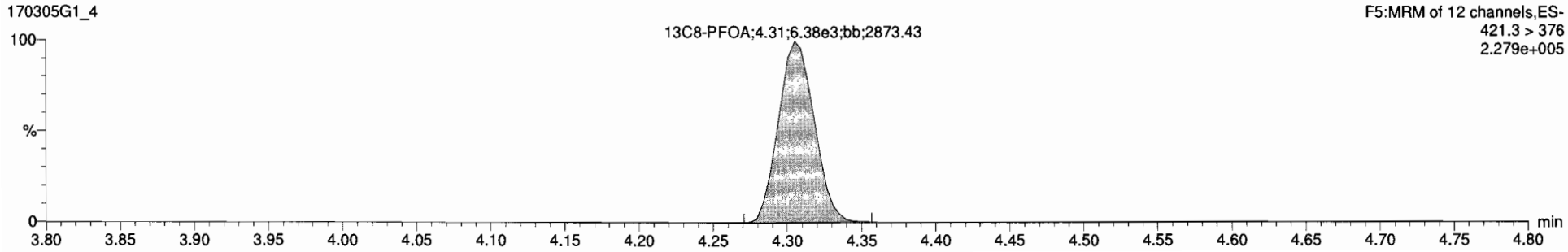

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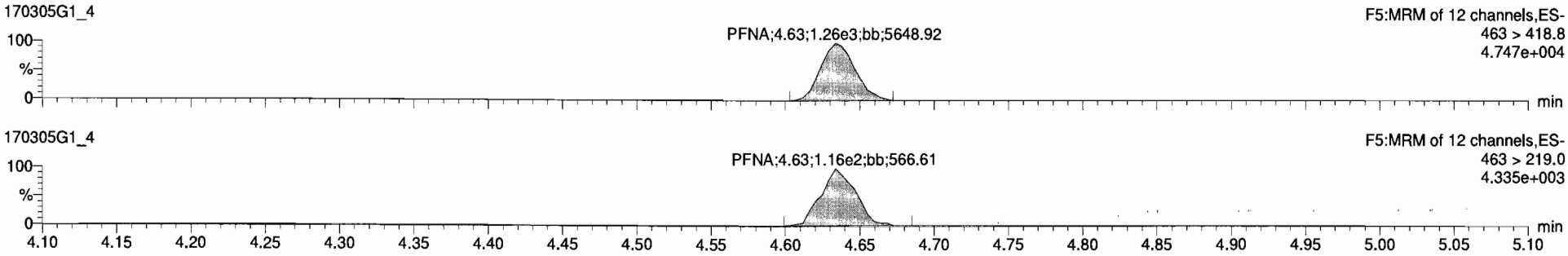

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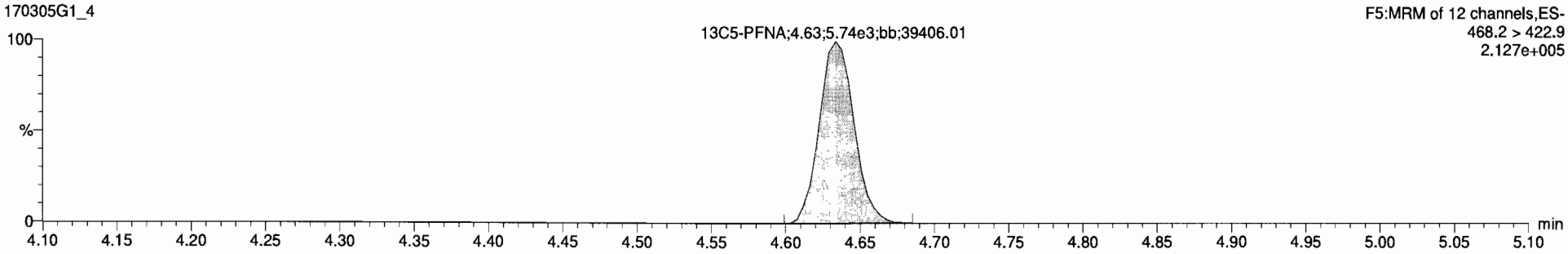

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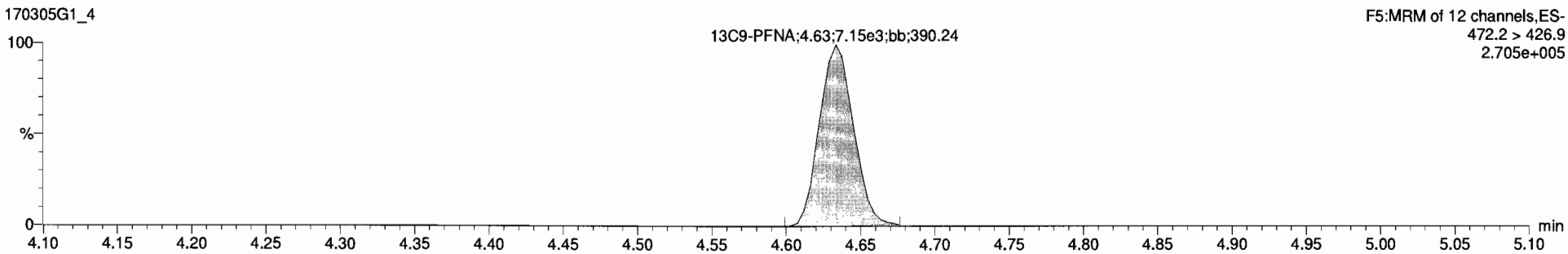

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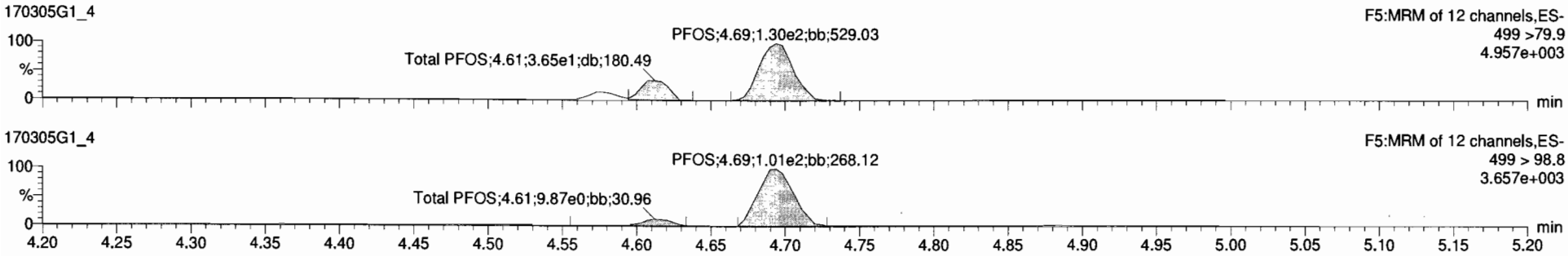

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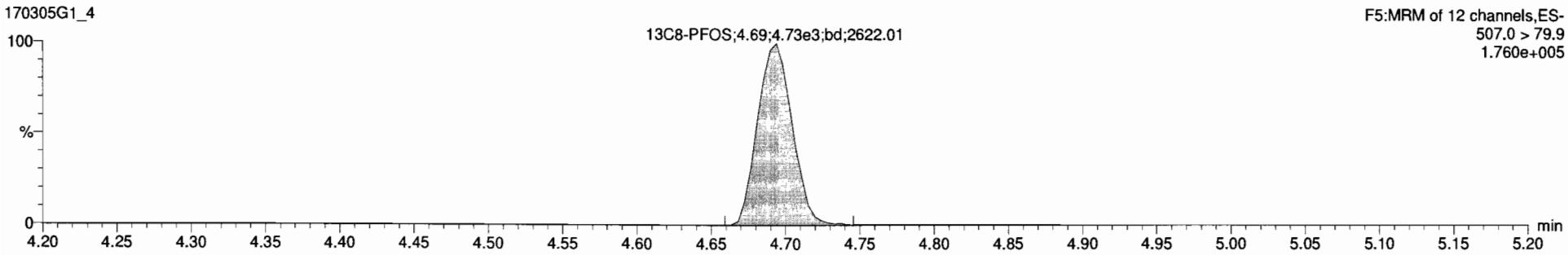

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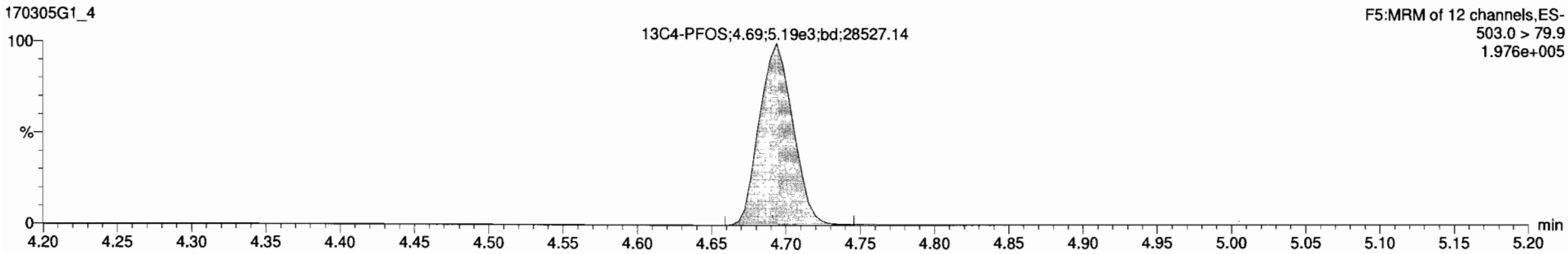

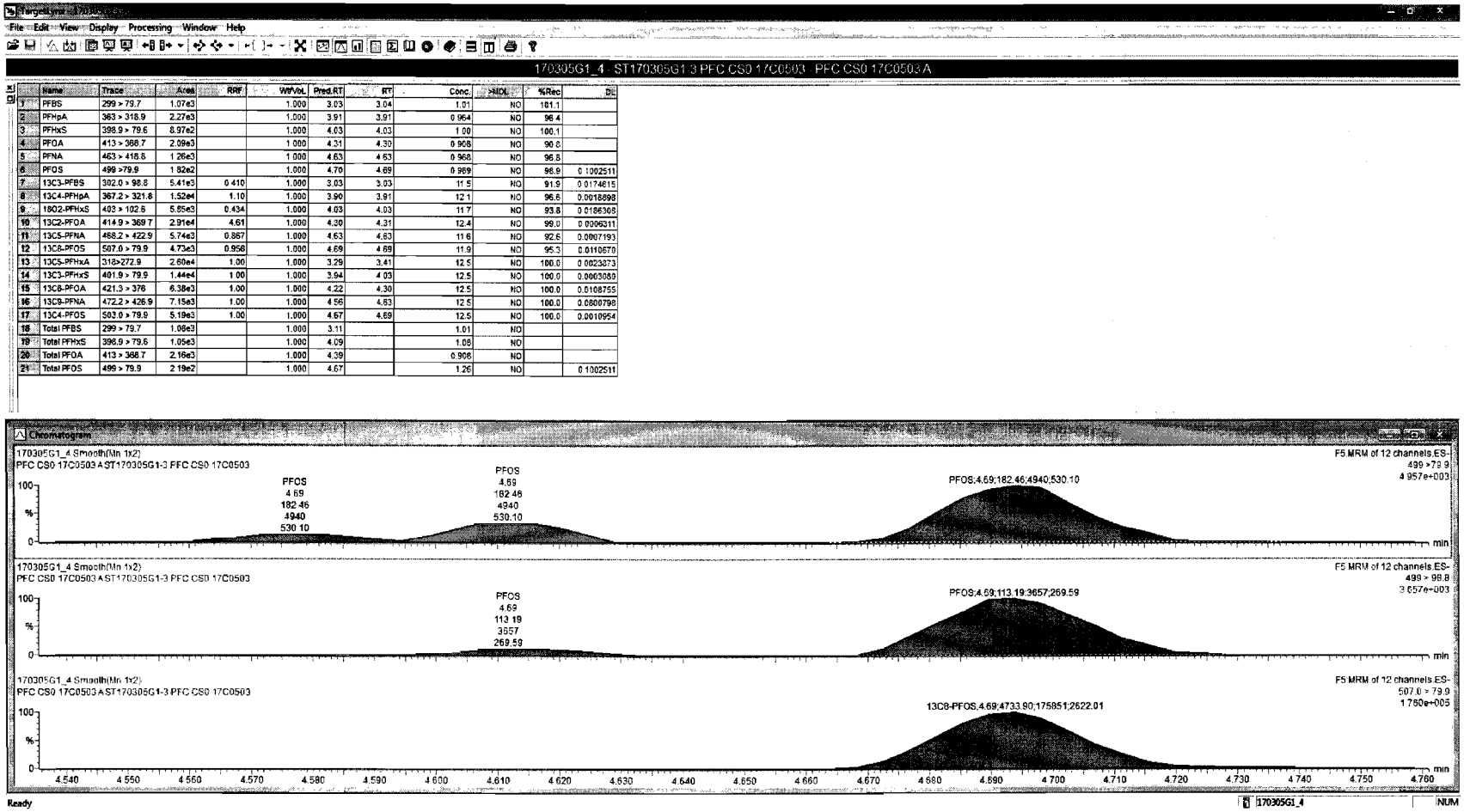

	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.07e3		1.000	3.03	3.04	1.01	NO	101.1	
2	PFHpA	363 > 318.9	2.27e3		1.000	3.91	3.91	0.964	NO	96.4	
3	PFHxS	398.9 > 79.6	8.97e2		1.000	4.03	4.03	1.00	NO	100.1	
4	PFOA	413 > 368.7	2.09e3		1.000	4.31	4.30	0.908	NO	90.8	
5	PFNA	463 > 418.8	1.26e3		1.000	4.63	4.63	0.968	NO	96.8	
6	PFOS	499 >79.9	1.82e2		1.000	4.70	4.69	0.989	NO	98.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	NO	91.9	0.0174615
8	13C4-PFHpA	367.2 > 321.8	1.52e4	1.10	1.000	3.90	3.91	12.1	NO	96.6	0.0018898
9	18O2-PFHxS	403 > 102.8	5.85e3	0.434	1.000	4.03	4.03	11.7	NO	93.8	0.0186308
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.30	4.31	12.4	NO	99.0	0.0006311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.867	1.000	4.63	4.63	11.6	NO	92.6	0.0007193
12	13C8-PFOS	507.0 > 79.9	4.73e3	0.956	1.000	4.69	4.69	11.9	NO	95.3	0.0110670
13	13C5-PFHxA	318>272.9	2.60e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0023873
14	13C3-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0003089
15	13C8-PFOA	421.3 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0108755
16	13C9-PFNA	472.2 > 426.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0808798
17	13C4-PFOS	503.0 > 79.9	5.19e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0010954
18	Total PFBS	299 > 79.7	1.08e3		1.000	3.11		1.01	NO		
19	Total PFHxS	398.9 > 79.6	1.05e3		1.000	4.09		1.08	NO		
20	Total PFOA	413 > 368.7	2.16e3		1.000	4.39		0.908	NO		
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67		1.26	NO		0.1002511

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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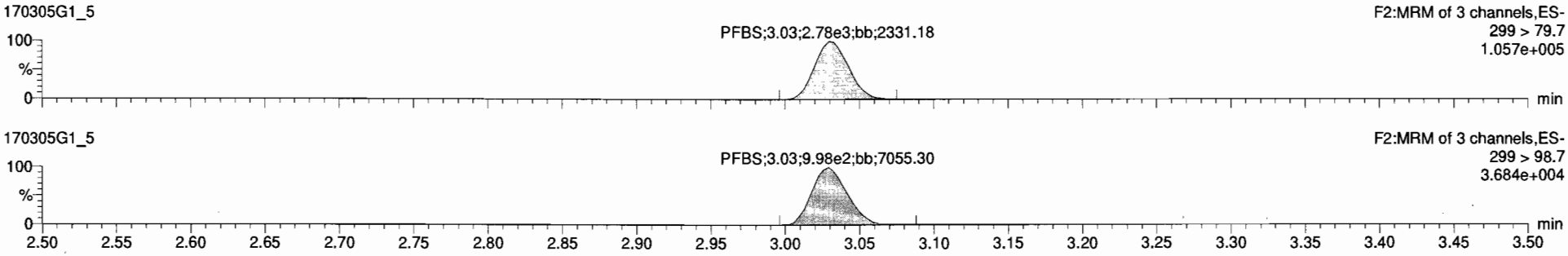
ID: ST170305G1-4 PFC CS1 17C0504, Description: PFC CS1 17C0504 A, Name: 170305G1_5, Date: 05-Mar-2017, Time: 13:24:21, Instrument: , Lab: , User:

PFBS



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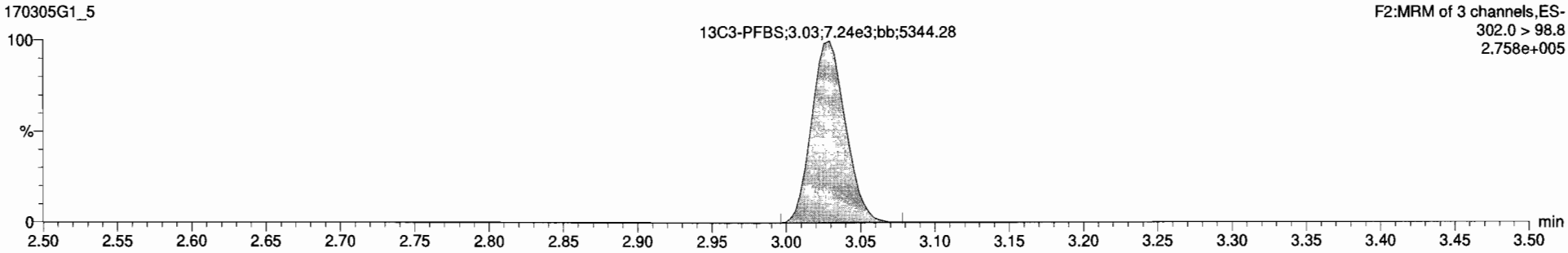

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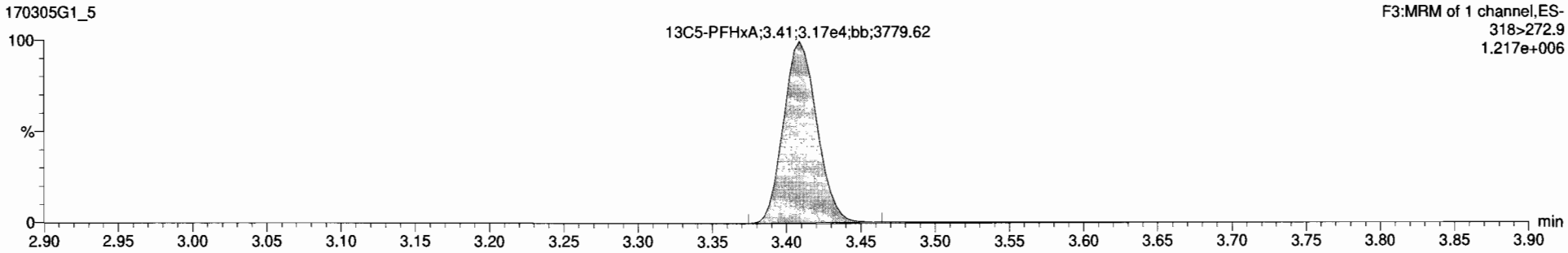

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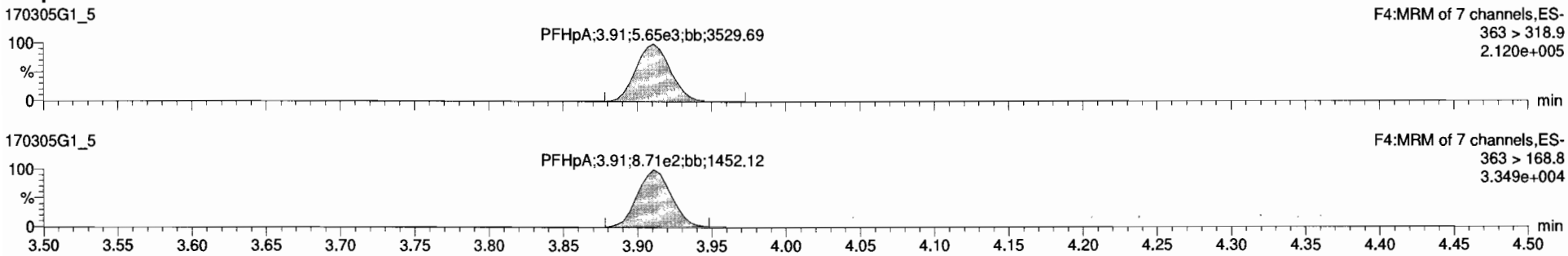

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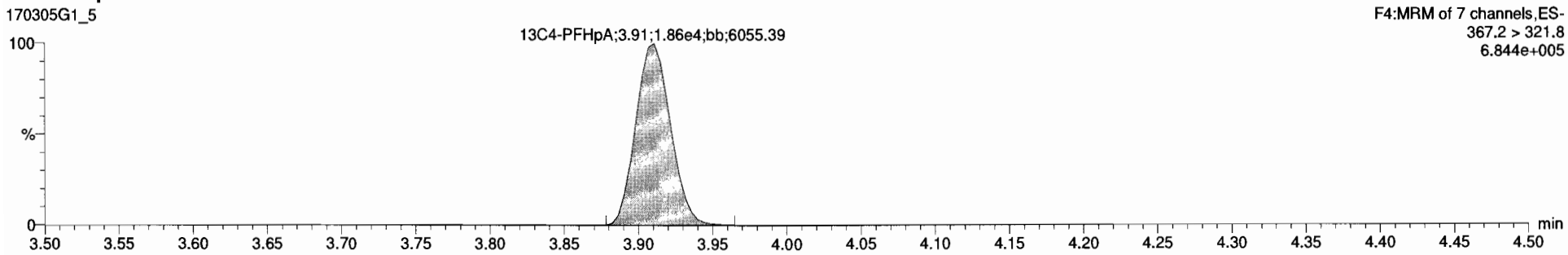

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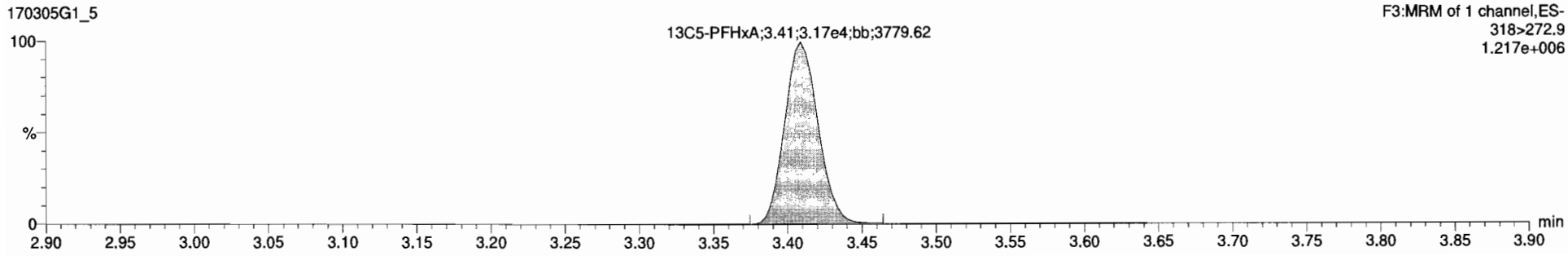

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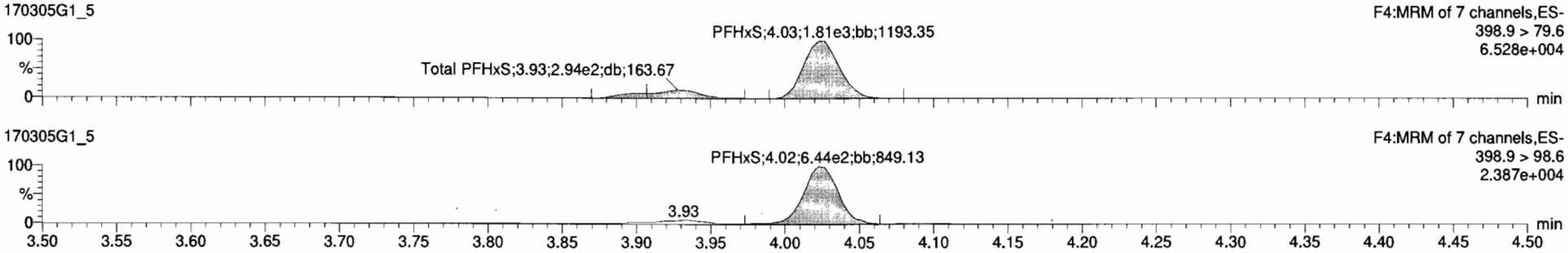
Total PFHxS



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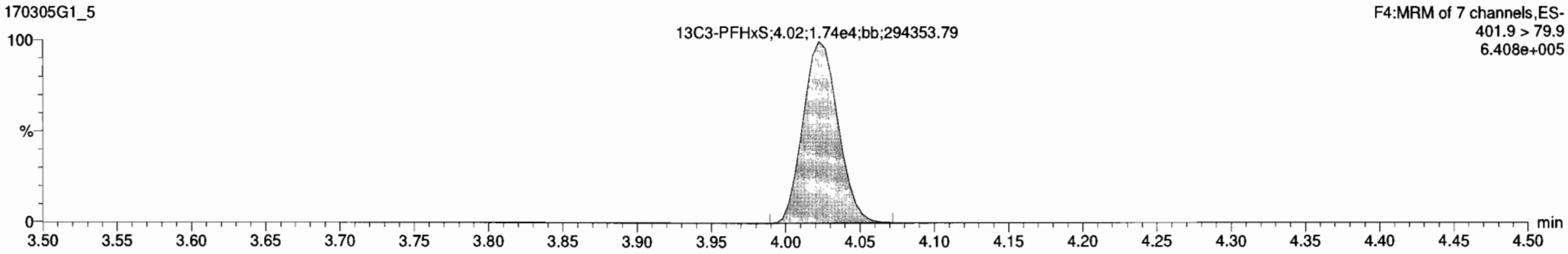

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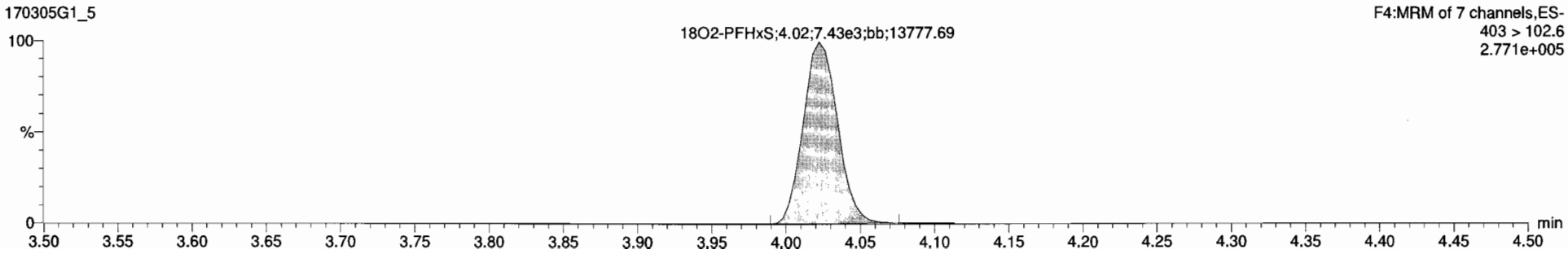

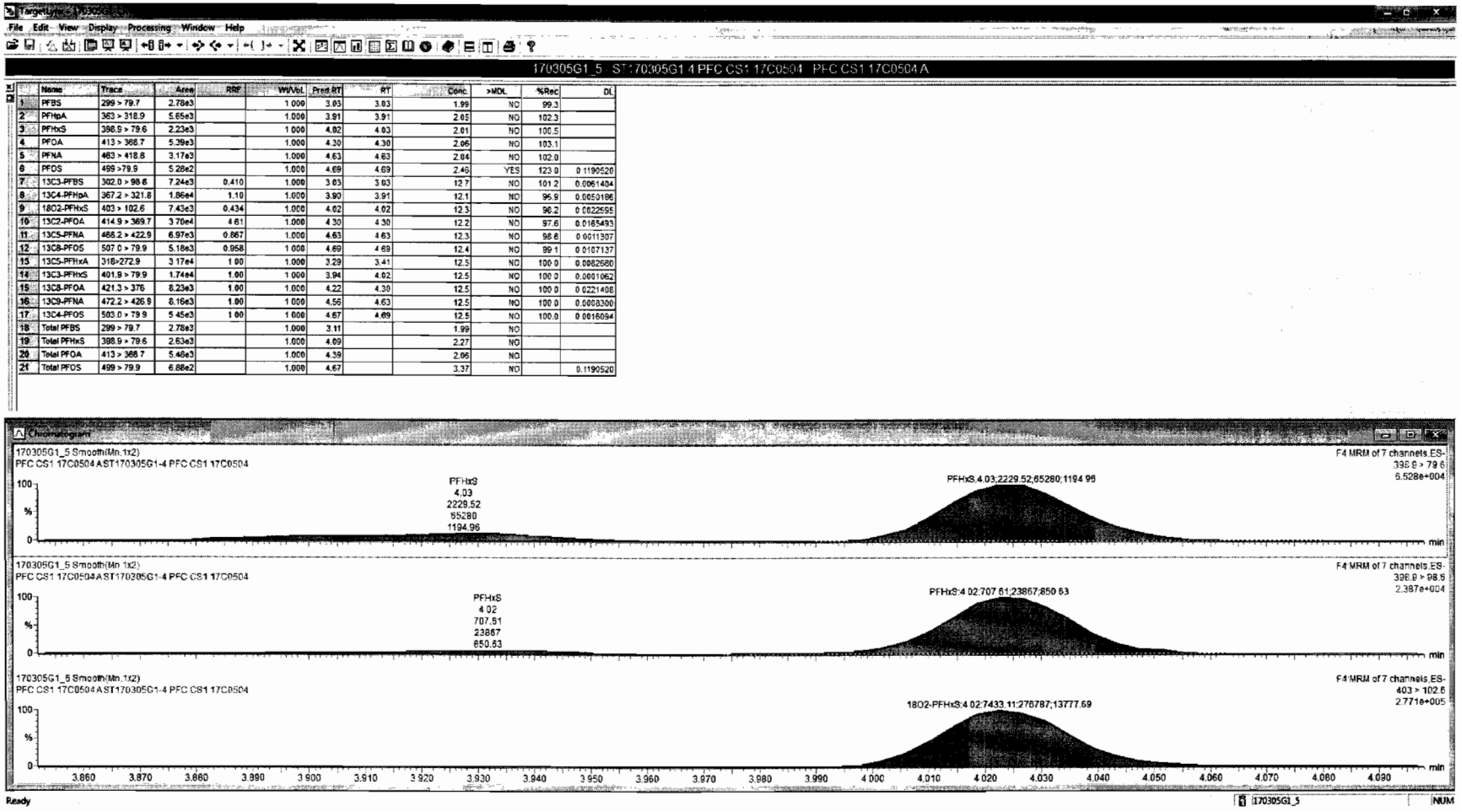

	Name	Trace	Area	RRF	Wt/Vol	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	2.78e3		1.000	3.03	3.03	1.99	NO	99.3	
2	PFHpA	363 > 318.9	5.65e3		1.000	3.91	3.91	2.05	NO	102.3	
3	PFHxS	398.9 > 79.6	2.23e3		1.000	4.02	4.03	2.01	NO	100.5	
4	PFOA	413 > 368.7	5.39e3		1.000	4.30	4.30	2.06	NO	103.1	
5	PFNA	463 > 418.8	3.17e3		1.000	4.63	4.63	2.04	NO	102.0	
6	PFOS	499 >79.9	5.28e2		1.000	4.69	4.69	2.46	YES	123.0	0.1190520
7	13C3-PFBS	302.0 > 98.6	7.24e3	0.410	1.000	3.03	3.03	12.7	NO	101.2	0.0061404
8	13C4-PFHpA	367.2 > 321.8	1.86e4	1.10	1.000	3.90	3.91	12.1	NO	96.9	0.0050186
9	18O2-PFHxS	403 > 102.6	7.43e3	0.434	1.000	4.02	4.02	12.3	NO	98.2	0.0022595
10	13C2-PFOA	414.9 > 369.7	3.70e4	4.61	1.000	4.30	4.30	12.2	NO	97.6	0.0165493
11	13C5-PFNA	468.2 > 422.9	6.97e3	0.867	1.000	4.63	4.63	12.3	NO	98.6	0.0011307
12	13C8-PFOS	507.0 > 79.9	5.18e3	0.958	1.000	4.69	4.69	12.4	NO	99.1	0.0107137
13	13C5-PFHxA	318>272.9	3.17e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0082680
14	13C3-PFHxS	401.9 > 79.9	1.74e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001062
15	13C8-PFOA	421.3 > 376	8.23e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221408
16	13C9-PFNA	472.2 > 426.9	8.16e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0008300
17	13C4-PFOS	503.0 > 79.9	5.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016094
18	Total PFBS	299 > 79.7	2.78e3		1.000	3.11		1.99	NO		
19	Total PFHxS	398.9 > 79.6	2.63e3		1.000	4.09		2.27	NO		
20	Total PFOA	413 > 368.7	5.46e3		1.000	4.38		2.06	NO		
21	Total PFOS	499 > 79.9	6.88e2		1.000	4.67		3.37	NO		0.1190520

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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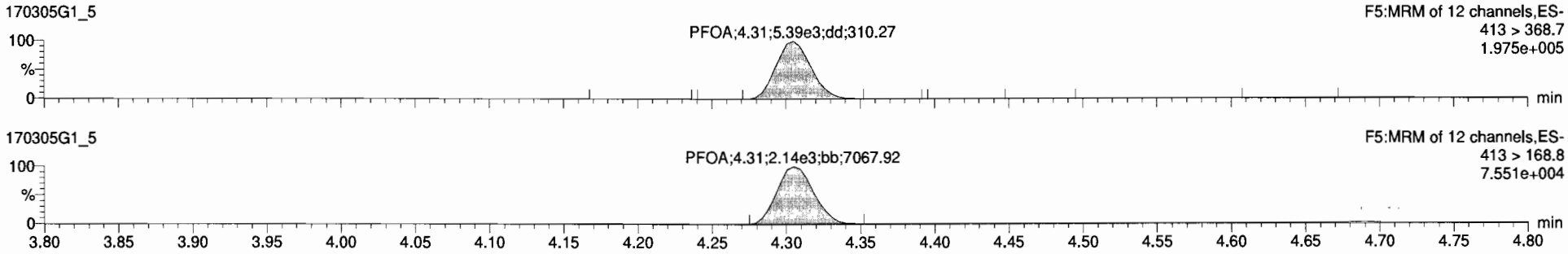
ID: ST170305G1-4 PFC CS1 17C0504, Description: PFC CS1 17C0504 A, Name: 170305G1_5, Date: 05-Mar-2017, Time: 13:24:21, Instrument: , Lab: , User:

Total PFOA



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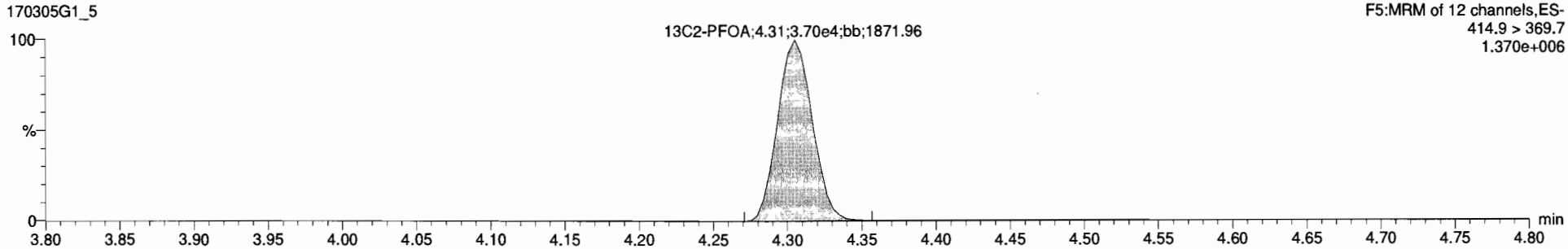

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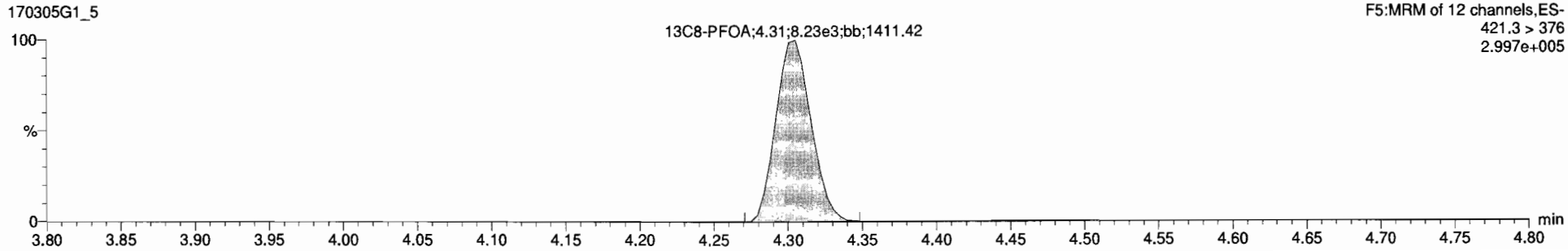

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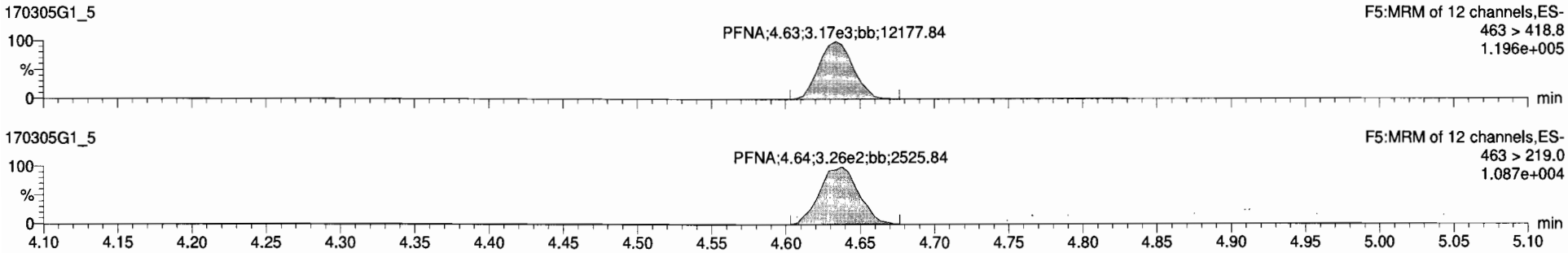

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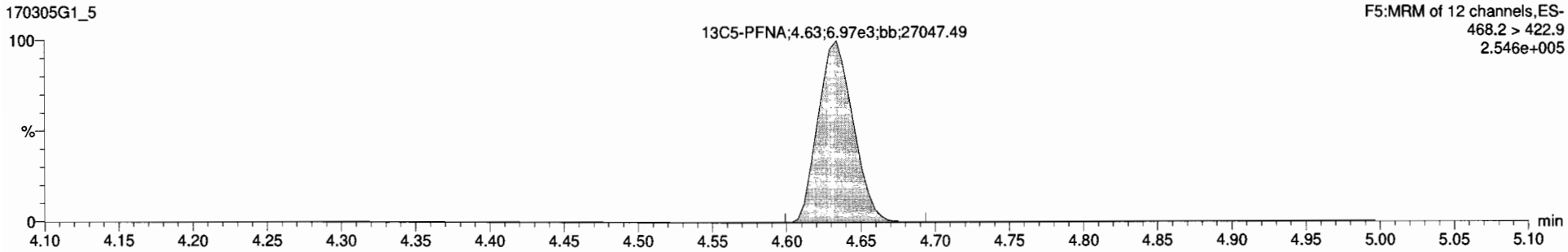

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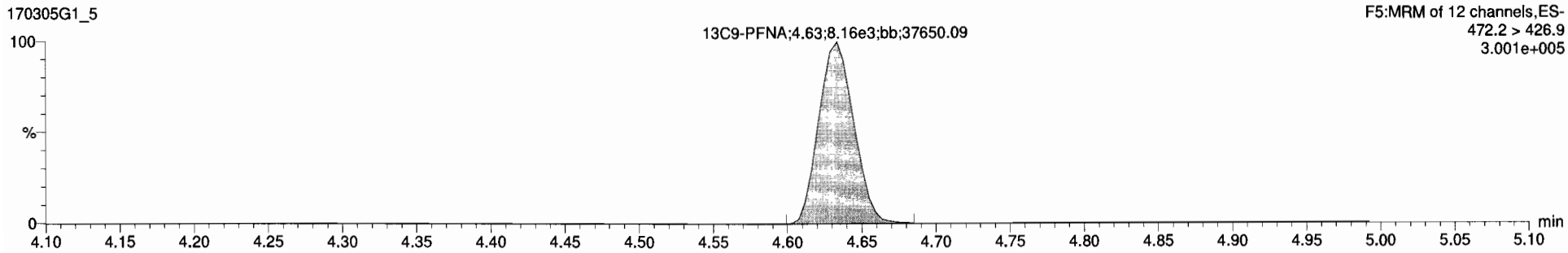

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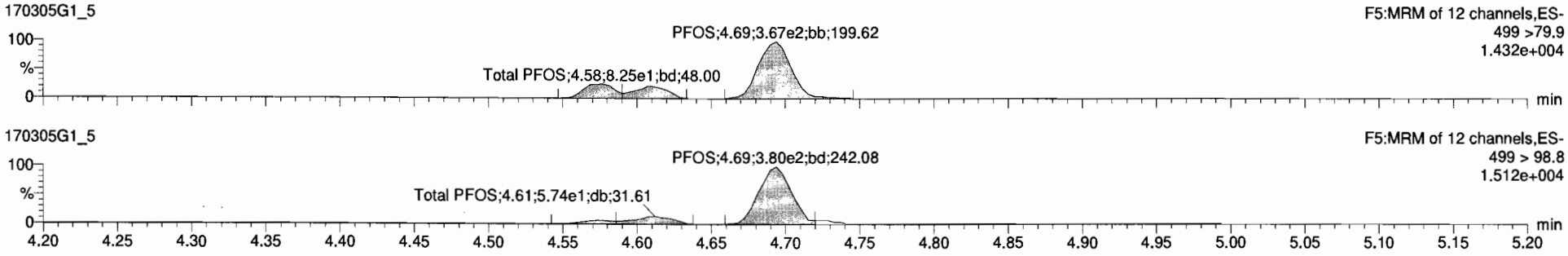
Total PFOS



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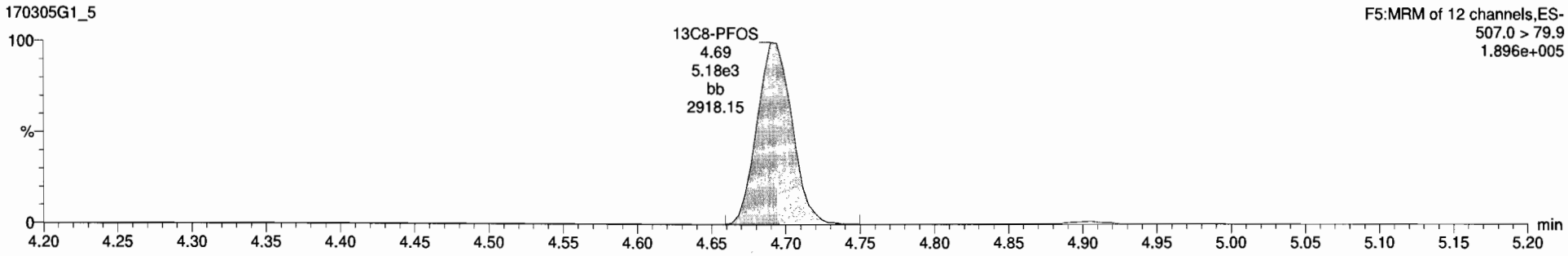

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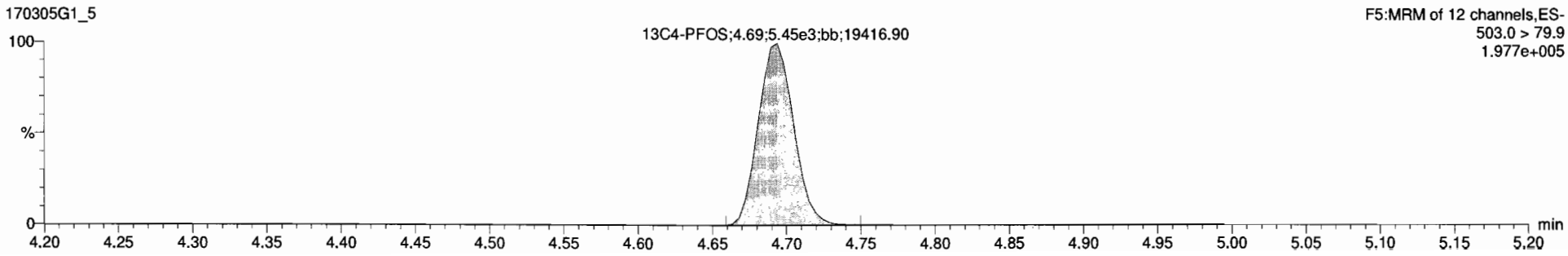

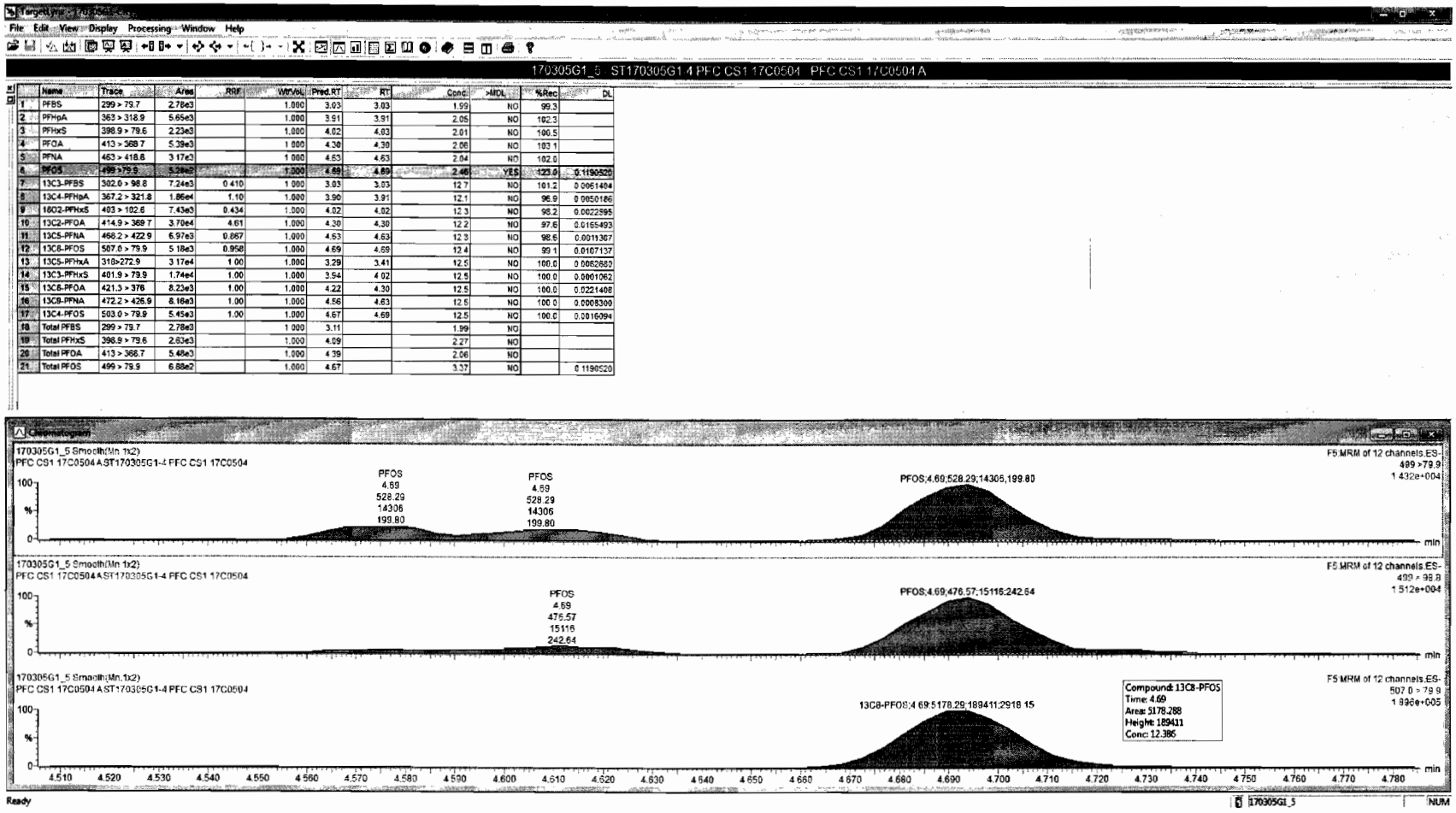

	Name	Trace	Area	RRF	WtrVol	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	2.78e3		1.000	3.03	3.03	1.99	NO	99.3	
2	PFHpA	363 > 318.9	5.65e3		1.000	3.91	3.91	2.05	NO	102.3	
3	PFHxS	398.9 > 79.6	2.23e3		1.000	4.02	4.03	2.01	NO	100.5	
4	PFOA	413 > 368.7	5.39e3		1.000	4.30	4.30	2.06	NO	103.1	
5	PFNA	463 > 418.8	3.17e3		1.000	4.63	4.63	2.04	NO	102.0	
6	PFOS	499 > 79.9	5.29e3		1.000	4.69	4.69	2.46	YES	123.0	0.1190520
7	13C3-PFBS	302.0 > 98.8	7.24e3	0.410	1.000	3.03	3.03	12.7	NO	101.2	0.0061404
8	13C4-PFHpA	367.2 > 321.8	1.86e4	1.10	1.000	3.90	3.91	12.1	NO	96.9	0.0650186
9	18O2-PFHxS	403 > 102.8	7.43e3	0.434	1.000	4.02	4.02	12.3	NO	98.2	0.0022595
10	13C2-PFOA	414.9 > 369.7	3.70e4	4.61	1.000	4.30	4.30	12.2	NO	97.6	0.0155493
11	13C5-PFNA	468.2 > 422.9	6.97e3	0.867	1.000	4.63	4.63	12.3	NO	98.6	0.0011367
12	13C8-PFOS	507.0 > 79.9	5.18e3	0.958	1.000	4.69	4.69	12.4	NO	99.1	0.0107137
13	13C5-PFHxA	318>272.9	3.17e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0062680
14	13C3-PFHxS	401.9 > 79.9	1.74e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001062
15	13C8-PFOA	421.3 > 376	8.23e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221408
16	13C9-PFNA	472.2 > 426.9	8.16e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0008300
17	13C4-PFOS	503.0 > 79.9	5.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016094
18	Total PFBS	299 > 79.7	2.78e3		1.000	3.11		1.99	NO		
19	Total PFHxS	398.9 > 79.6	2.63e3		1.000	4.09		2.27	NO		
20	Total PFOA	413 > 368.7	5.48e3		1.000	4.39		2.06	NO		
21	Total PFOS	499 > 79.9	6.88e2		1.000	4.67		3.37	NO		0.1190520

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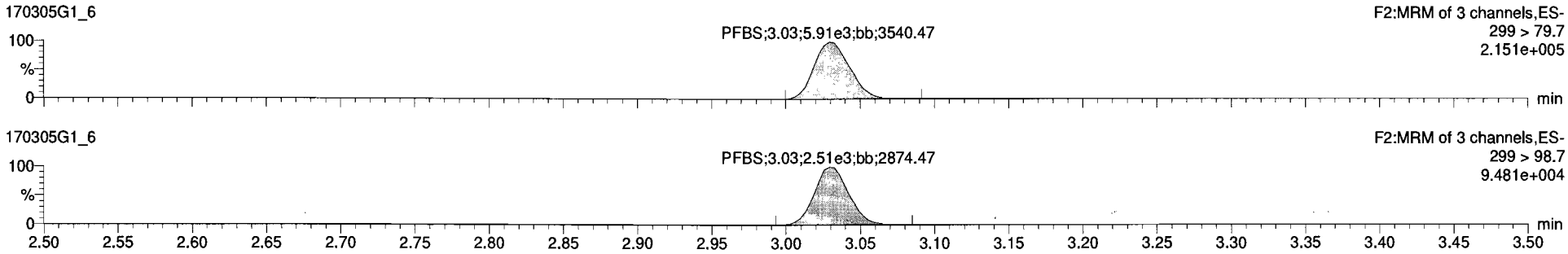
ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

PFBS



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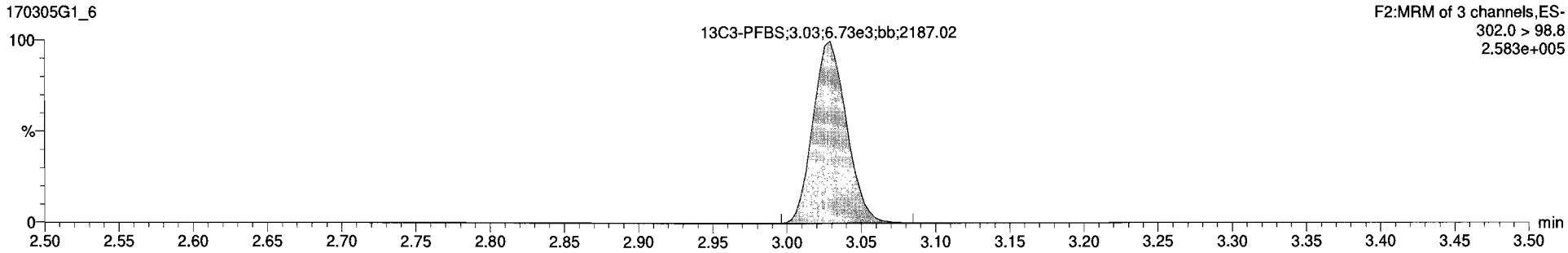

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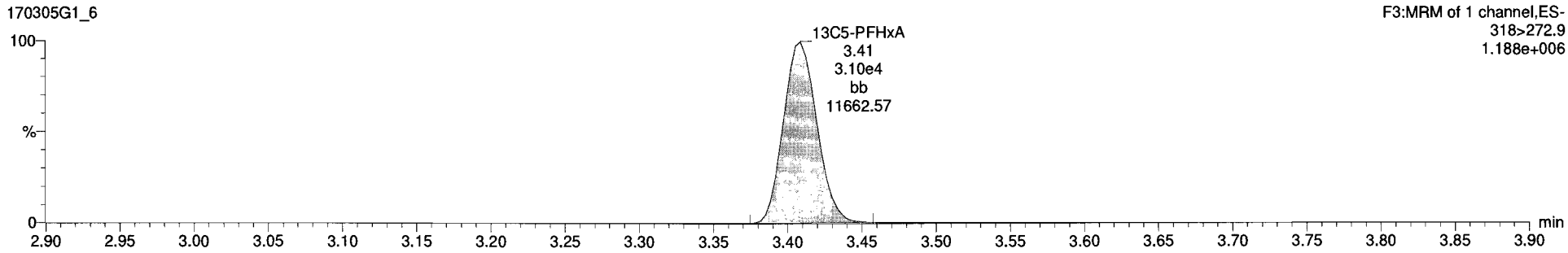

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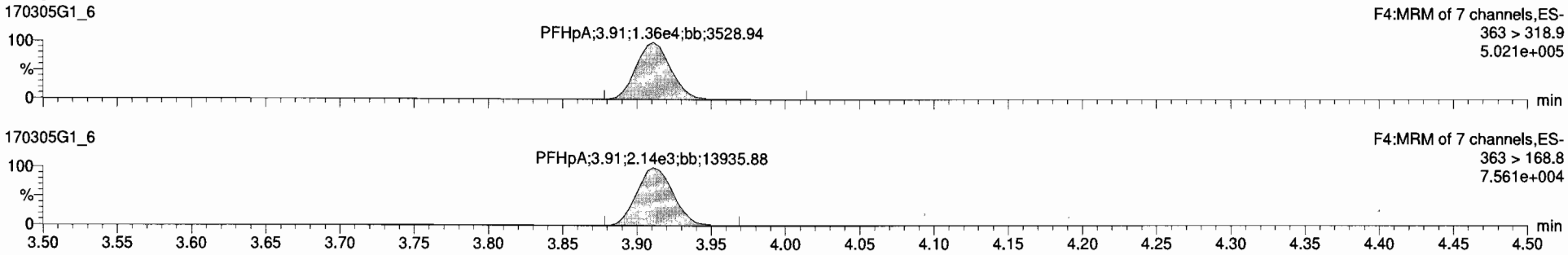
PFHpA



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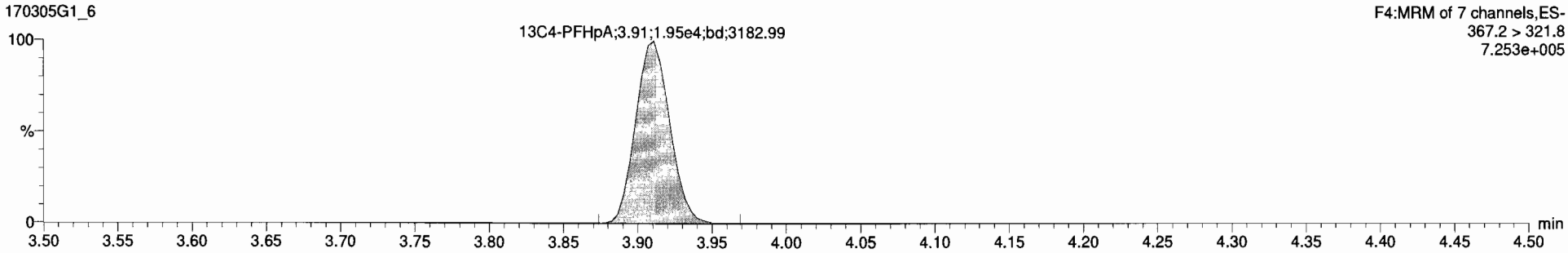

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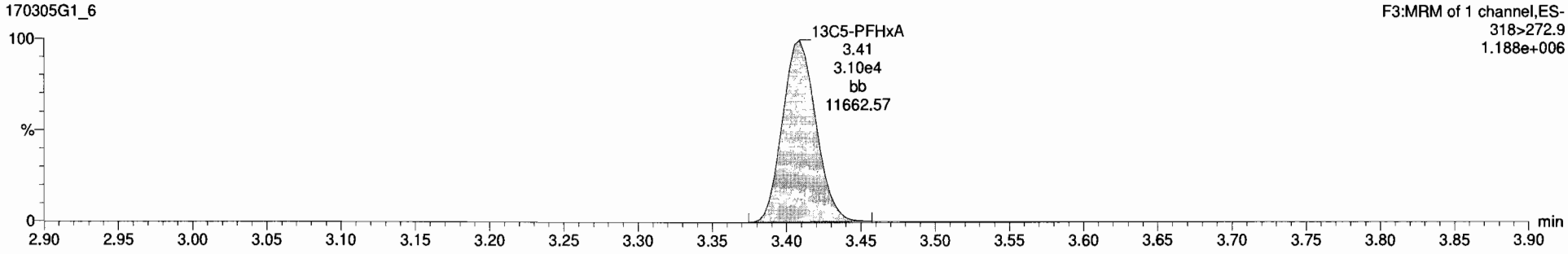

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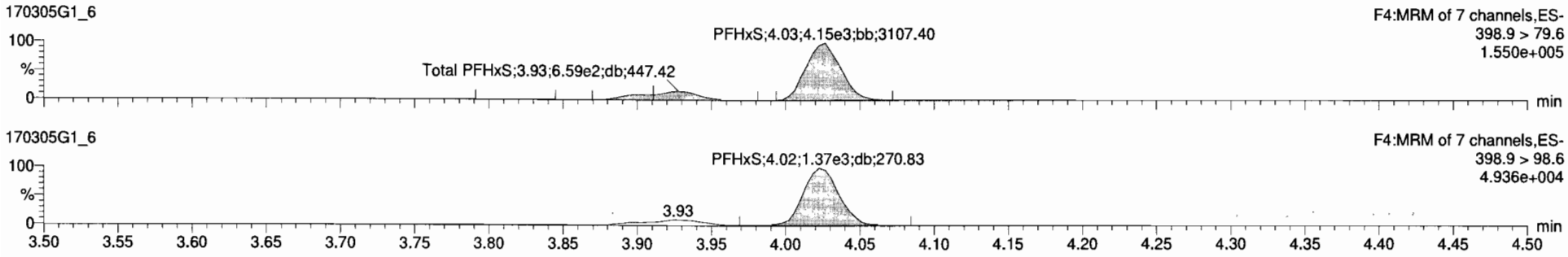
Total PFHxS



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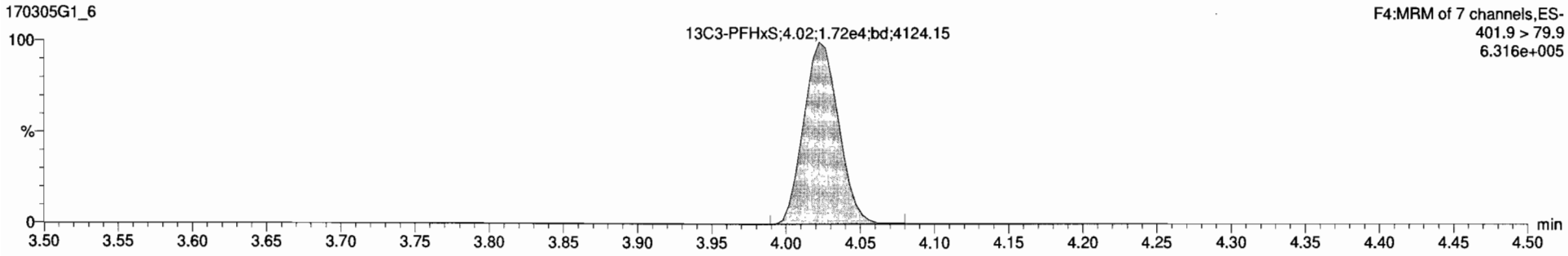

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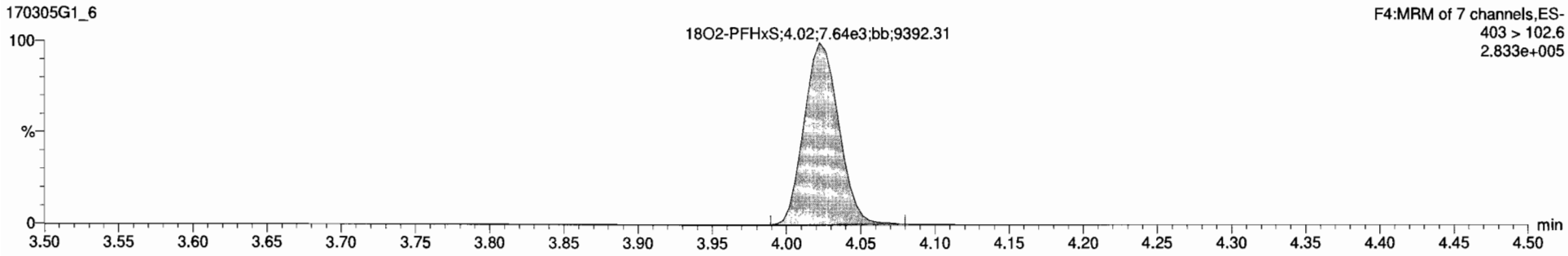

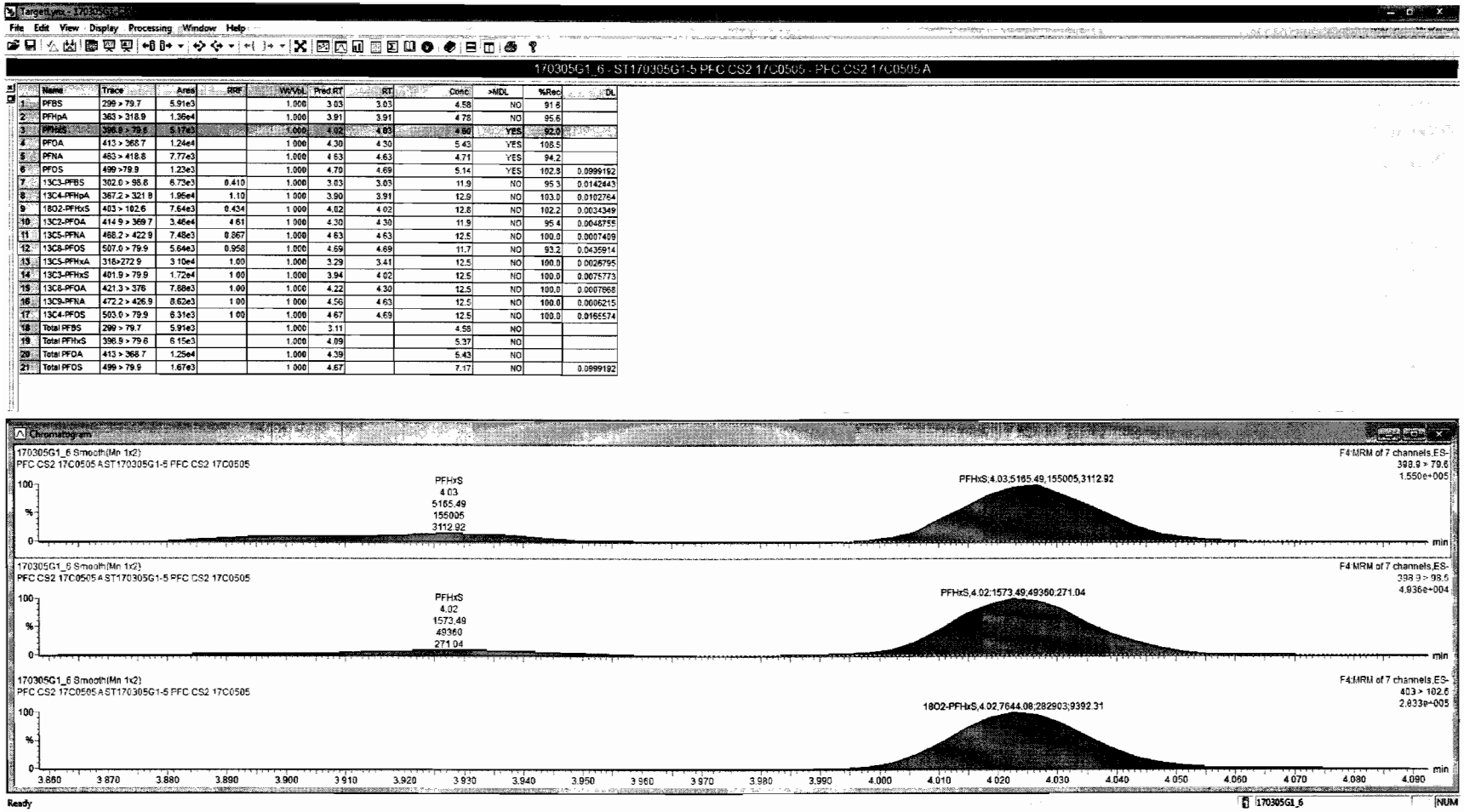

	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.91e3		1.000	3.03	3.03	4.58	NO	91.6	
2	PFHpA	363 > 318.9	1.36e4		1.000	3.91	3.91	4.78	NO	95.6	
3	PFHxS	398.9 > 79.6	5.17e3		1.000	4.02	4.03	4.60	YES	92.0	
4	PFDA	413 > 368.7	1.24e4		1.000	4.30	4.30	5.43	YES	108.5	
5	PFNA	463 > 418.8	7.77e3		1.000	4.63	4.63	4.71	YES	94.2	
6	PFOS	499 >79.9	1.23e3		1.000	4.70	4.69	5.14	YES	102.8	0.0999192
7	13C3-PFBS	302.0 > 98.6	6.73e3	0.410	1.000	3.03	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.9	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.0	0.0102764
9	18O2-PFHxS	403 > 102.6	7.64e3	0.434	1.000	4.02	4.02	12.8	NO	102.2	0.0034349
10	13C2-PFDA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0048755
11	13C5-PFNA	468.2 > 422.9	7.48e3	0.867	1.000	4.63	4.63	12.5	NO	100.0	0.0007409
12	13C8-PFOS	507.0 > 79.9	5.64e3	0.958	1.000	4.69	4.69	11.7	NO	93.2	0.0435914
13	13C5-PFHxA	318>272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026795
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C8-PFOA	421.3 > 376	7.88e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007868
16	13C9-PFNA	472.2 > 426.9	8.62e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0006215
17	13C4-PFOS	503.0 > 79.9	8.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0165574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.9 > 79.6	6.15e3		1.000	4.09		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
21	Total PFOS	499 > 79.9	1.67e3		1.000	4.67		7.17	NO		0.0999192

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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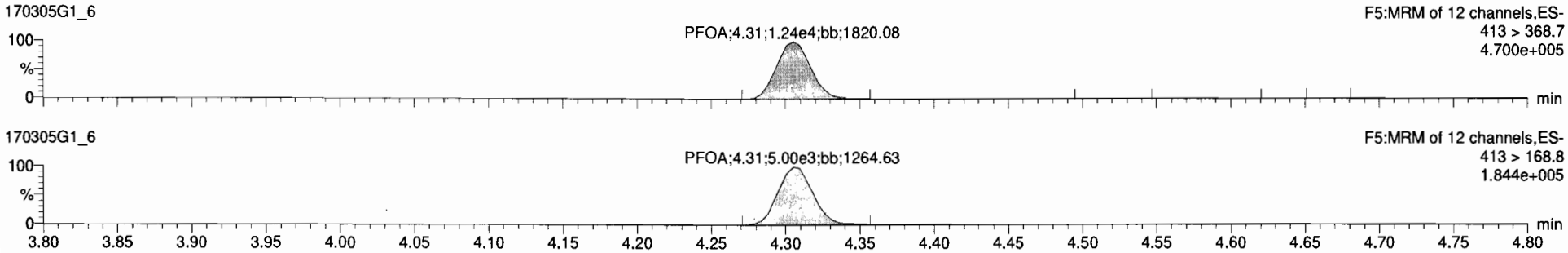
Total PFOA



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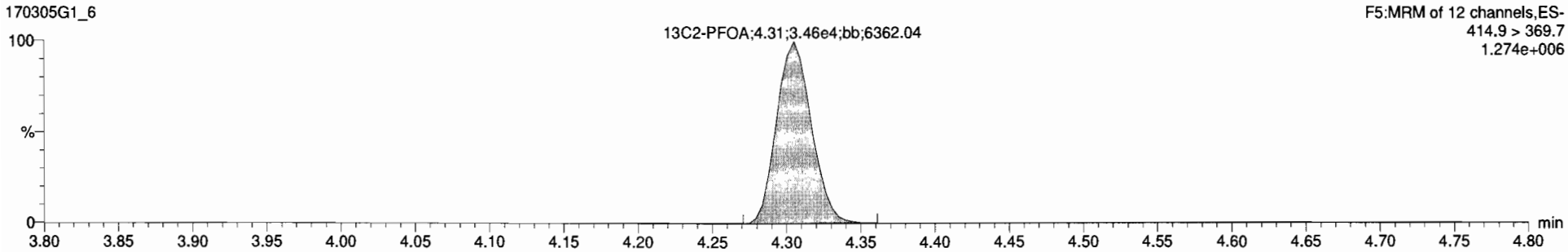

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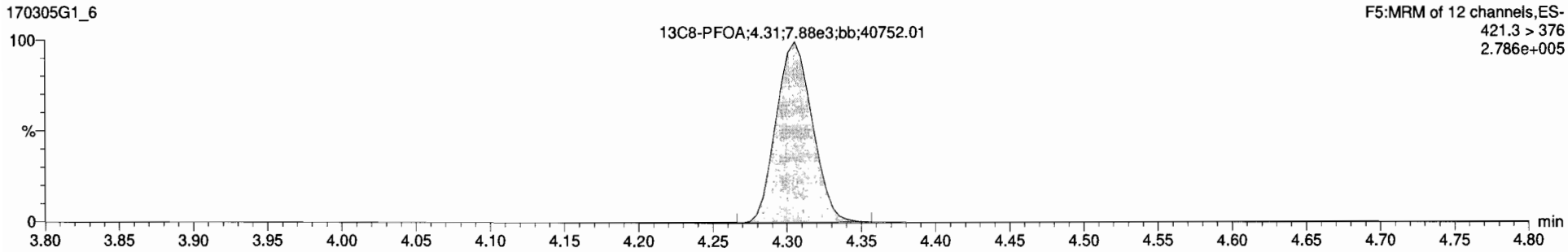

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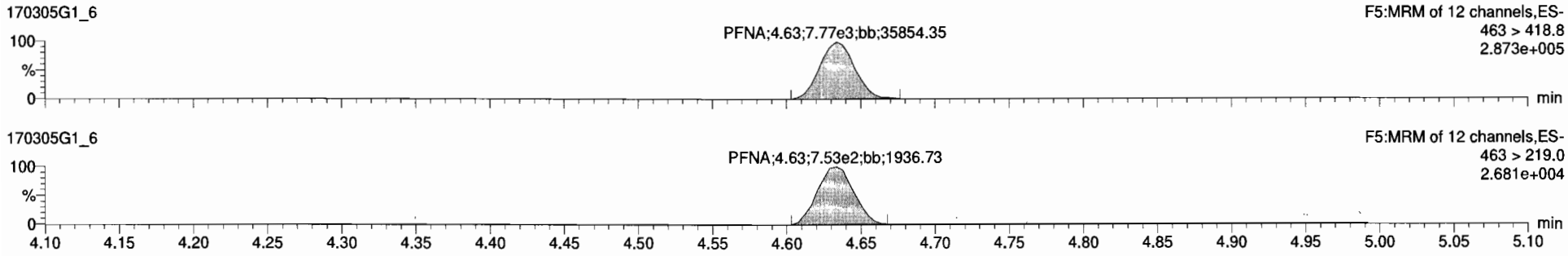

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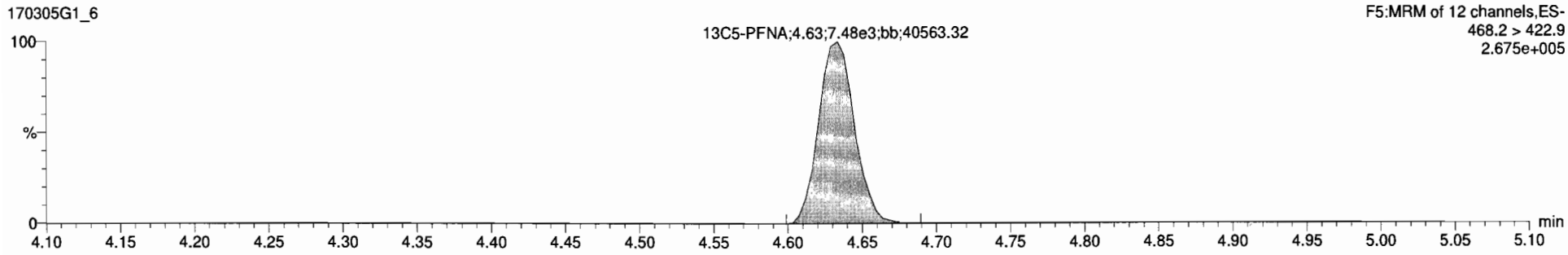

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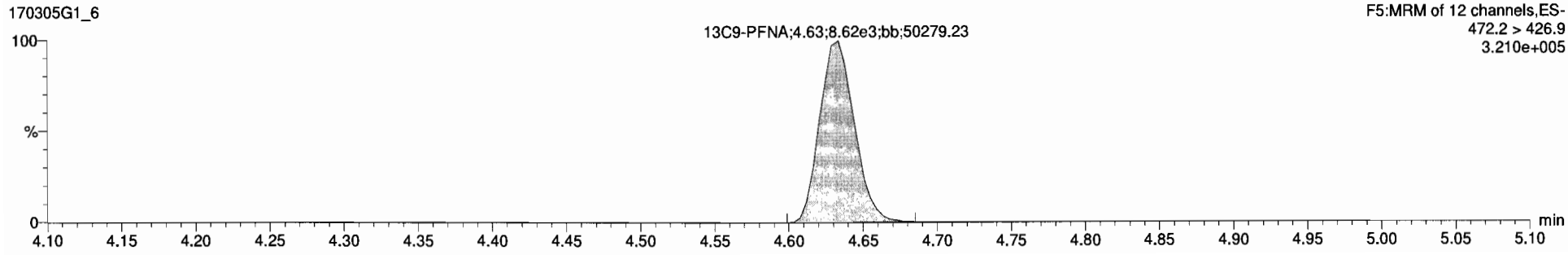

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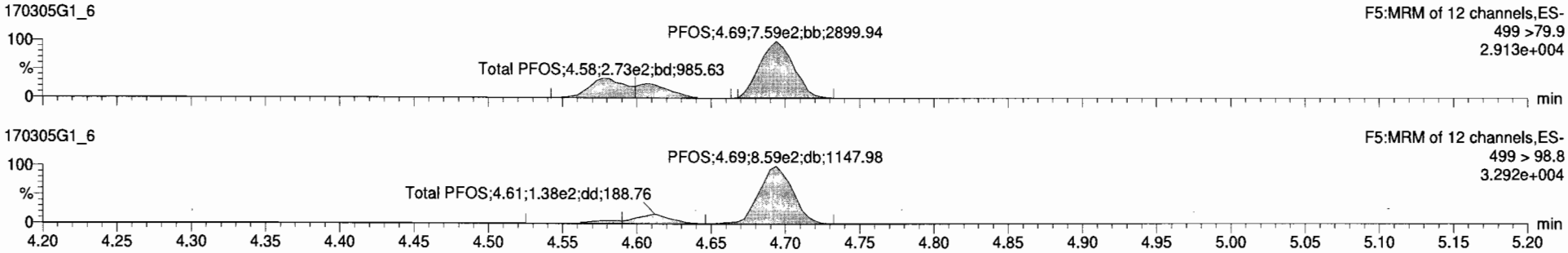
Total PFOS



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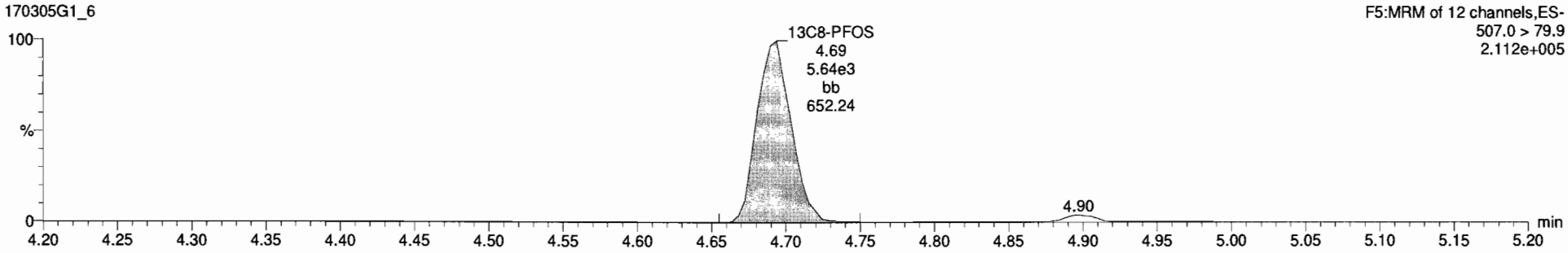

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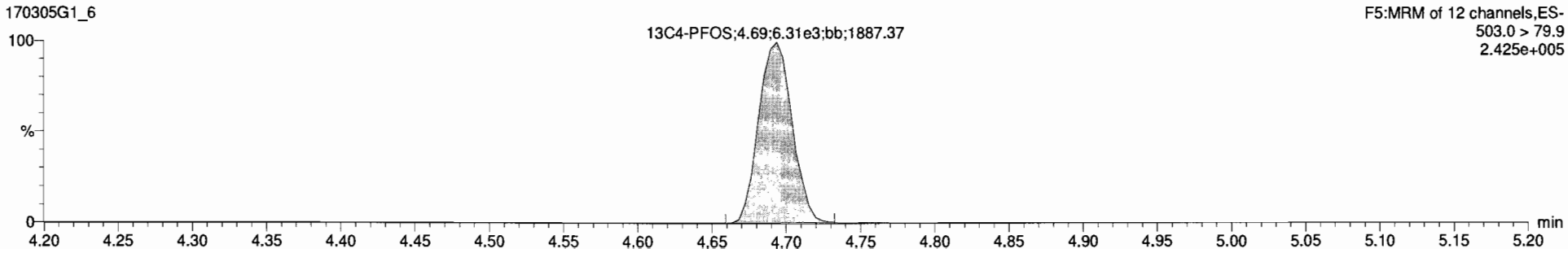

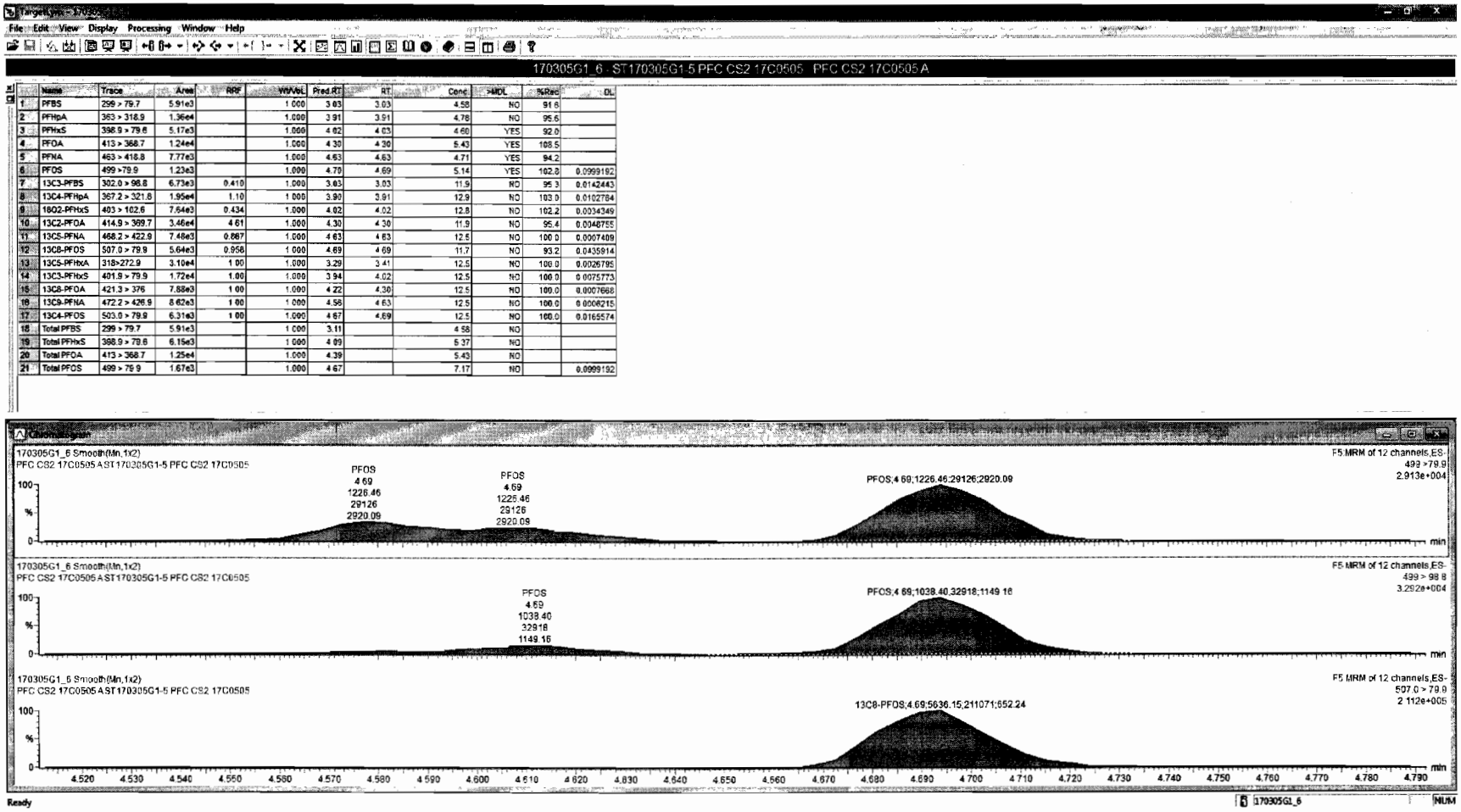

	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.91e3		1.000	3.03	3.03	4.58	NO	91.6	
2	PFHpA	363 > 318.9	1.36e4		1.000	3.91	3.91	4.78	NO	95.6	
3	PFHxS	398.9 > 79.6	5.17e3		1.000	4.02	4.03	4.60	YES	92.0	
4	PFOA	413 > 368.7	1.24e4		1.000	4.30	4.30	5.43	YES	108.5	
5	PFNA	463 > 418.8	7.77e3		1.000	4.63	4.63	4.71	YES	94.2	
6	PFOS	499 >79.9	1.23e3		1.000	4.70	4.69	5.14	YES	102.8	0.0999192
7	13C3-PFBS	302.0 > 98.8	6.73e3	0.410	1.000	3.03	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.8	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.9	0.0102784
9	18O2-PFHxS	403 > 102.6	7.64e3	0.434	1.000	4.02	4.02	12.8	NO	102.2	0.0034349
10	13C2-PFOA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0048755
11	13C5-PFNA	468.2 > 422.9	7.48e3	0.887	1.000	4.63	4.63	12.6	NO	100.0	0.0007409
12	13C8-PFOS	507.0 > 79.9	5.64e3	0.956	1.000	4.69	4.69	11.7	NO	93.2	0.0435914
13	13C5-PFHxA	318>272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026795
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C8-PFOA	421.3 > 376	7.88e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007668
16	13C9-PFNA	472.2 > 426.9	8.62e3	1.00	1.000	4.58	4.63	12.5	NO	100.0	0.0008215
17	13C4-PFOS	503.0 > 79.9	6.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0165574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.9 > 79.6	6.15e3		1.000	4.09		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
21	Total PFOS	499 > 79.9	1.67e3		1.000	4.67		7.17	NO		0.0999192

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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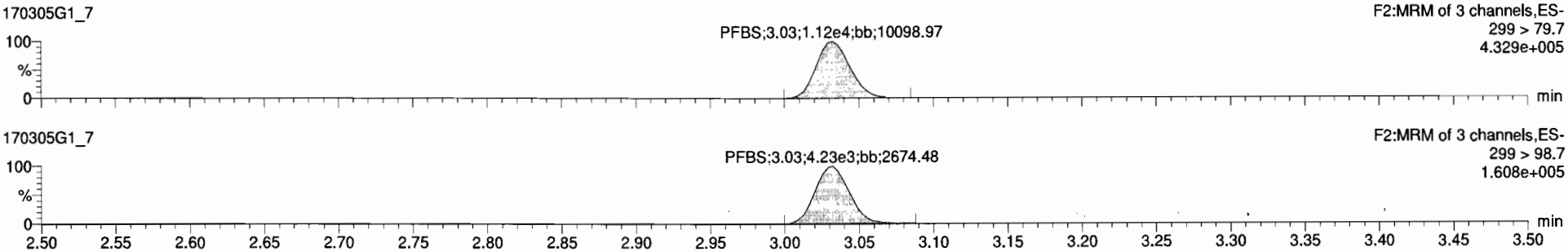
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

PFBS



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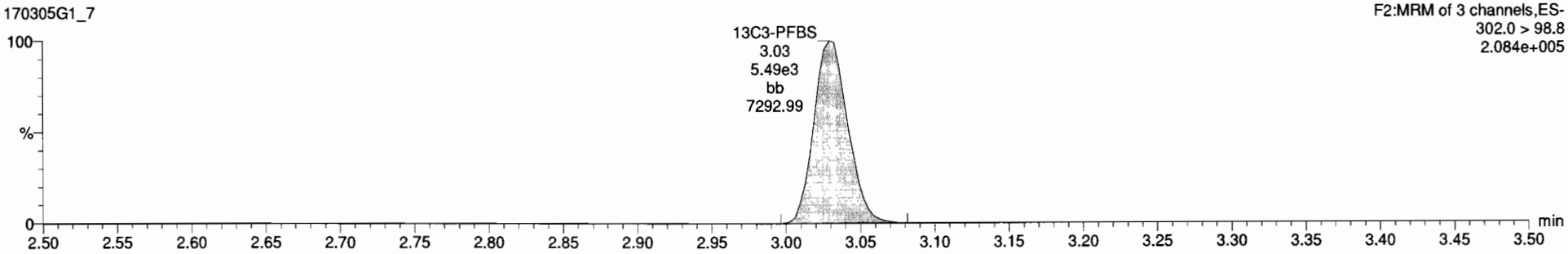

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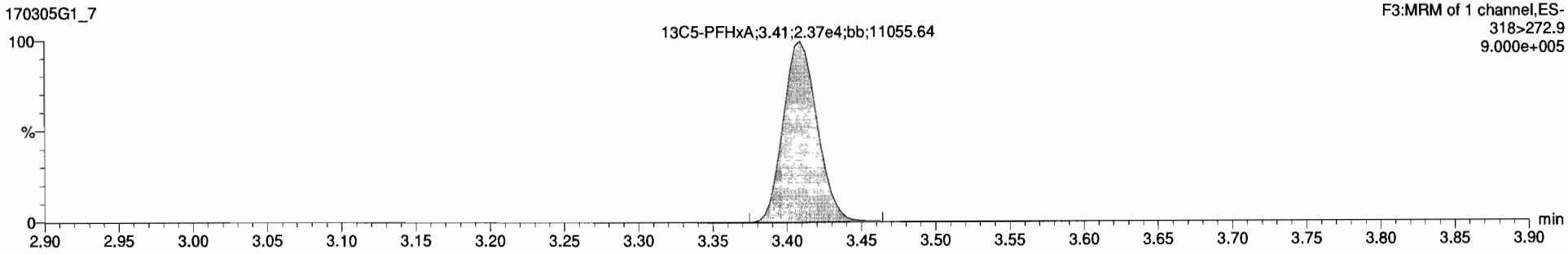

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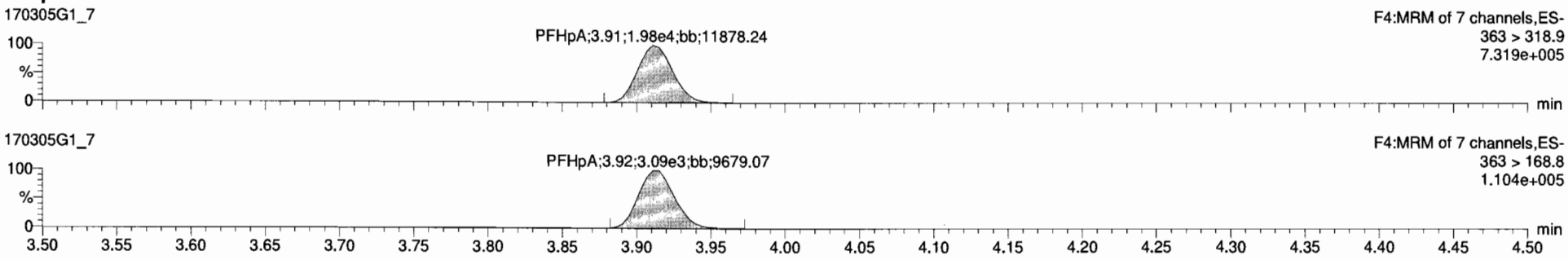

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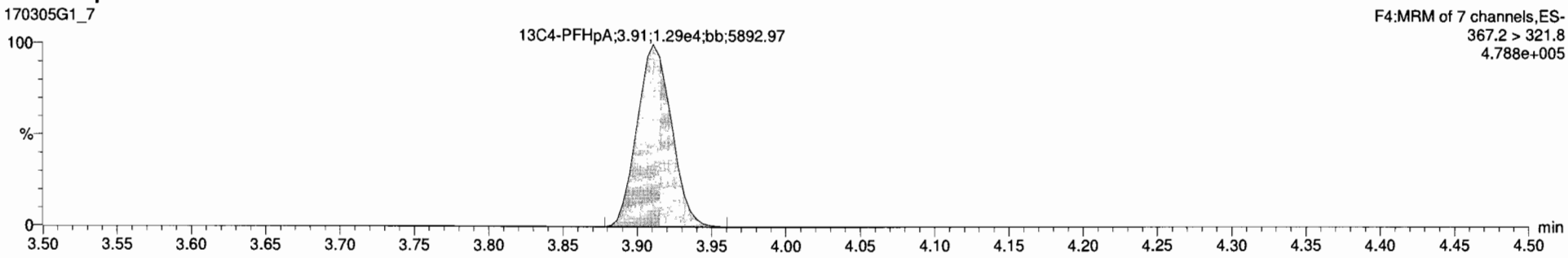

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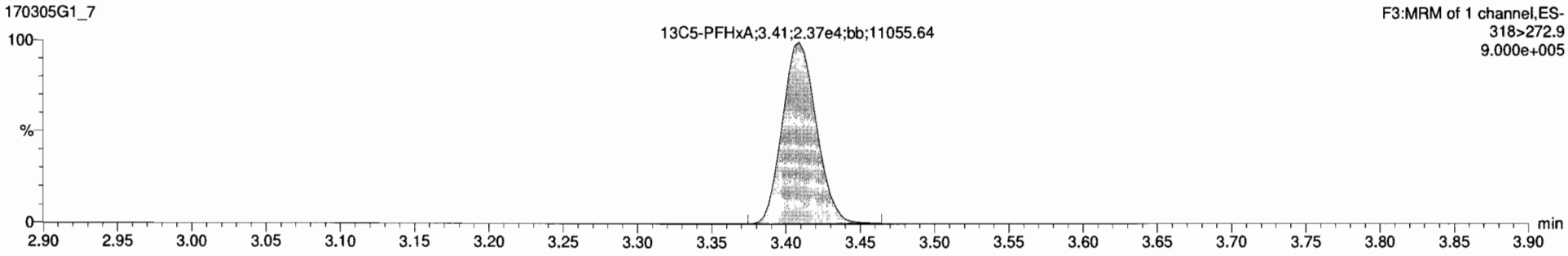

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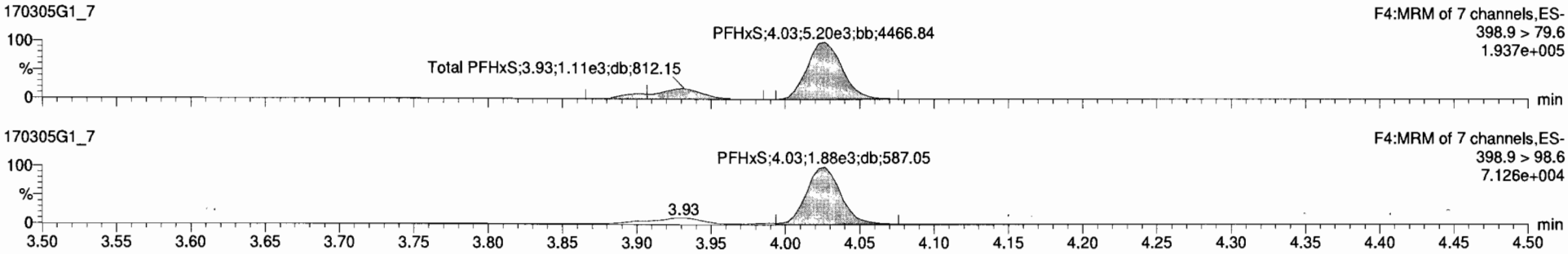
Total PFHxS



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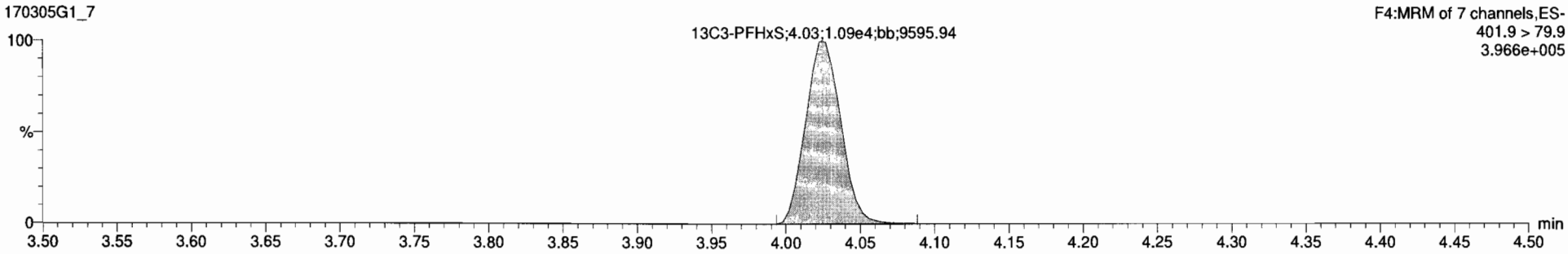
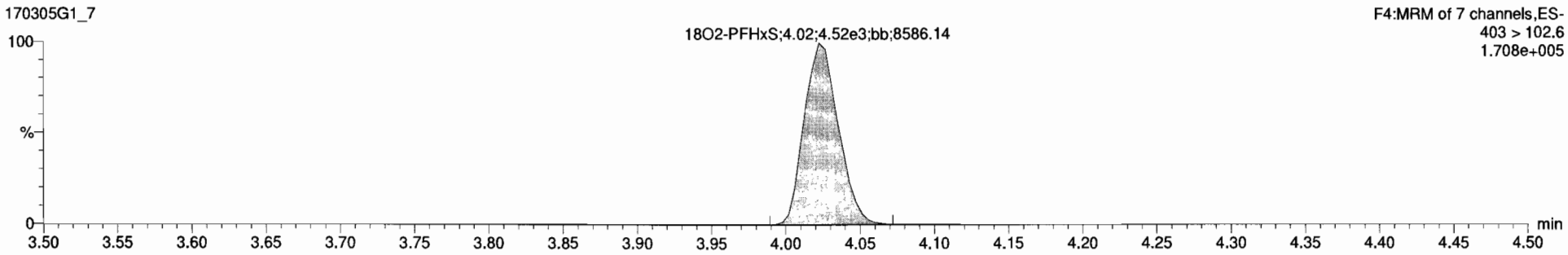
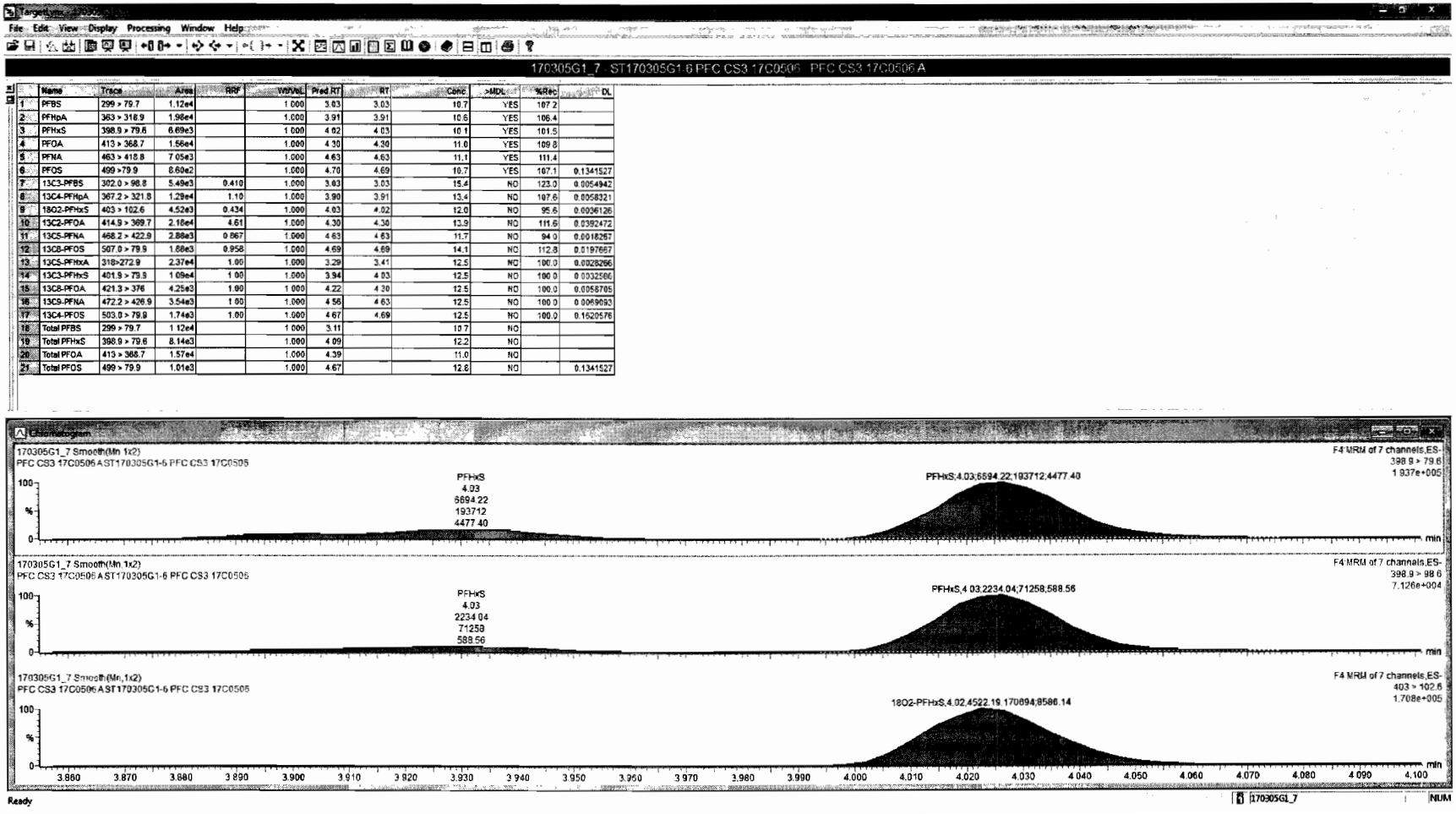


18O2-PFHxS





	Name	Trace	Area	RRF	WtVal	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4		1.000	3.03	3.03	10.7	YES	107.2	
2	PFHpA	363 > 318.9	1.98e4		1.000	3.91	3.91	10.6	YES	106.4	
3	PFHxS	398.9 > 79.6	6.69e3		1.000	4.02	4.03	10.1	YES	101.5	
4	PFOA	413 > 368.7	1.56e4		1.000	4.30	4.30	11.0	YES	109.8	
5	PFNA	463 > 418.8	7.05e3		1.000	4.63	4.63	11.1	YES	111.4	
6	PFOS	499 >79.9	8.60e2		1.000	4.70	4.69	10.7	YES	107.1	0.1341527
7	13C3-PFBS	302.0 > 98.8	5.49e3	0.410	1.000	3.03	3.03	15.4	NO	123.0	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	13.4	NO	107.6	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.6	0.0036126
10	13C2-PFOA	414.9 > 369.7	2.16e4	4.61	1.000	4.30	4.30	13.9	NO	111.6	0.0392472
11	13C5-PFNA	468.2 > 422.9	2.88e3	0.867	1.000	4.63	4.63	11.7	NO	94.0	0.0018267
12	13C8-PFOS	507.0 > 79.9	1.88e3	0.958	1.000	4.69	4.69	14.1	NO	112.8	0.0197667
13	13C5-PFHxA	318>272.9	2.37e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0028266
14	13C3-PFHxS	401.9 > 79.9	1.09e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0032566
15	13C8-PFOA	421.3 > 376	4.25e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0058705
16	13C9-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0069093
17	13C4-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.1520576
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO		
19	Total PFHxS	398.9 > 79.6	8.14e3		1.000	4.09		12.2	NO		
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		11.0	NO		
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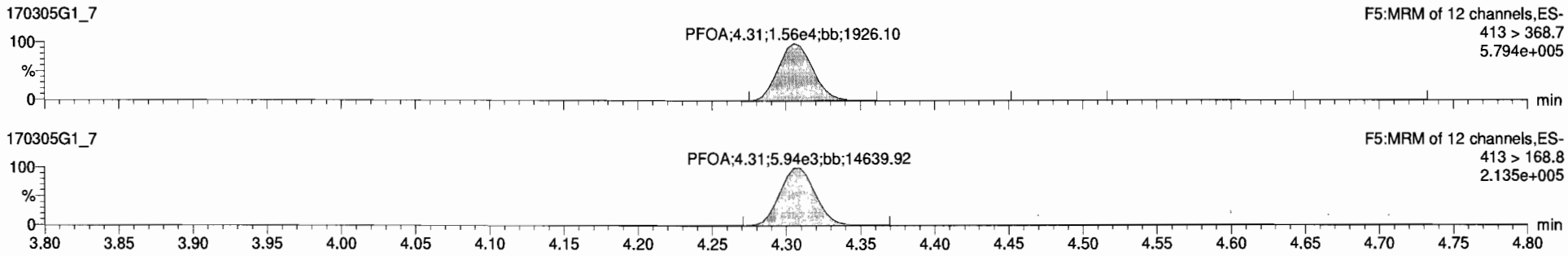
Total PFOA



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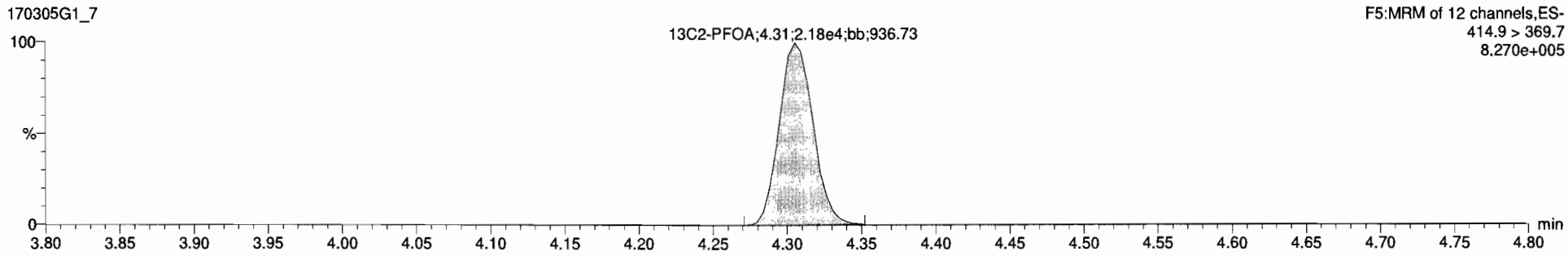

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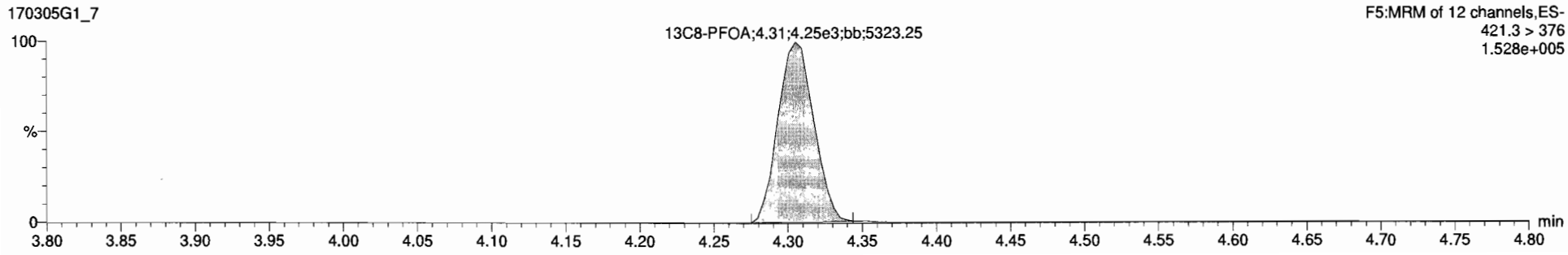

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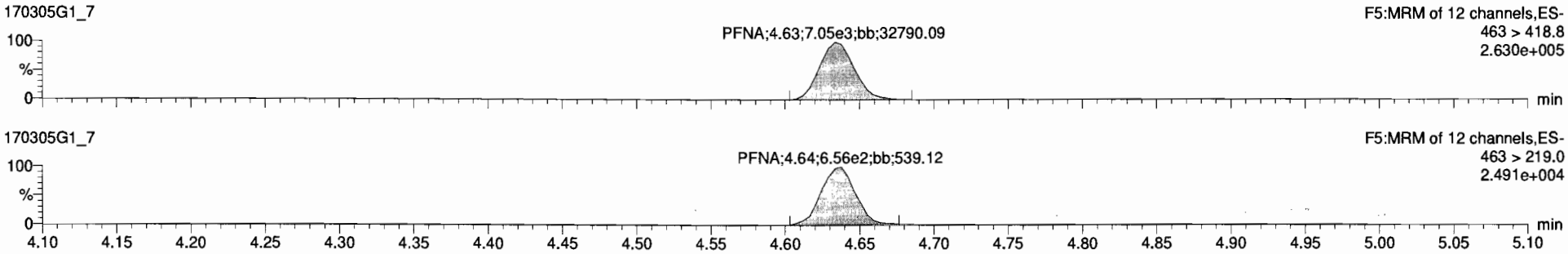
PFNA



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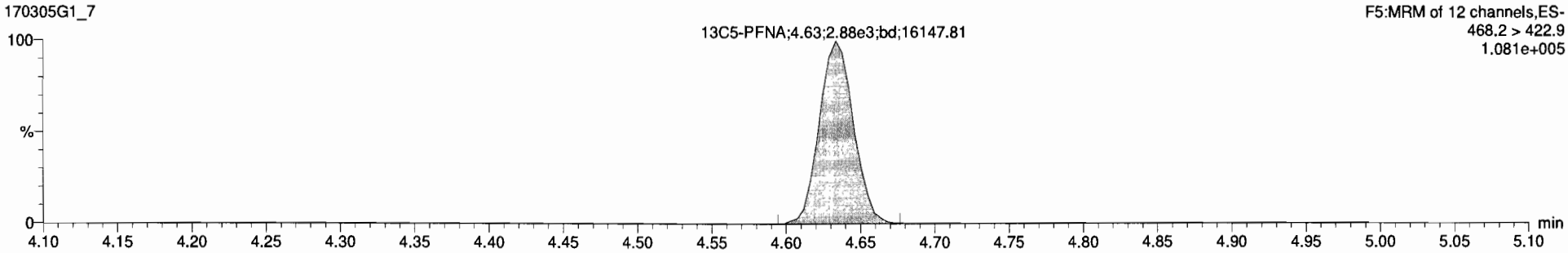

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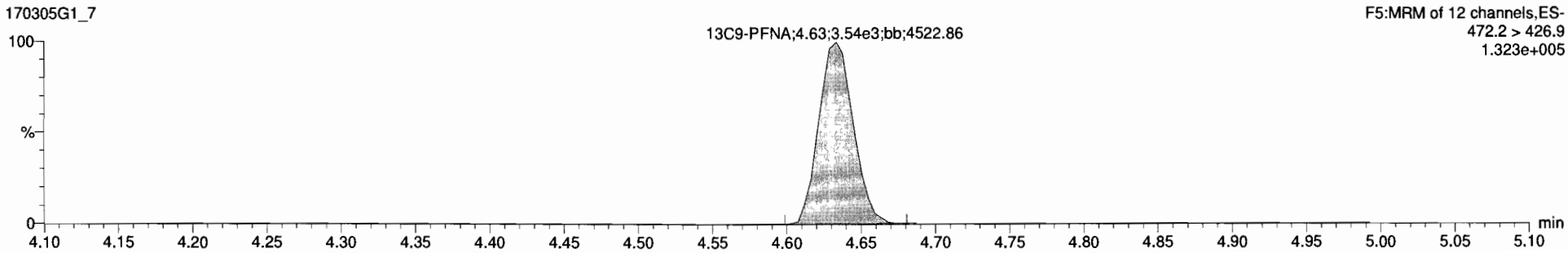

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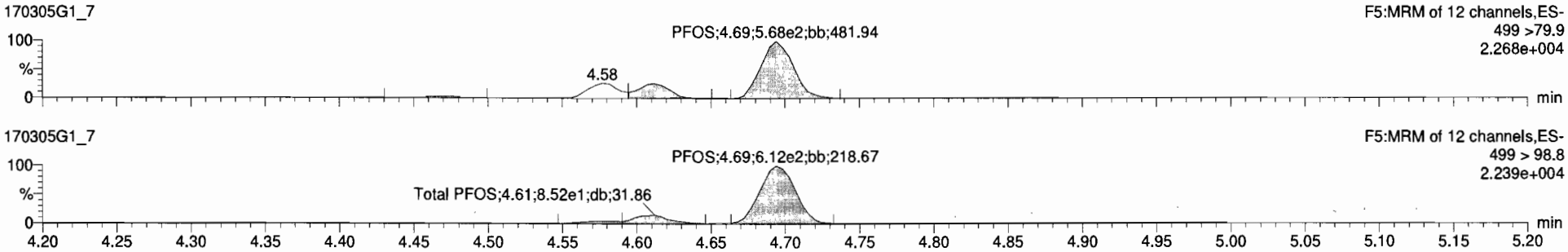
Total PFOS



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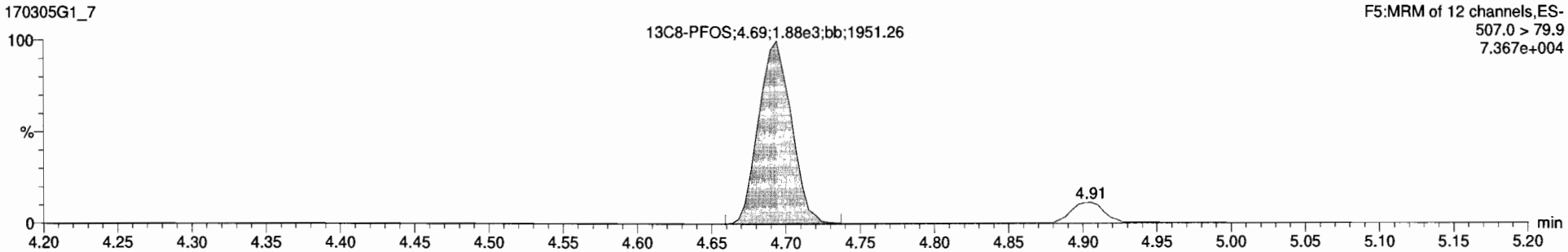
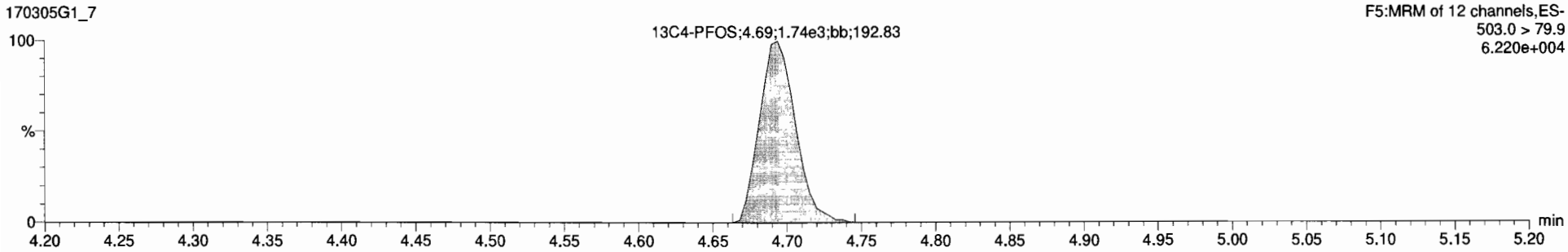
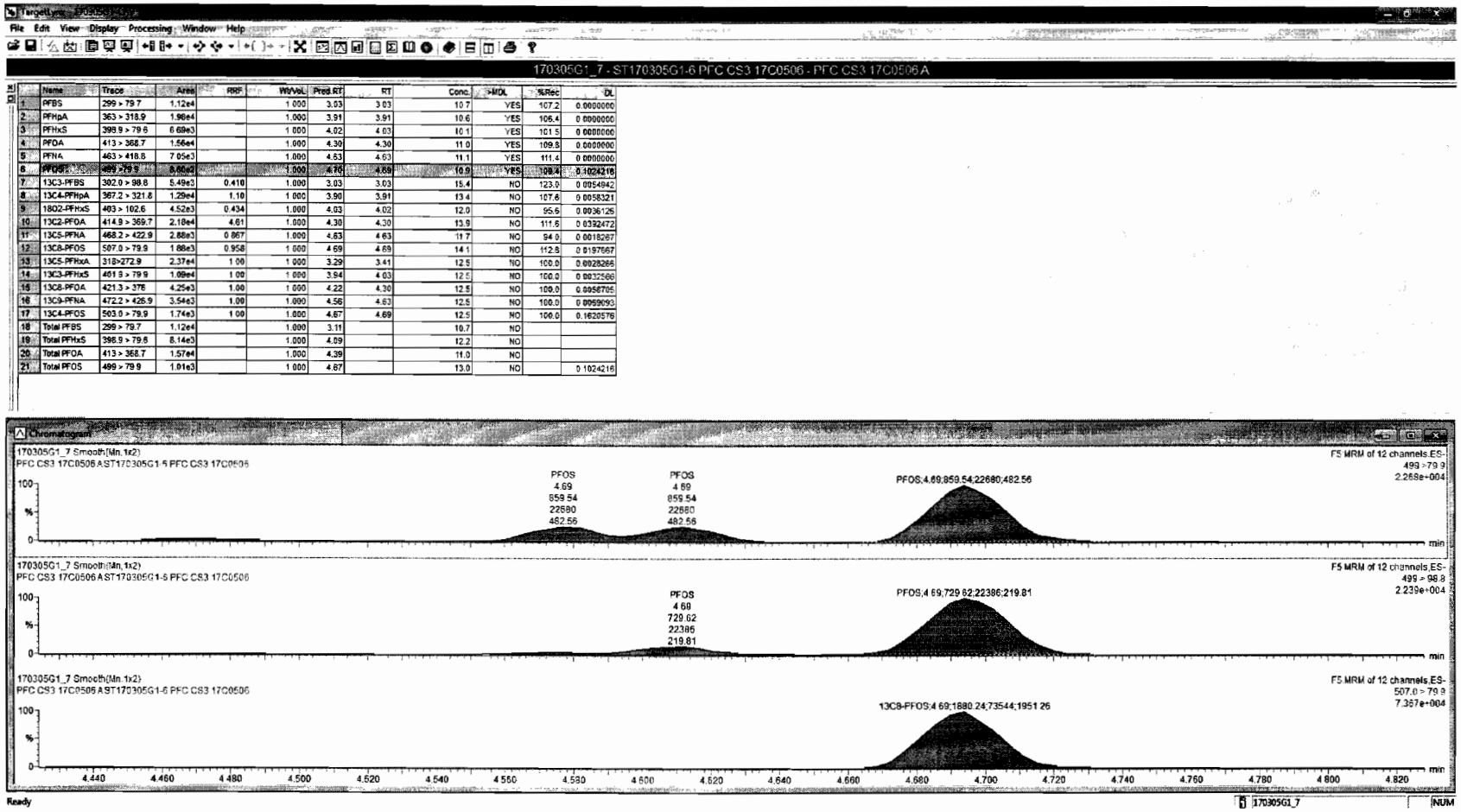


13C4-PFOS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4		1.000	3.03	3.03	10.7	YES	107.2	0.0000000
2	PFHpA	363 > 318.9	1.96e4		1.000	3.91	3.91	10.6	YES	106.4	0.0000000
3	PFHxS	398.9 > 79.6	6.69e3		1.000	4.02	4.03	10.1	YES	101.5	0.0000000
4	PFOA	413 > 368.7	1.56e4		1.000	4.30	4.30	11.0	YES	109.8	0.0000000
5	PFNA	463 > 418.8	7.05e3		1.000	4.63	4.63	11.1	YES	111.4	0.0000000
6	PFOS	499 > 79.9	8.60e2		1.000	4.70	4.69	10.9	YES	108.4	0.1024216
7	13C3-PFBS	302.0 > 98.8	5.49e3	0.410	1.000	3.03	3.03	15.4	NO	123.0	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	13.4	NO	107.6	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.6	0.0036125
10	13C2-PFOA	414.9 > 369.7	2.18e4	4.61	1.000	4.30	4.30	13.9	NO	111.6	0.0392472
11	13C5-PFNA	468.2 > 422.9	2.88e3	0.867	1.000	4.63	4.63	11.7	NO	94.0	0.0018267
12	13C8-PFOS	507.0 > 79.9	1.88e3	0.958	1.000	4.69	4.69	14.1	NO	112.8	0.0197667
13	13C5-PFHxA	318>272.9	2.37e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0028266
14	13C3-PFHxS	401.9 > 79.9	1.09e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0032588
15	13C8-PFOA	421.3 > 376	4.25e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0056705
16	13C9-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0059093
17	13C4-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.1620576
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO		
19	Total PFHxS	398.9 > 79.6	8.14e3		1.000	4.09		12.2	NO		
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		11.0	NO		
21	Total PFOS	499 > 79.9	1.01e3		1.000	4.67		13.0	NO		0.1024216

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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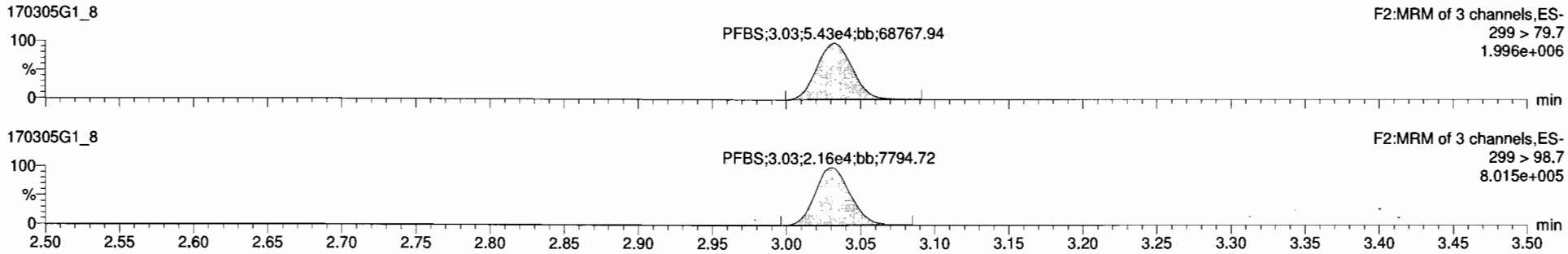
ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

PFBS



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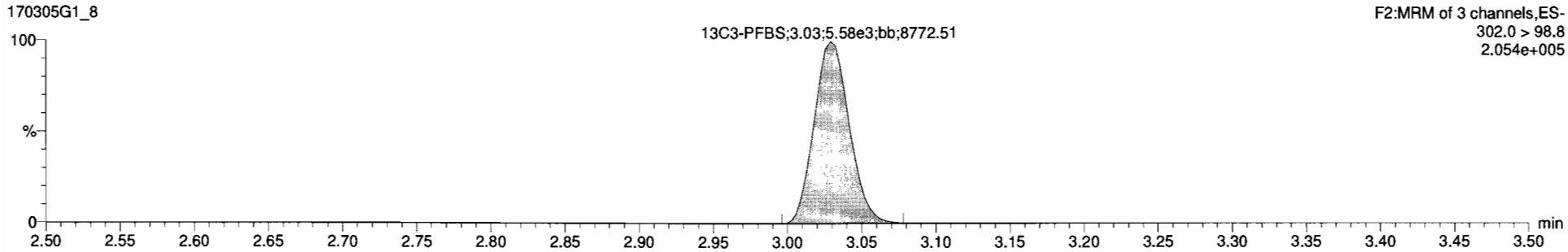

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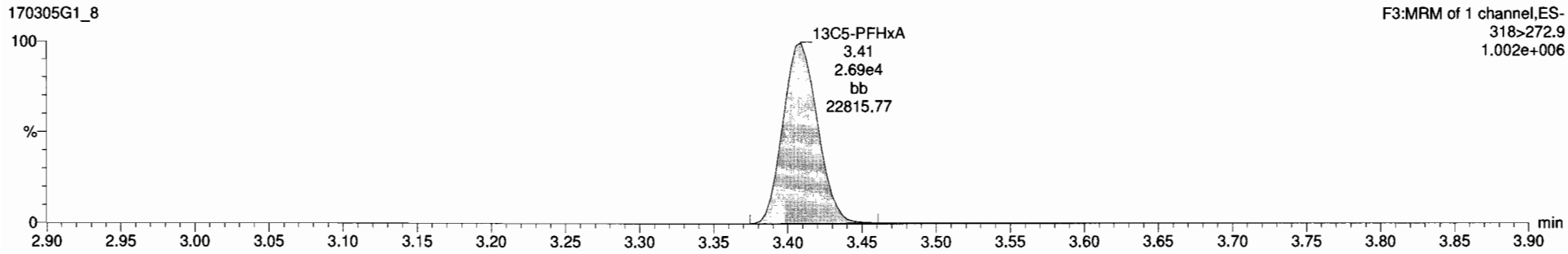

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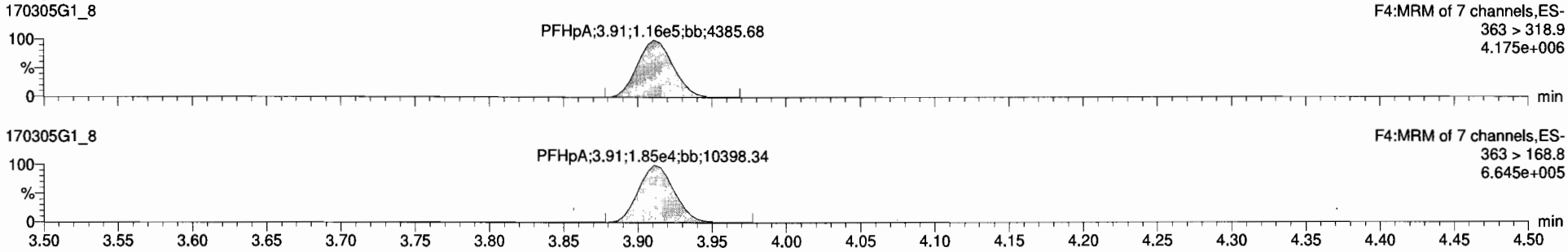

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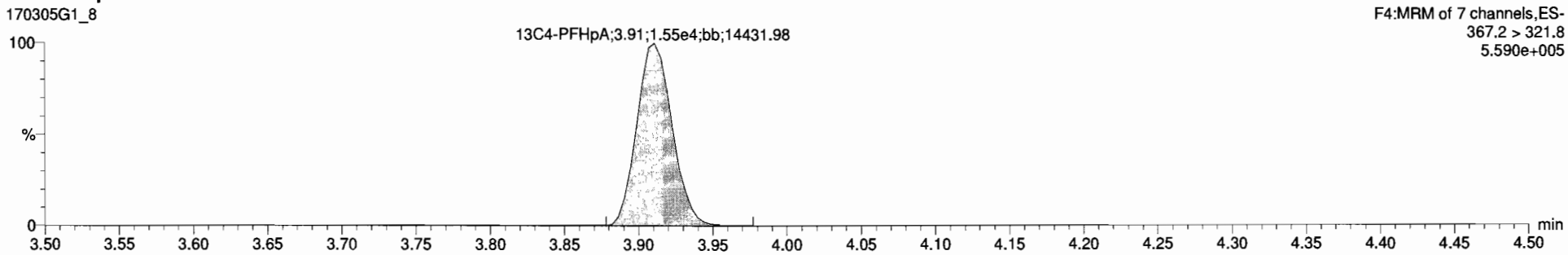

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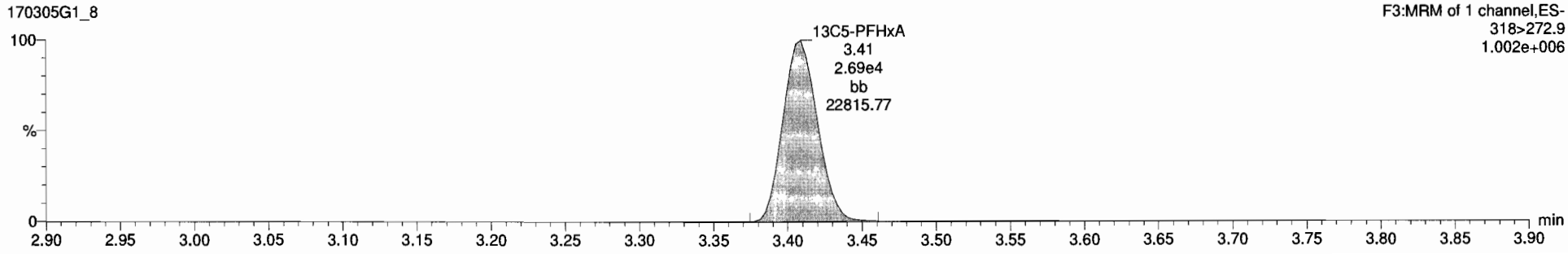

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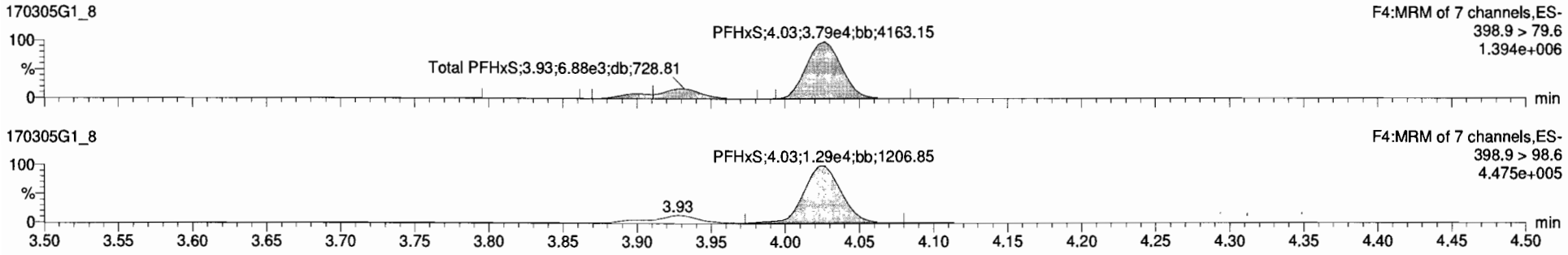
Total PFHxS



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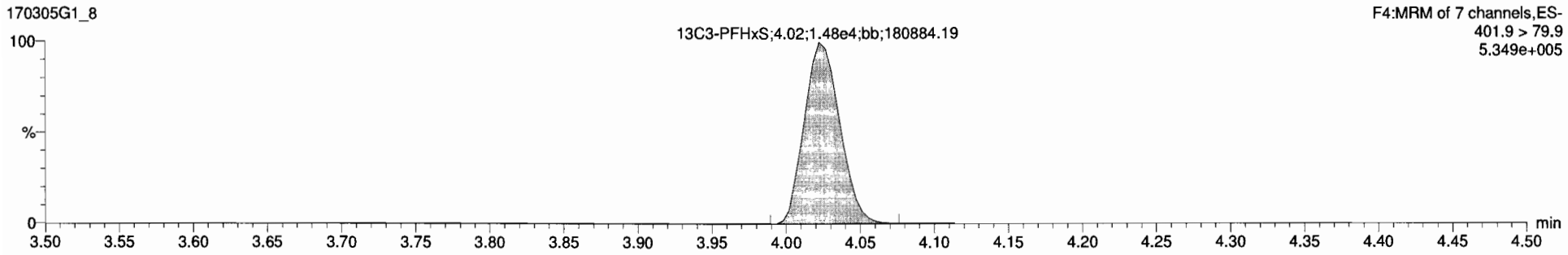
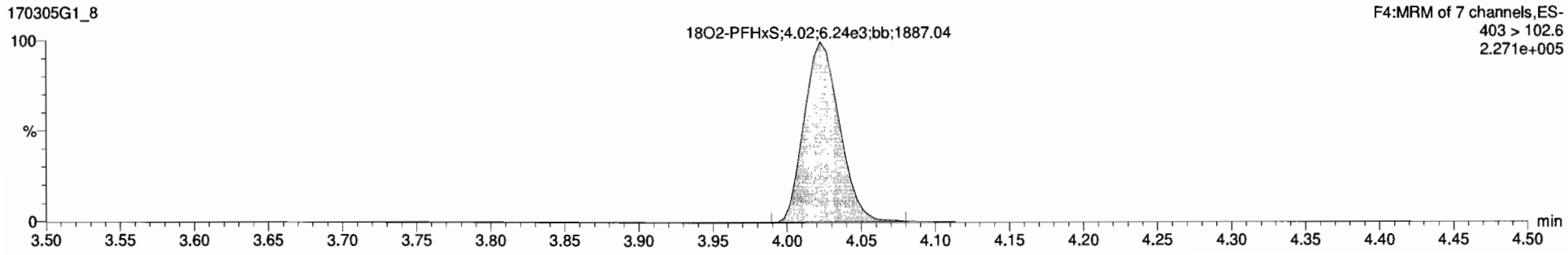
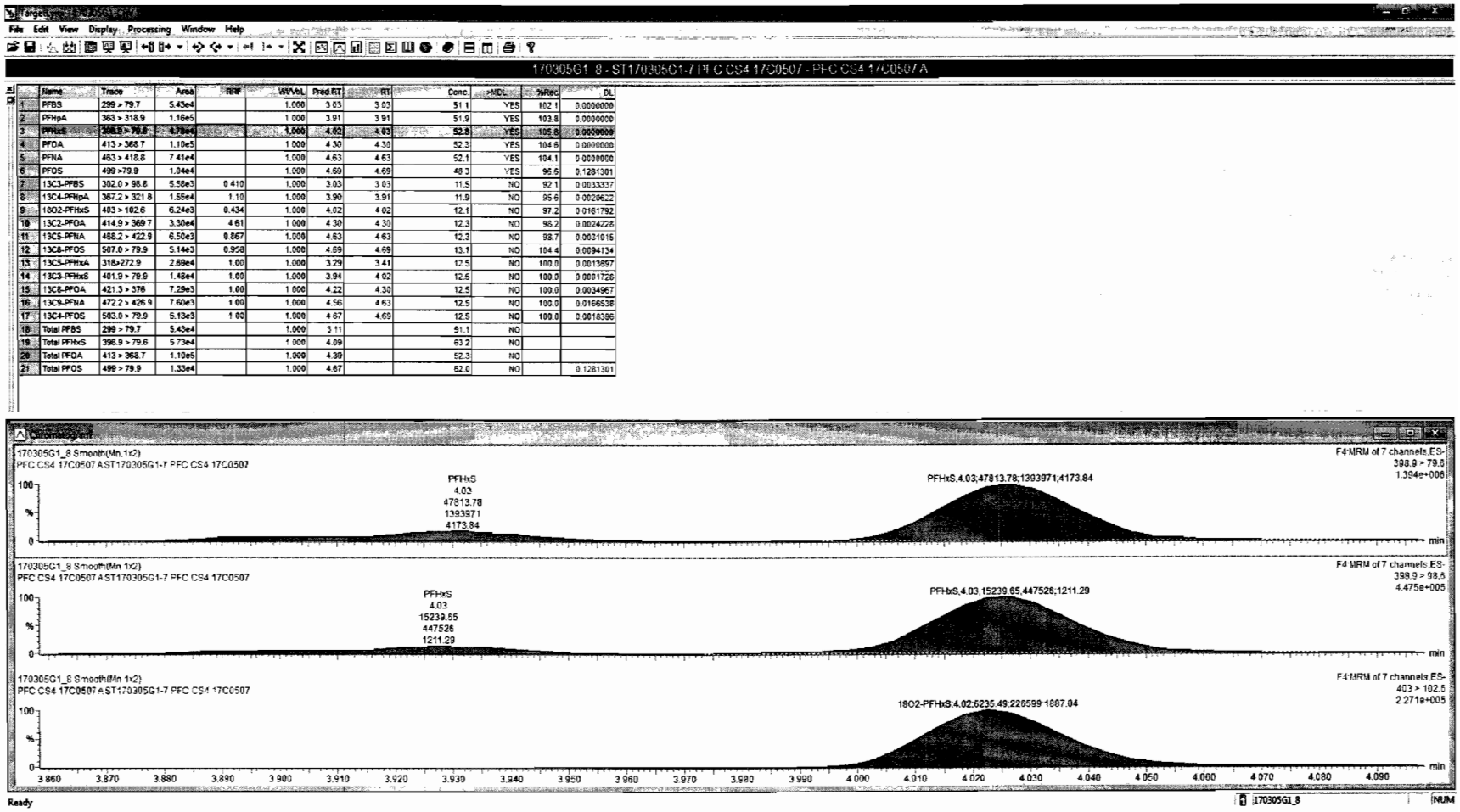


18O2-PFHxS





	Name	Trace	Area	RRF	Wt/VoL	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
2	PFHpA	363 > 318.9	1.16e5		1.000	3.91	3.91	51.9	YES	103.8	0.0000000
3	PFHxS	398.9 > 79.8	4.78e4		1.000	4.02	4.03	52.8	YES	105.6	0.0000000
4	PFOA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
5	PFNA	463 > 418.8	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
6	PFOS	499 >79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.6	0.1281301
7	13C3-PFBS	302.0 > 98.8	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	92.1	0.0033337
8	13C4-PFHpA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	95.6	0.0029622
9	18O2-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0161792
10	13C2-PFOA	414.9 > 369.7	3.30e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024228
11	13C5-PFNA	468.2 > 422.9	6.50e3	0.867	1.000	4.63	4.63	12.3	NO	98.7	0.0031015
12	13C8-PFOS	507.0 > 79.9	5.14e3	0.958	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13	13C5-PFHxA	318>272.9	2.89e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0013897
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.60	1.000	3.94	4.02	12.5	NO	100.0	0.0001726
15	13C8-PFOA	421.3 > 376	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
16	13C9-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0166538
17	13C4-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0018396
18	Total PFBS	299 > 79.7	5.43e4		1.000	3.11		51.1	NO		
19	Total PFHxS	398.9 > 79.6	5.73e4		1.000	4.09		63.2	NO		
20	Total PFOA	413 > 368.7	1.10e5		1.000	4.39		52.3	NO		
21	Total PFOS	499 > 79.9	1.33e4		1.000	4.67		62.0	NO		0.1281301

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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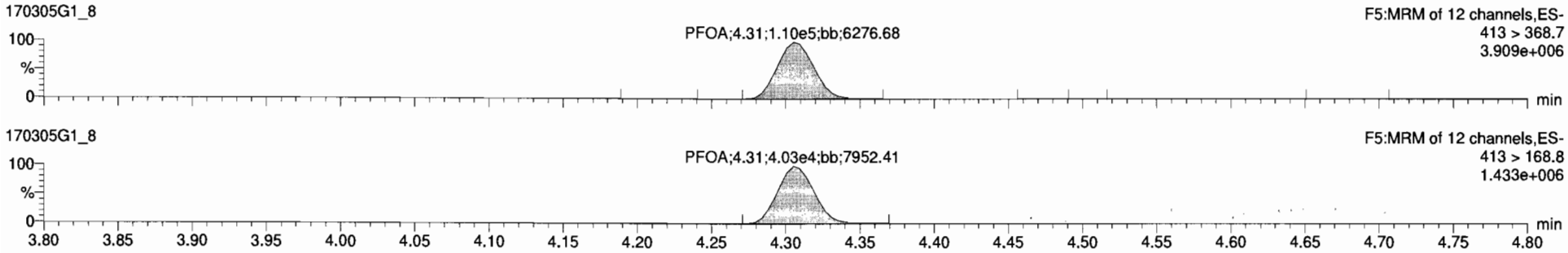
ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

Total PFOA



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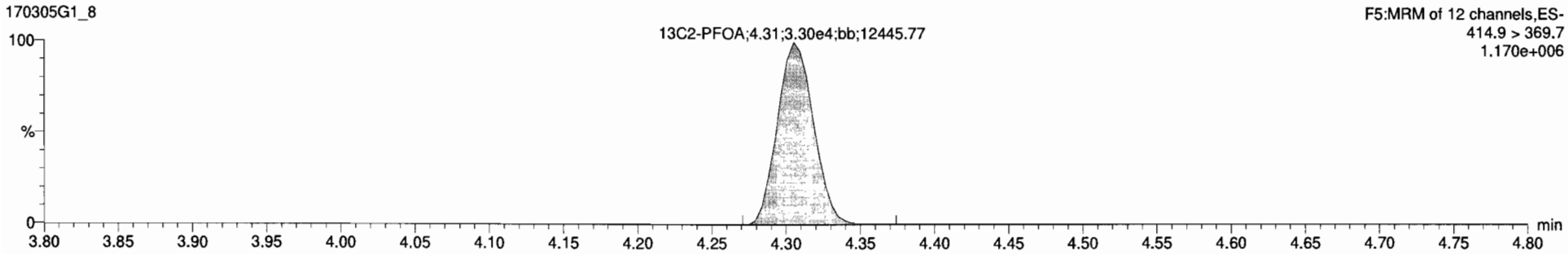

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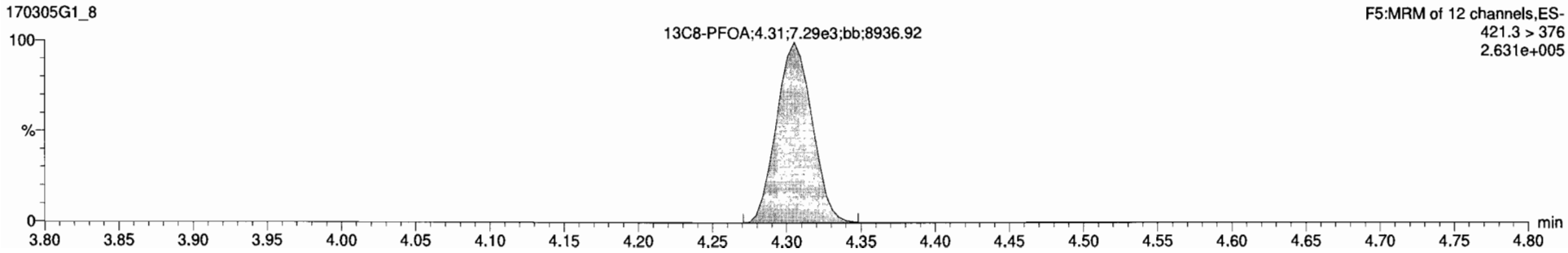

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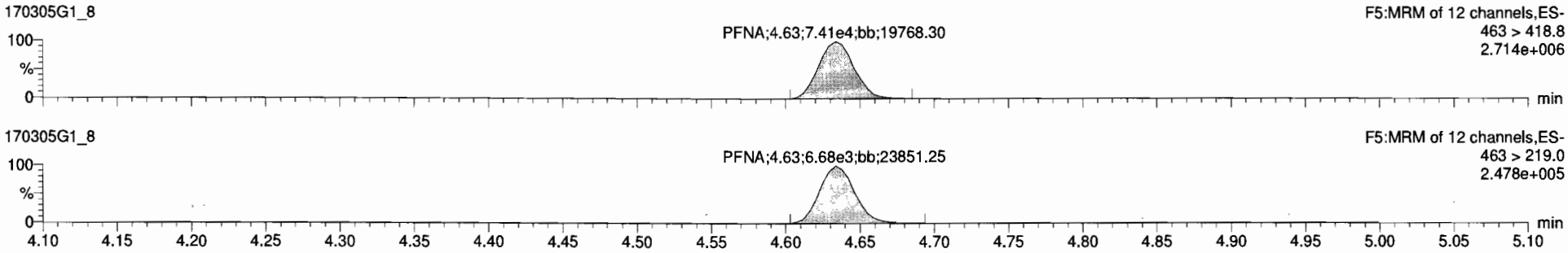

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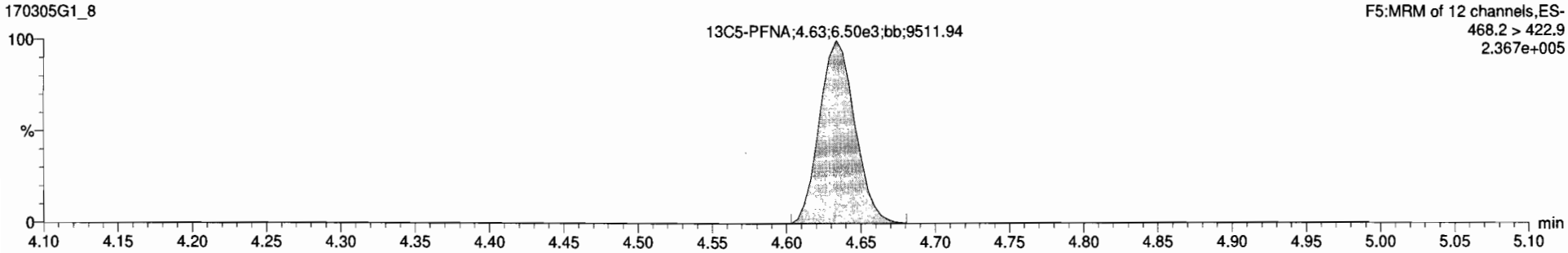

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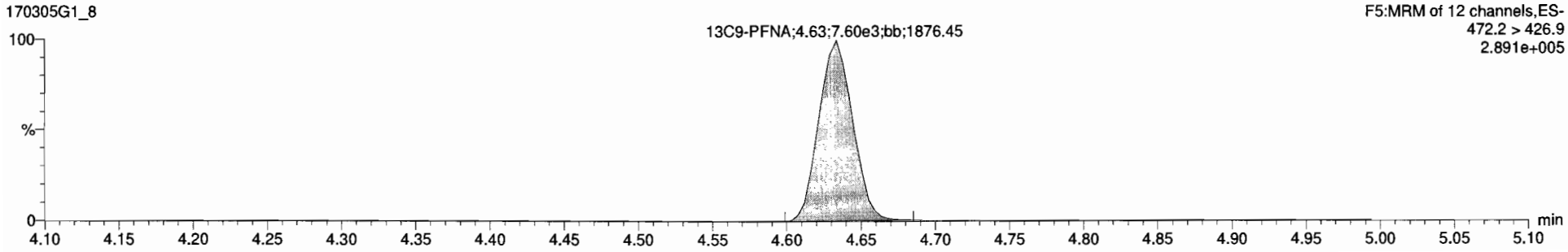

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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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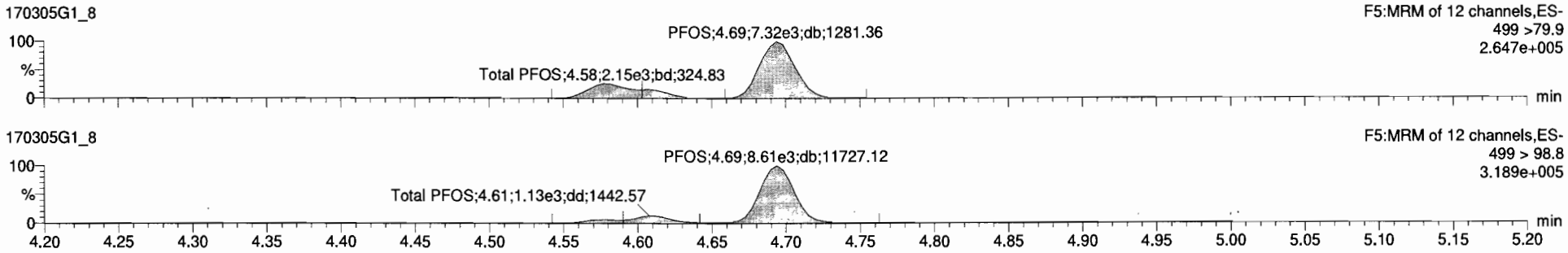
Total PFOS



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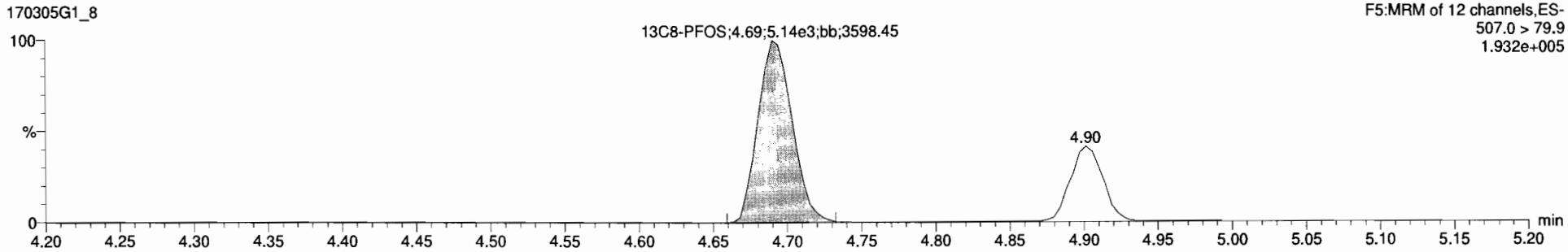

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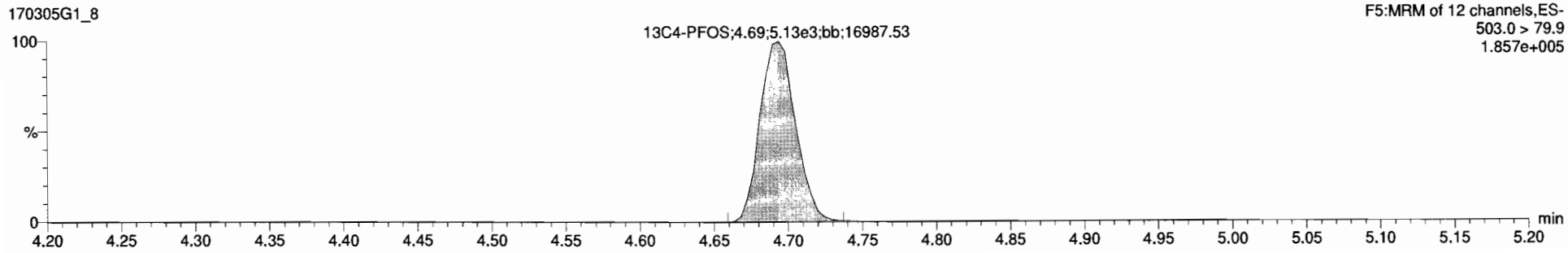

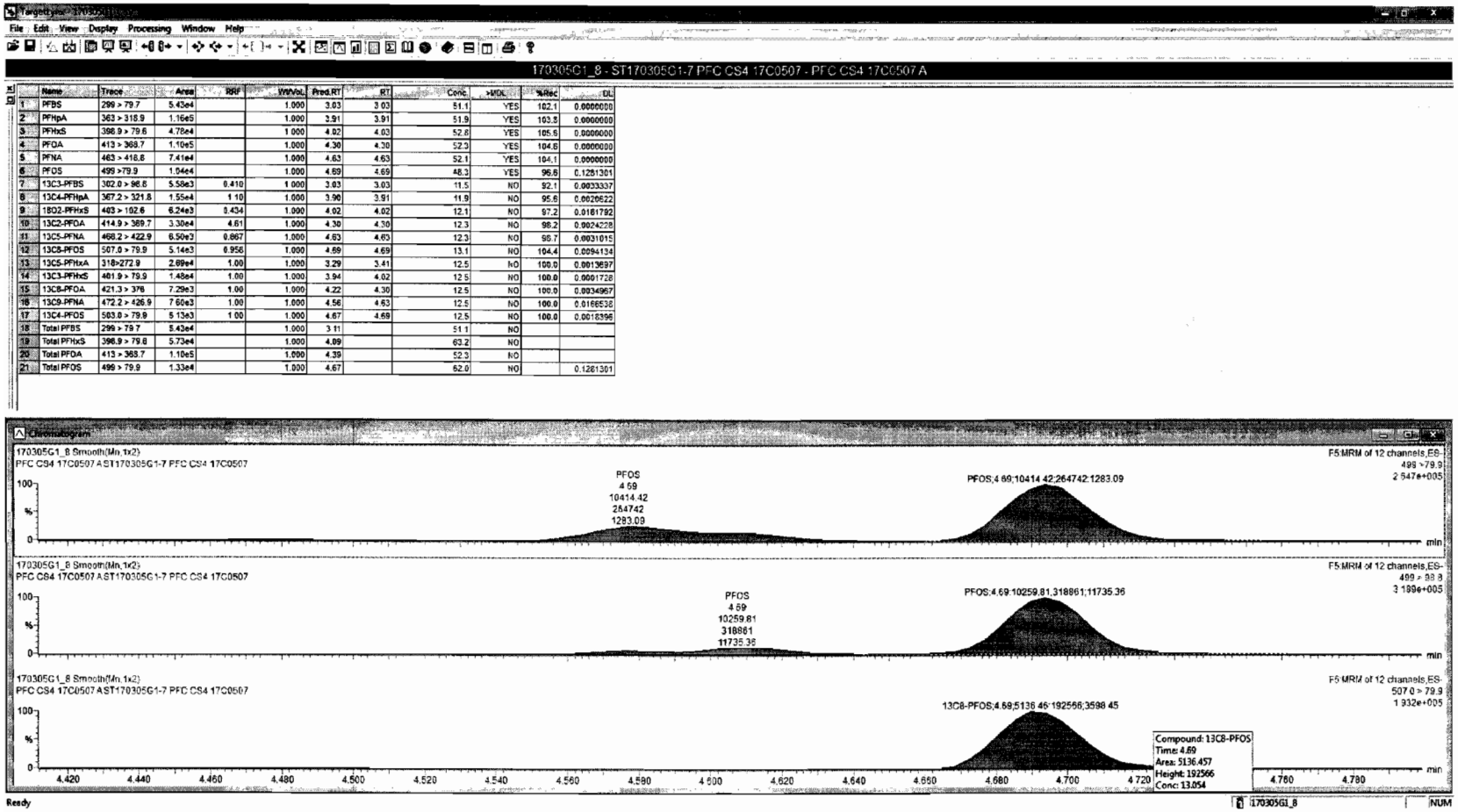

	Name	Trace	Area	RRF	WtVal	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
2	PFHpA	363 > 318.9	1.16e5		1.000	3.91	3.91	51.9	YES	103.8	0.0000000
3	PFHxS	398.9 > 79.8	4.78e4		1.000	4.02	4.03	52.8	YES	105.5	0.0000000
4	PFOA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
5	PFNA	463 > 418.8	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
6	PFOS	499 >79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.6	0.1281301
7	13C3-PFBS	302.0 > 98.8	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	92.1	0.0033337
8	13C4-PFHpA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	95.6	0.0026622
9	18O2-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0161792
10	13C2-PFOA	414.9 > 369.7	3.30e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024228
11	13C5-PFNA	468.2 > 422.9	6.50e3	0.867	1.000	4.63	4.63	12.3	NO	98.7	0.0031015
12	13C8-PFOS	507.0 > 79.9	5.14e3	0.956	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13	13C5-PFHxA	318>272.9	2.89e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0013697
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001728
15	13C8-PFOA	421.3 > 376	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
16	13C9-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0166538
17	13C4-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0018396
18	Total PFBS	299 > 79.7	5.43e4		1.000	3.11		51.1	NO		
19	Total PFHxS	398.9 > 79.8	5.73e4		1.000	4.09		63.2	NO		
20	Total PFOA	413 > 368.7	1.10e5		1.000	4.39		52.3	NO		
21	Total PFOS	499 > 79.9	1.33e4		1.000	4.67		62.0	NO		0.1281301

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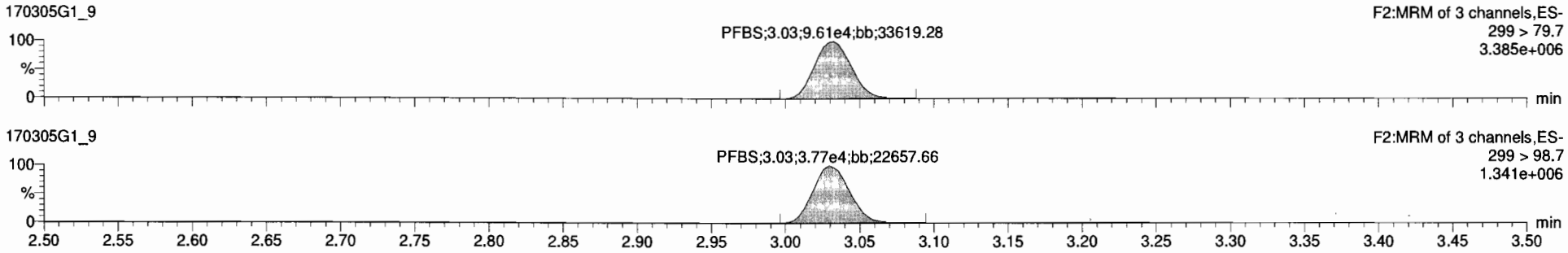
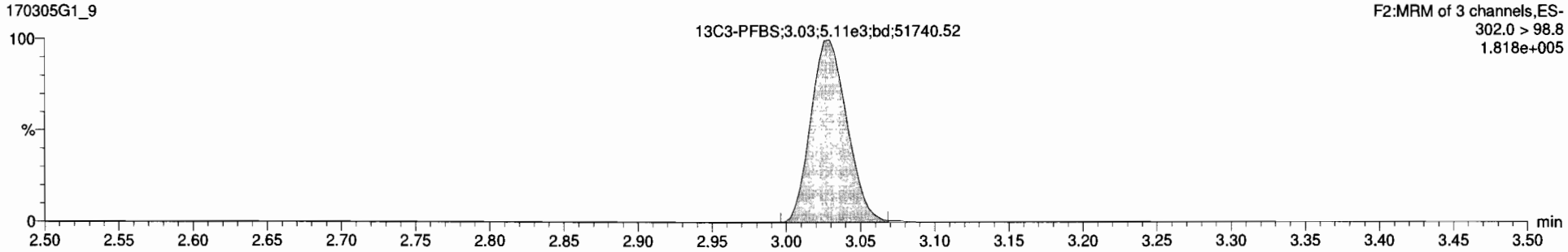
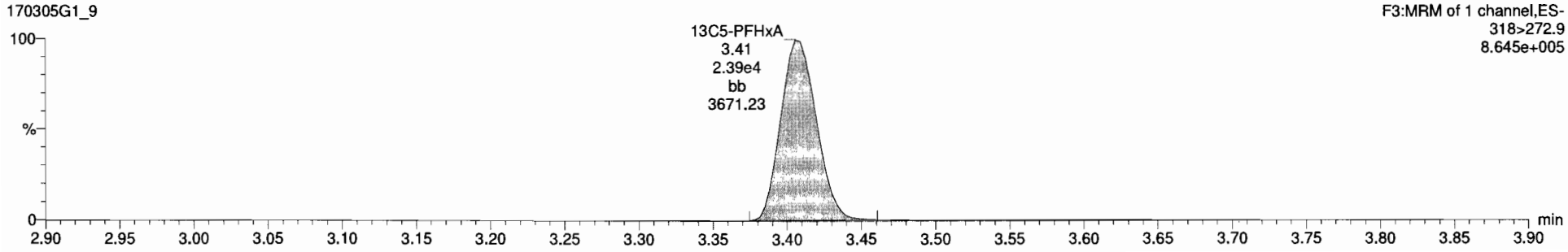
PFBS



13C3-PFBS



13C5-PFHxA



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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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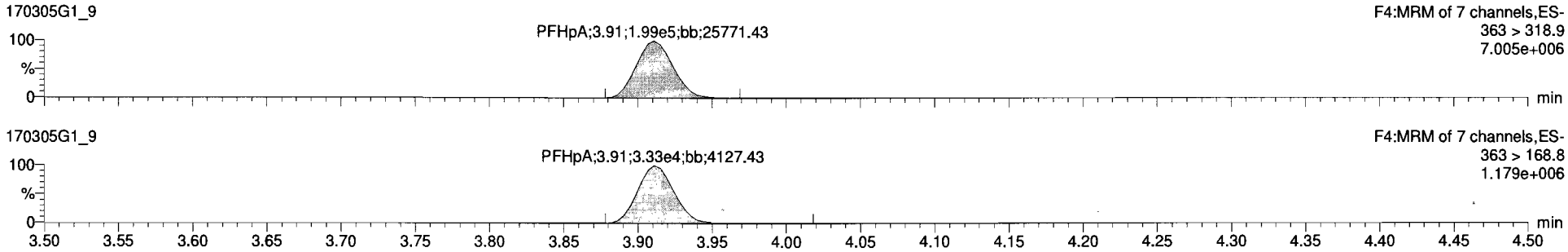
PFHpA



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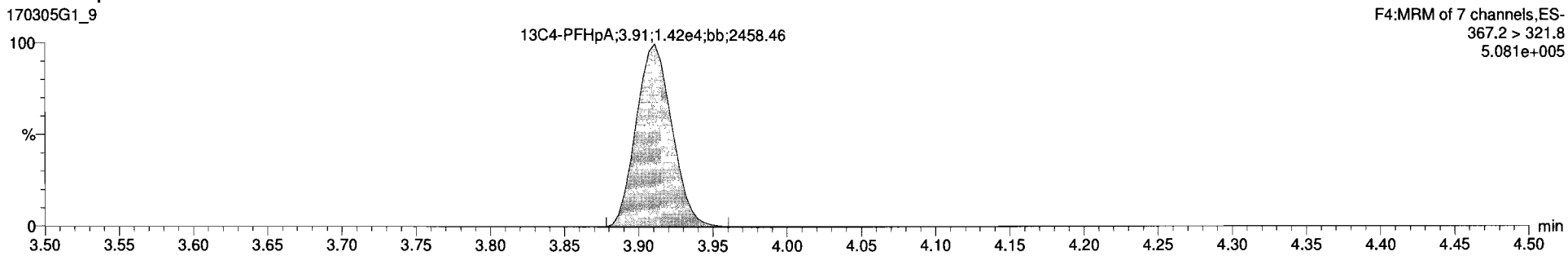

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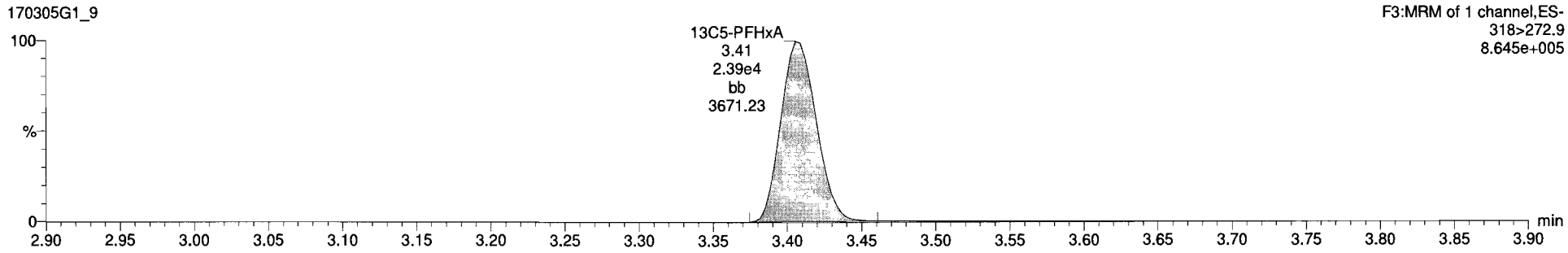

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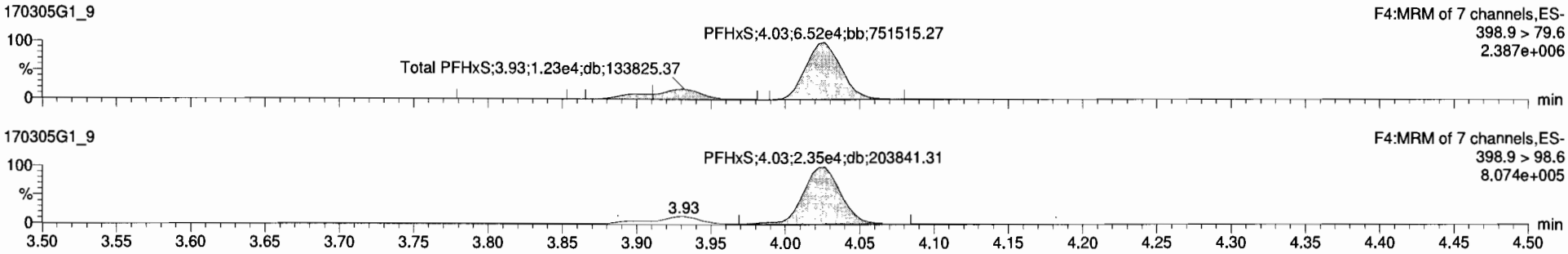
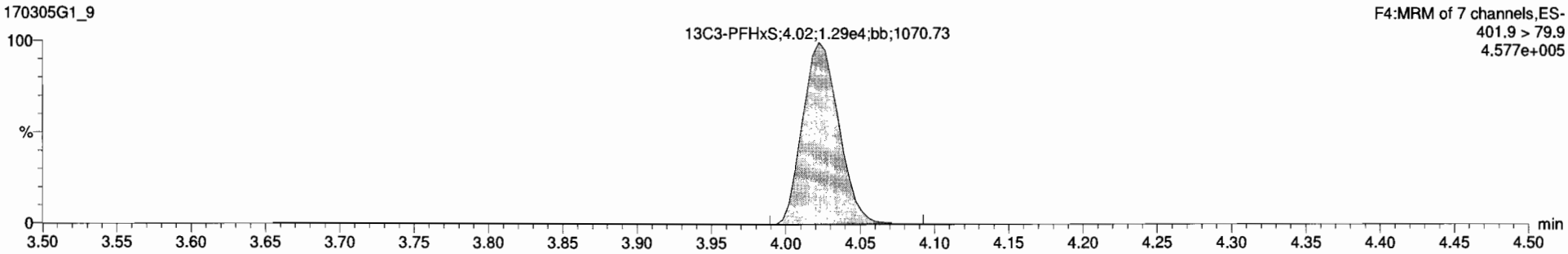
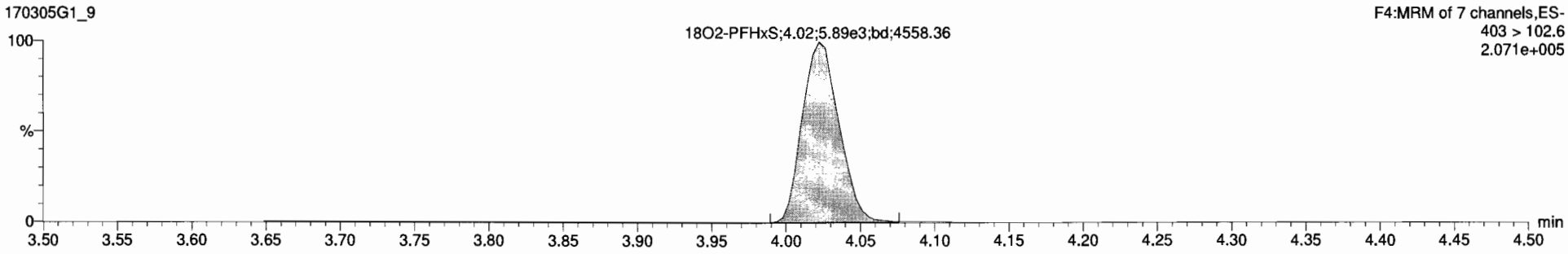
Total PFHxS

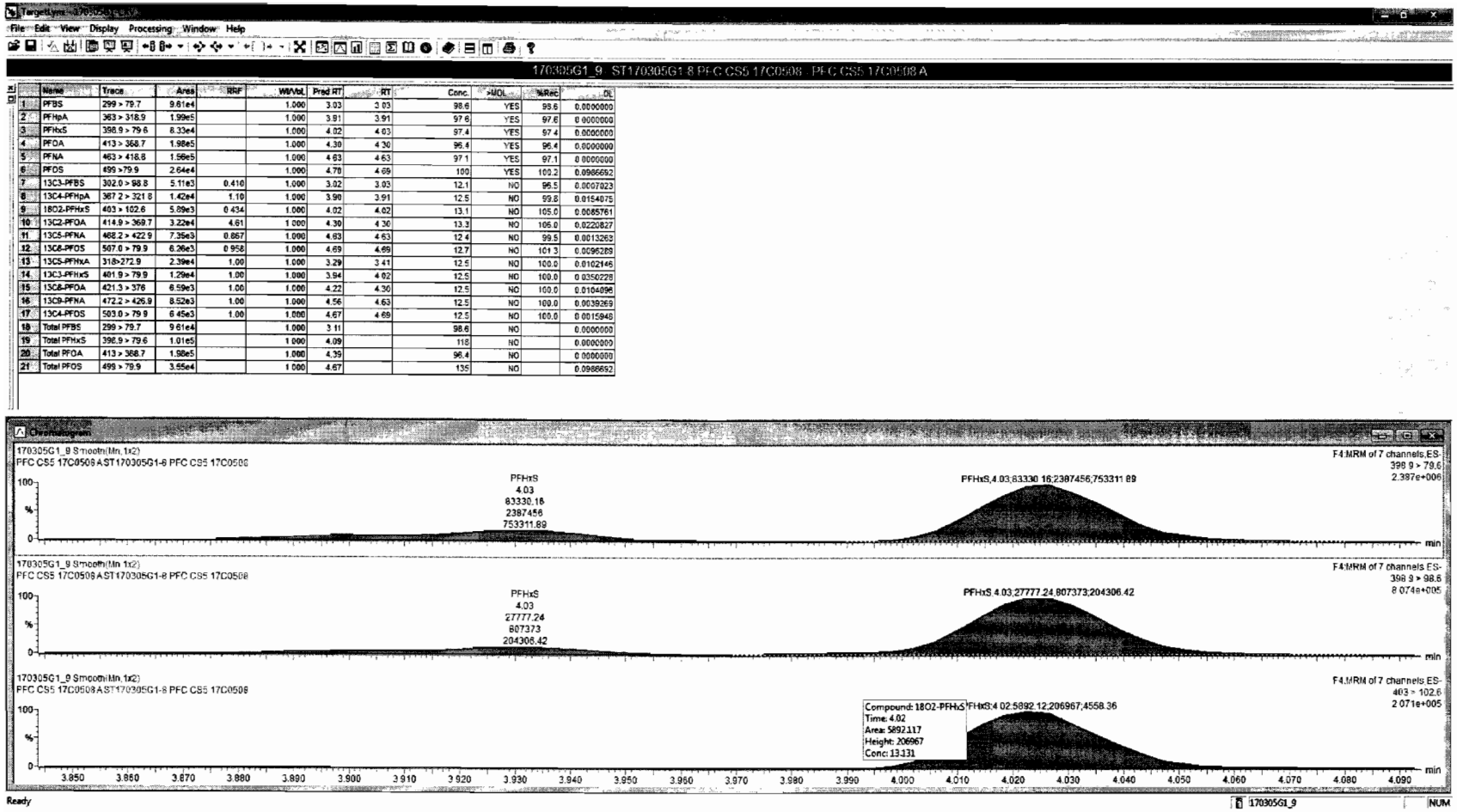


13C3-PFHxS



18O2-PFHxS





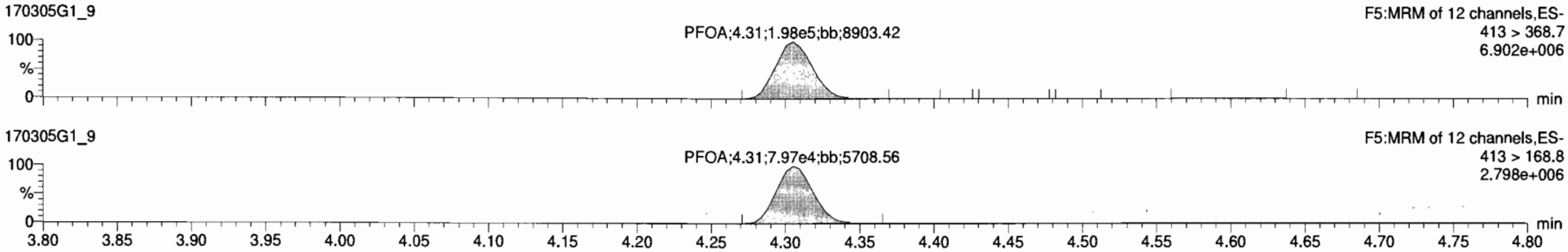
	Name	Trace	Area	RRF	WtVol	Pred RT	RT	Conc.	>IDL	%Rec	DL
1	PFBS	299 > 79.7	9.61e4		1.000	3.03	3.03	98.6	YES	98.6	0.0000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.0000000
3	PFHxS	398.9 > 79.6	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.0000000
4	PFOA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.0000000
5	PFNA	463 > 418.8	1.56e5		1.000	4.63	4.63	97.1	YES	97.1	0.0000000
6	PFOS	499 > 79.9	2.64e4		1.000	4.70	4.69	100	YES	100.2	0.0966692
7	13C3-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.0007023
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154075
9	18O2-PFHxS	403 > 102.6	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0085761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.61	1.000	4.30	4.30	13.3	NO	105.0	0.0220827
11	13C5-PFNA	468.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0013263
12	13C8-PFOS	507.0 > 79.9	6.26e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C5-PFHxA	318>272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C3-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0350228
15	13C8-PFOA	421.3 > 376	8.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104096
16	13C9-PFNA	472.2 > 426.9	8.52e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039269
17	13C4-PFOS	503.0 > 79.9	6.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0015948
18	Total PFBS	299 > 79.7	9.61e4		1.000	3.11		98.6	NO		0.0000000
19	Total PFHxS	398.9 > 79.6	1.01e5		1.000	4.09		118	NO		0.0000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		98.4	NO		0.0000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.0966692

Dataset: Untitled

Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-8 PFC CS5 17C0508, Description: PFC CS5 17C0508 A, Name: 170305G1_9, Date: 05-Mar-2017, Time: 14:14:34, Instrument: , Lab: , User:

Total PFOA



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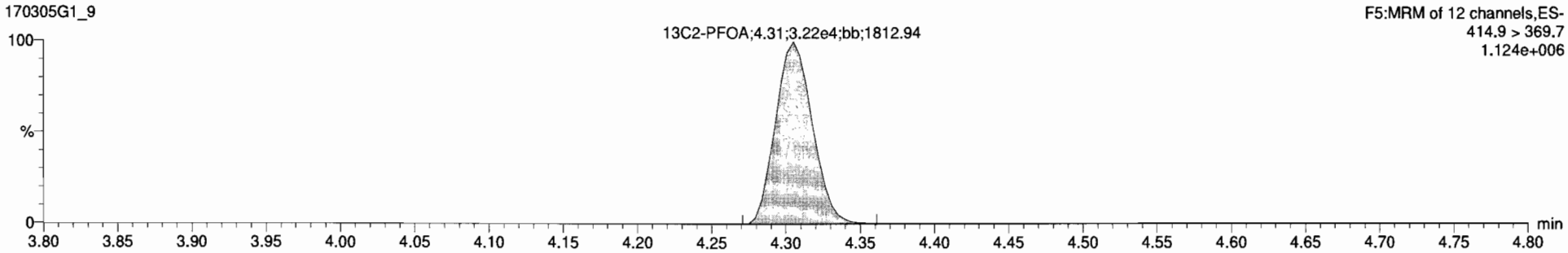

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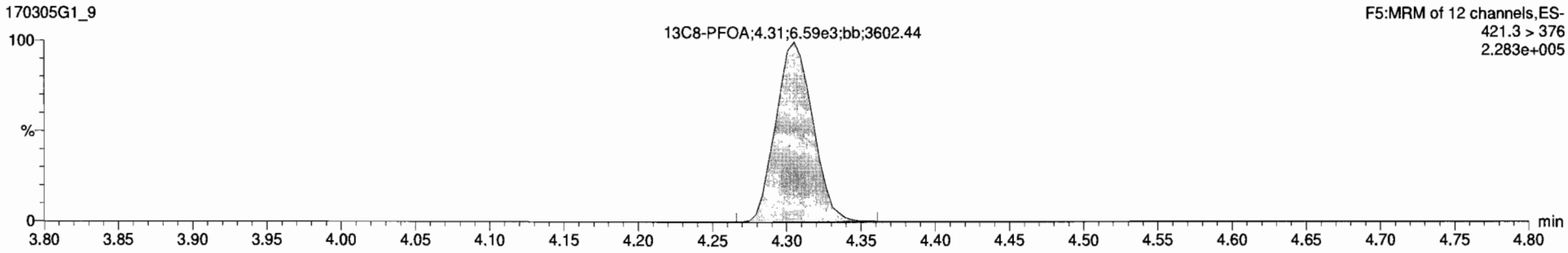

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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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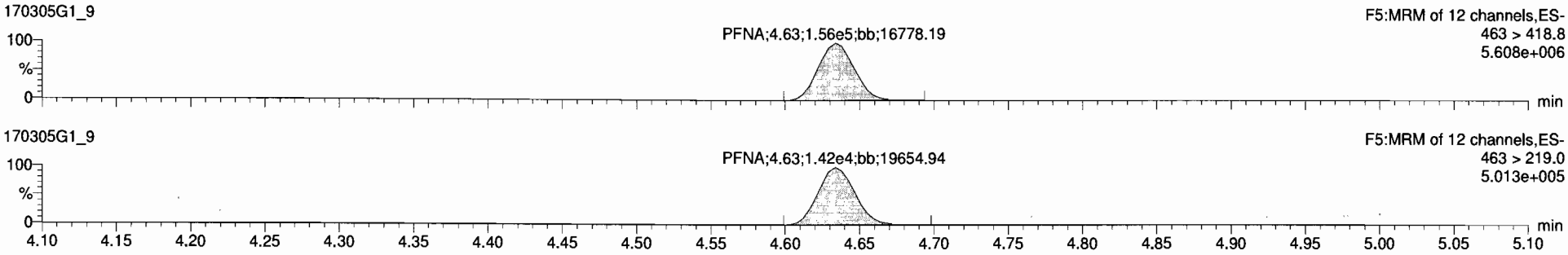
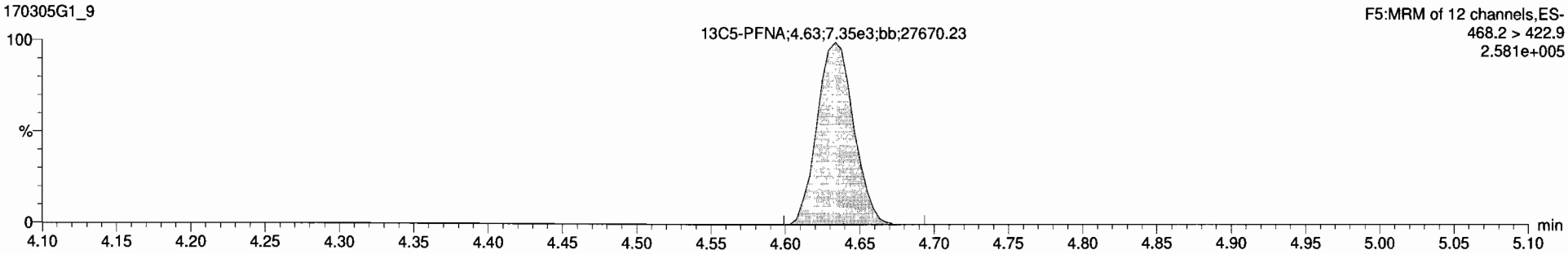
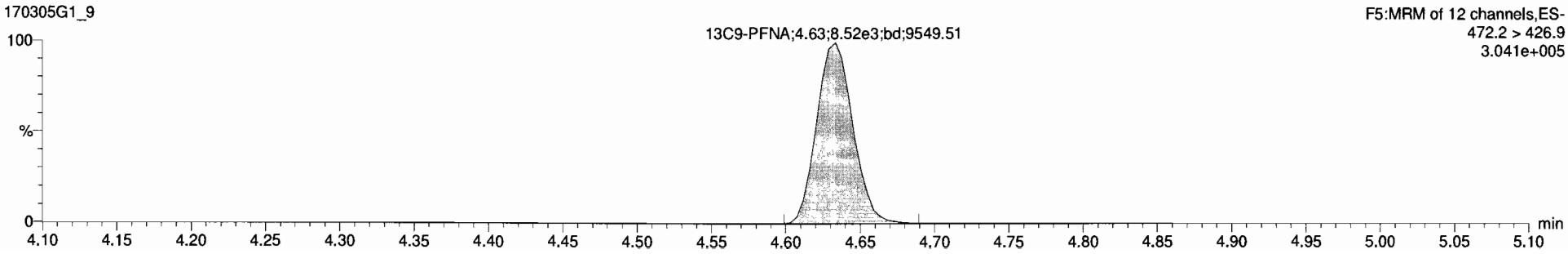
PFNA



13C5-PFNA



13C9-PFNA



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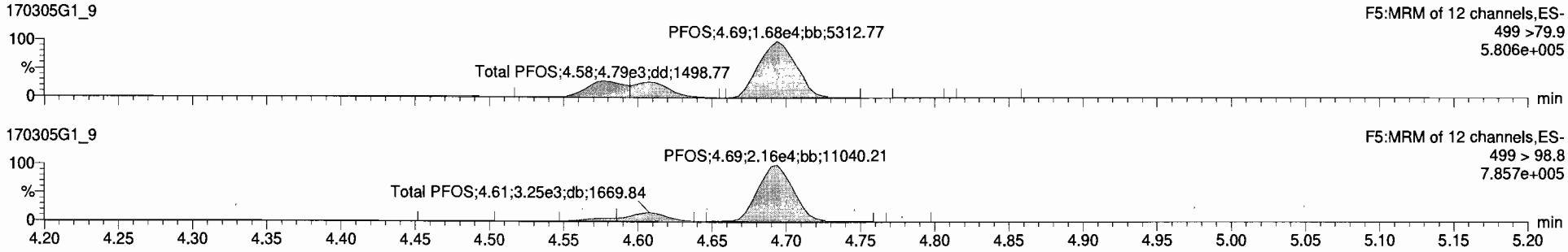
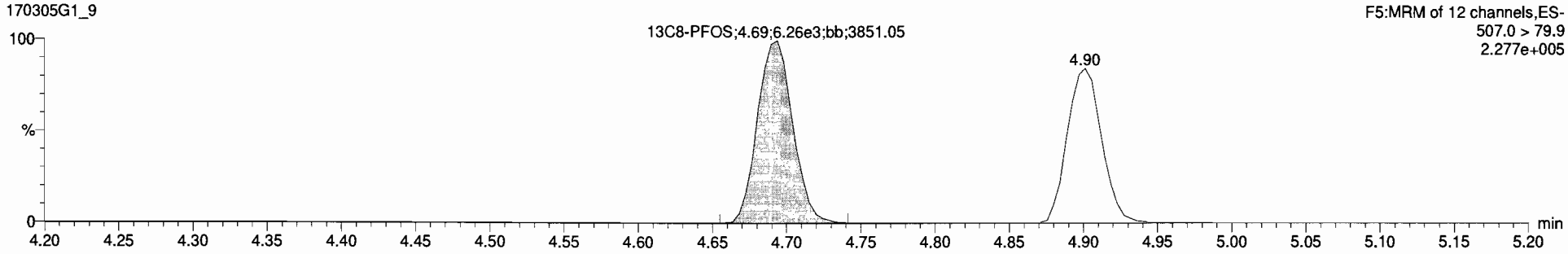
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-8 PFC CS5 17C0508, Description: PFC CS5 17C0508 A, Name: 170305G1_9, Date: 05-Mar-2017, Time: 14:14:34, Instrument: , Lab: , User:

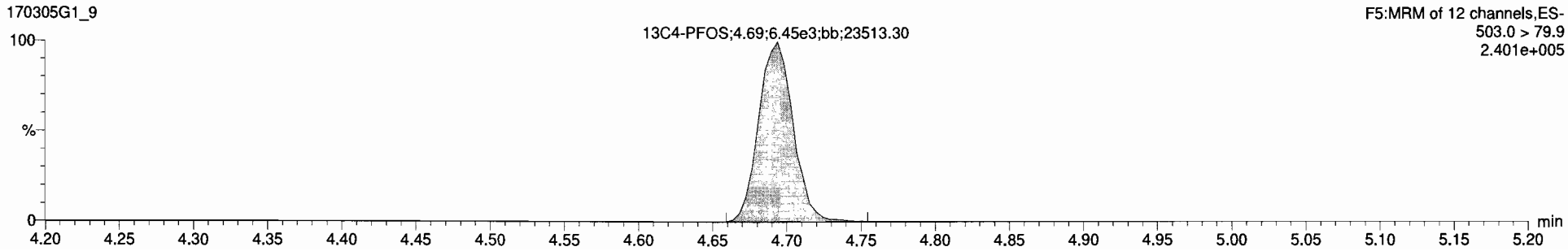
Total PFOS

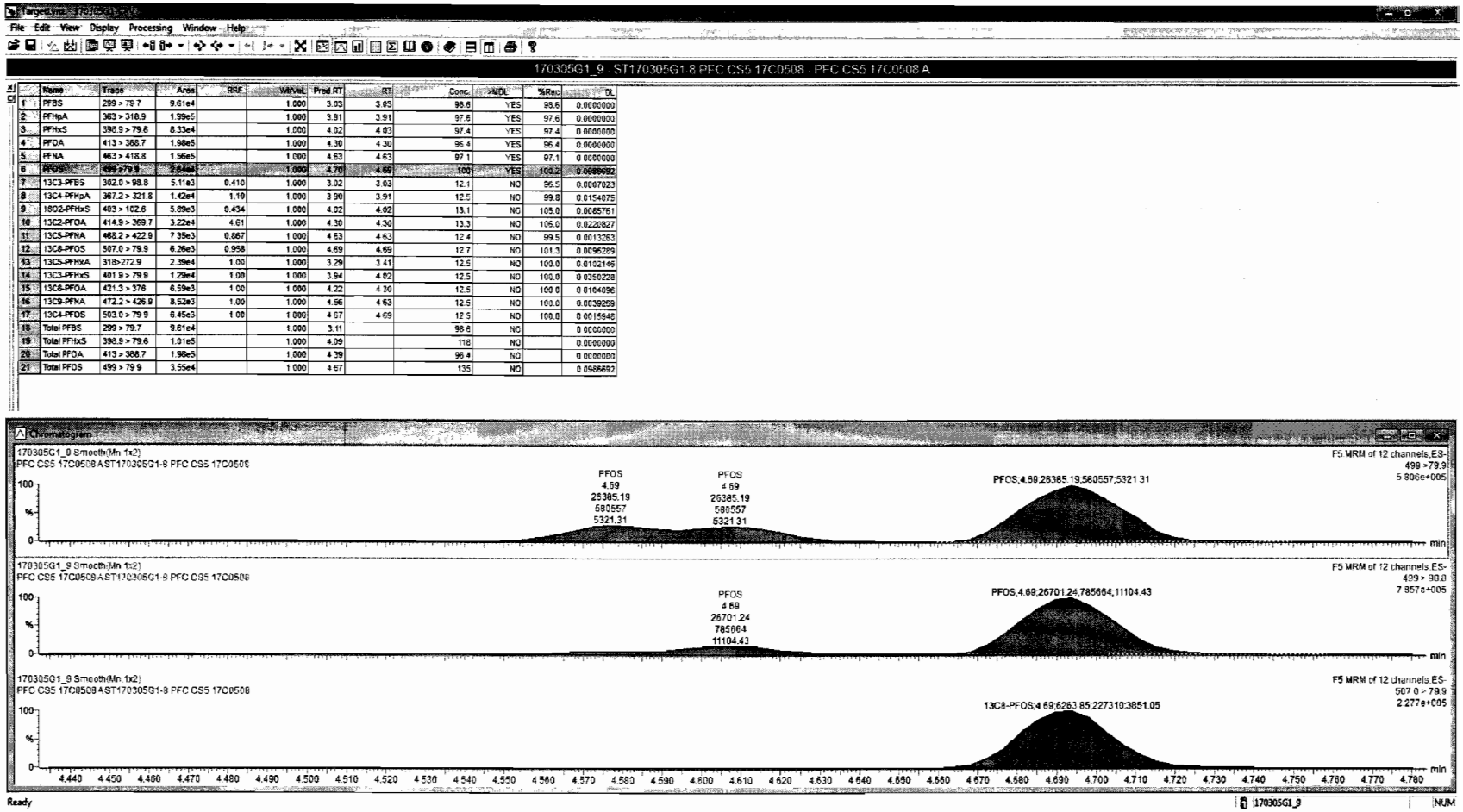


13C8-PFOS



13C4-PFOS





	Name	Trace	Area	RRF	WtVal	Pred RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	9.61e4		1.000	3.03	3.03	98.6	YES	98.6	0.0000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.0000000
3	PFHxS	398.9 > 79.6	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.0000000
4	PFOA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.0000000
5	PFNA	463 > 418.8	1.56e5		1.000	4.63	4.63	97.1	YES	97.1	0.0000000
6	PFOS	499 > 79.9	2.64e4		1.000	4.70	4.69	100	YES	100.2	0.0986692
7	13C3-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.0007023
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154875
9	1802-PFHxS	403 > 102.8	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0085761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.61	1.000	4.30	4.30	13.3	NO	105.0	0.0220827
11	13C5-PFNA	468.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0013263
12	13C8-PFOS	507.0 > 79.9	6.26e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C5-PFHxA	318>272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C3-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0250228
15	13C8-PFOA	421.3 > 376	6.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104096
16	13C9-PFNA	472.2 > 426.9	8.52e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039259
17	13C4-PFDS	503.0 > 79.9	6.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0015948
18	Total PFBS	299 > 79.7	9.61e4		1.000	3.11		98.6	NO		0.0000000
19	Total PFHxS	398.9 > 79.6	1.01e5		1.000	4.09		118	NO		0.0000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.0000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.0986692

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-11.qld

Last Altered: Monday, March 06, 2017 09:12:14 Pacific Standard Time
Printed: Monday, March 06, 2017 09:13:06 Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.09e4	6.54e3		1.000	3.03	8.70	87.0
2	2	PFHpA	363 > 318.9	2.52e4	1.73e4		1.000	3.91	10.0	100.4
3	3	PFHxS	398.9 > 79.6	8.94e3	6.56e3		1.000	4.03	9.33	93.3
4	4	PFOA	413 > 368.7	2.26e4	3.20e4		1.000	4.31	10.9	108.7
5	5	PFNA	463 > 418.8	1.28e4	5.80e3		1.000	4.63	10.0	100.4
6	6	PFOS	499 >79.9	2.01e3	4.01e3		1.000	4.69	11.7	117.2
7	7	13C3-PFBS	302.0 > 98.8	6.54e3	1.49e4	0.410	1.000	3.03	13.4	106.8
8	8	13C4-PFHpA	367.2 > 321.8	1.73e4	1.49e4	1.098	1.000	3.91	13.2	105.7
9	9	18O2-PFHxS	403 > 102.6	6.56e3	1.49e4	0.434	1.000	4.02	12.6	101.2
10	10	13C2-PFOA	414.9 > 369.7	3.20e4	7.38e3	4.608	1.000	4.31	11.8	94.1
11	11	13C5-PFNA	468.2 > 422.9	5.80e3	6.69e3	0.867	1.000	4.63	12.5	99.9
12	12	13C8-PFOS	507.0 > 79.9	4.01e3	4.48e3	0.958	1.000	4.69	11.7	93.4
13	13	13C5-PFHxA	318>272.9	2.89e4	2.89e4	1.000	1.000	3.41	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	1.49e4	1.49e4	1.000	1.000	4.03	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	7.38e3	7.38e3	1.000	1.000	4.31	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	6.69e3	6.69e3	1.000	1.000	4.63	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	4.48e3	4.48e3	1.000	1.000	4.69	12.5	100.0

75-125

ES 3/6/17

✓AC 3/6/17

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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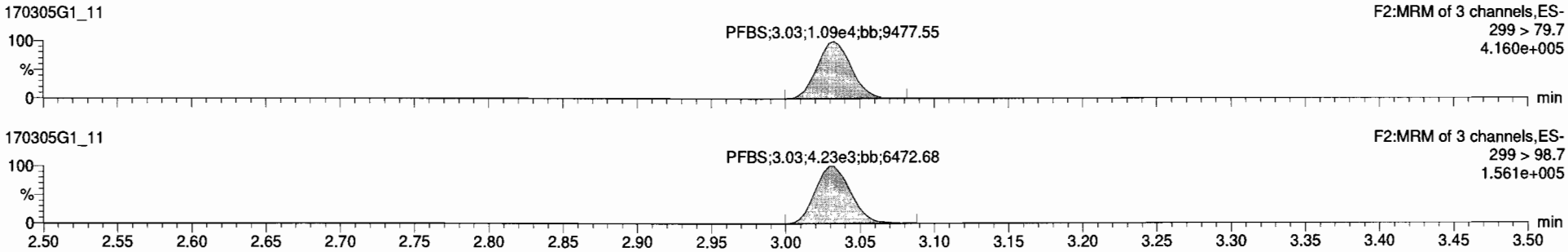
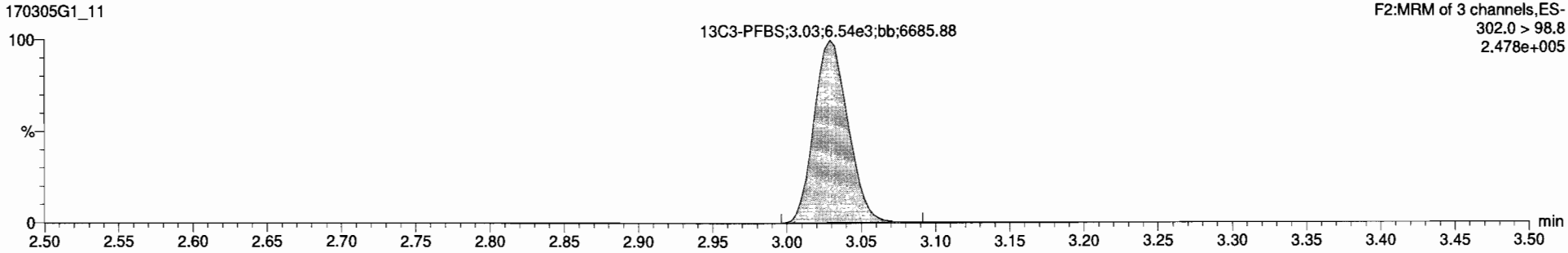
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

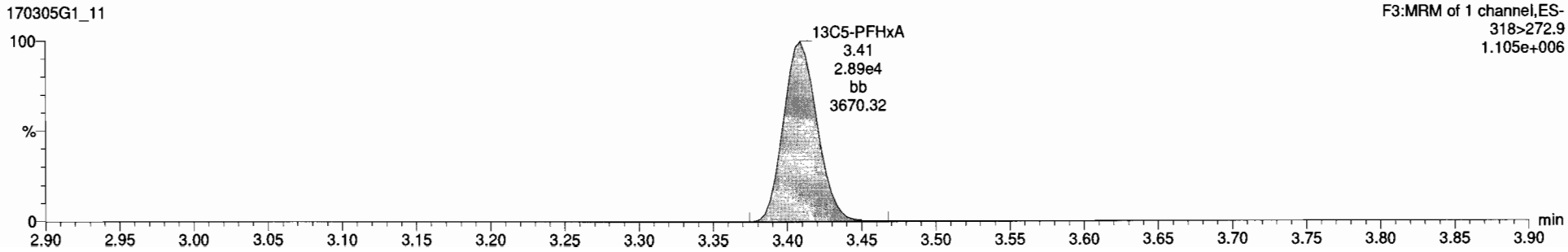
PFBS



13C3-PFBS



13C5-PFHxA



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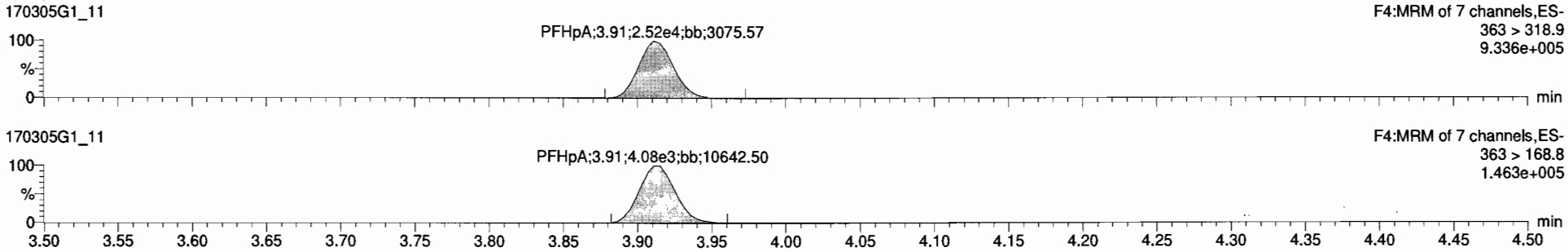
Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

PFHpA



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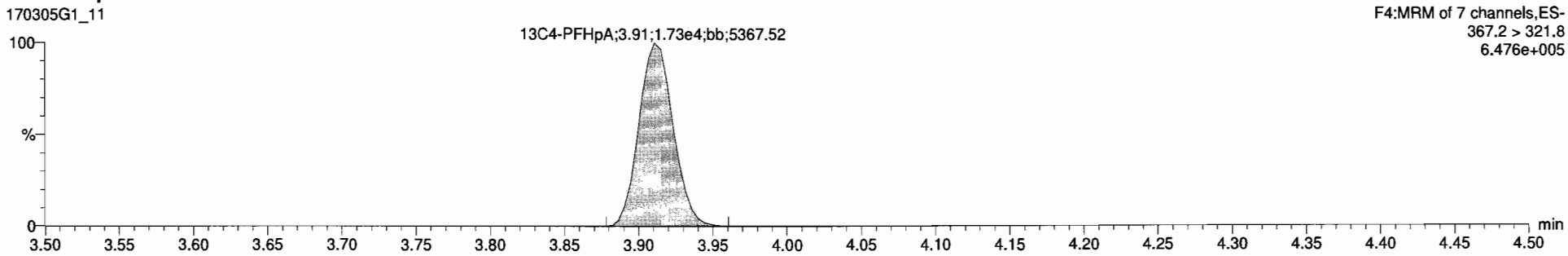

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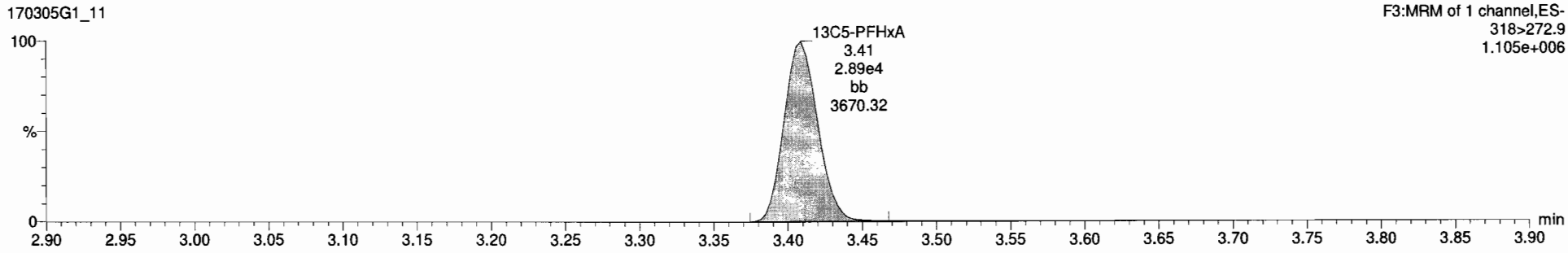

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Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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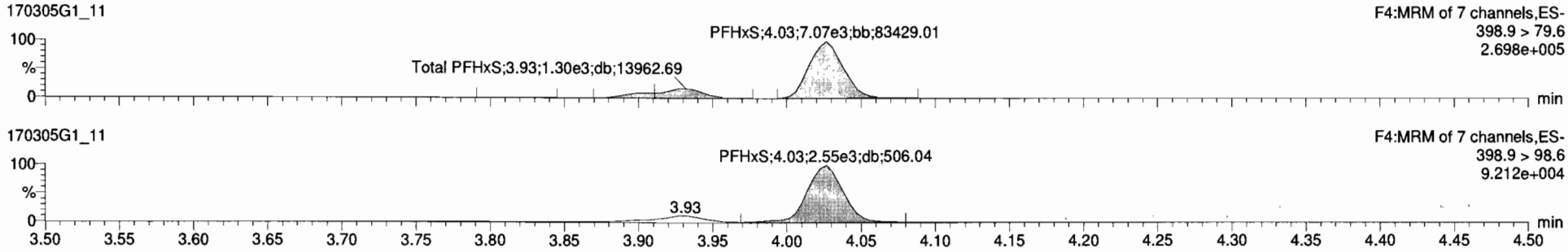
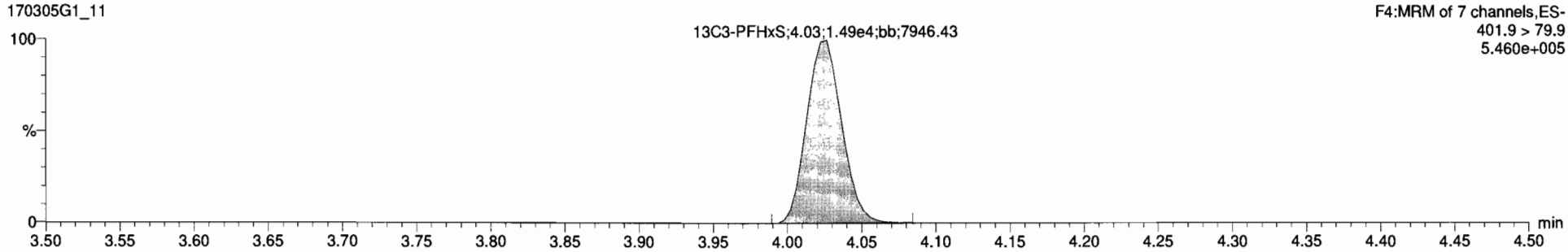
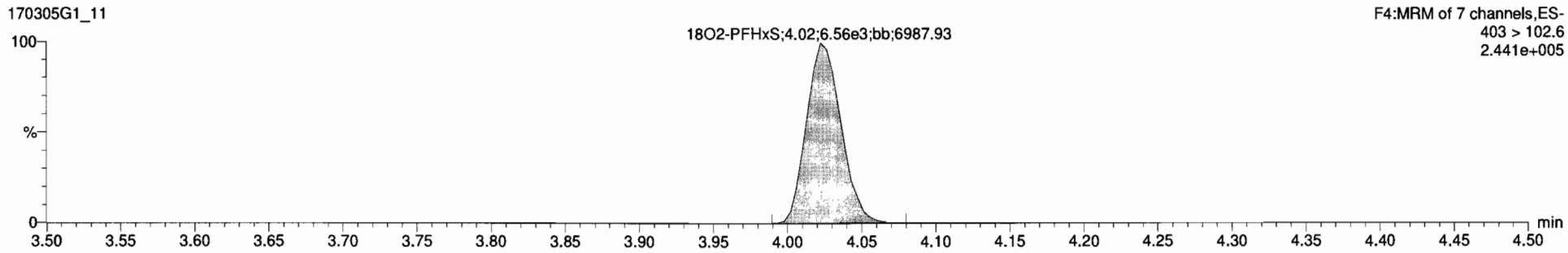
Total PFHxS

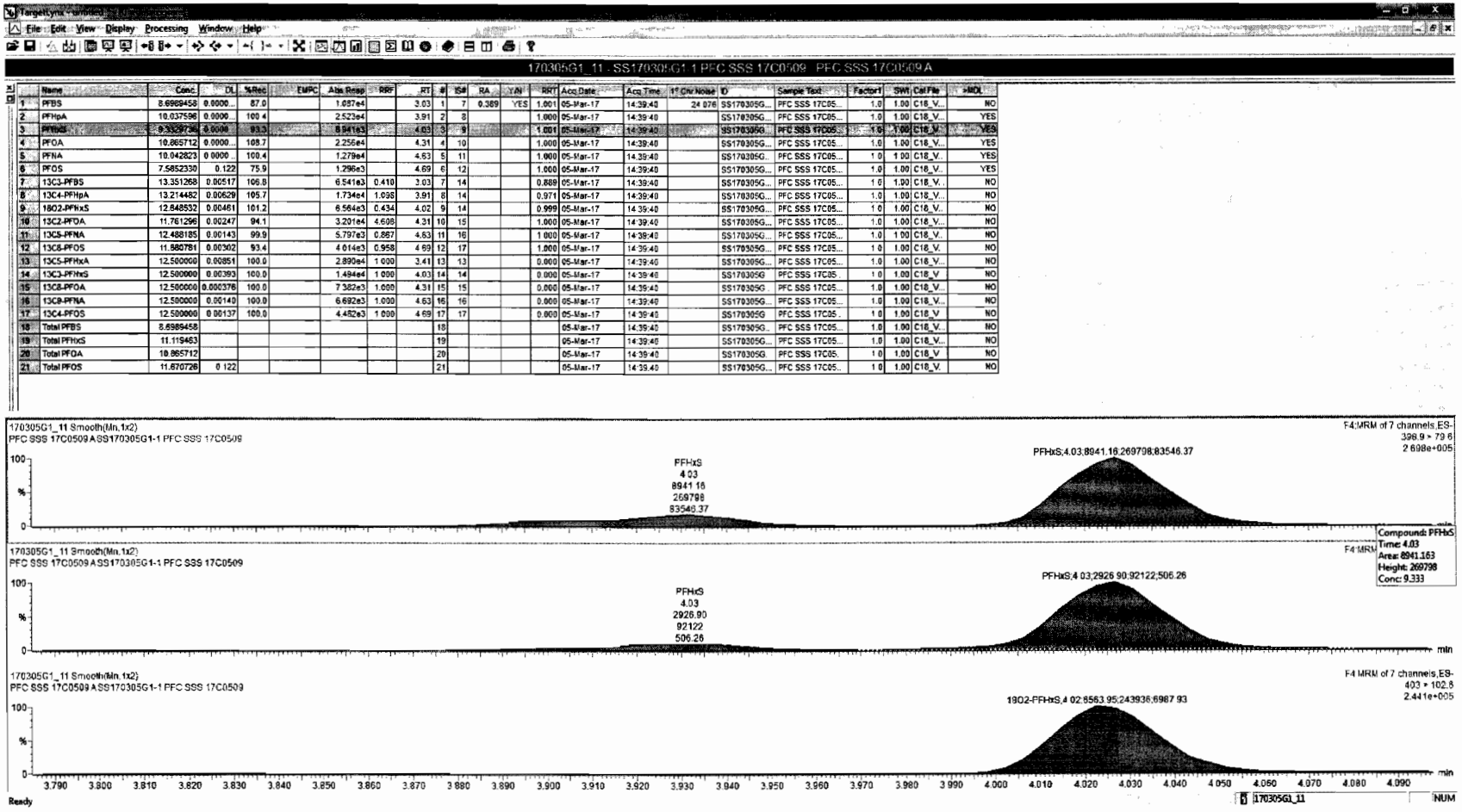


13C3-PFHxS



18O2-PFHxS





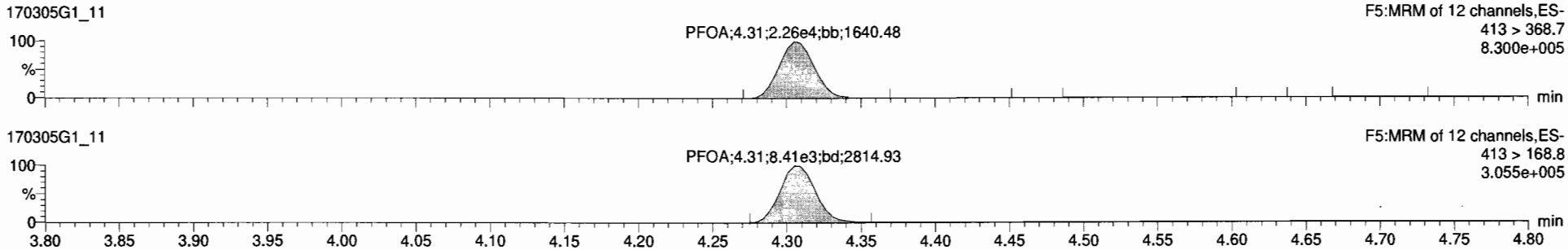
	Name	Conc.	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	IS#	RA	Y/N	RRT	Acq Date	Acq Time	1st Chr Noise	ID	Sample Text	Factor1	Swt	Cal File	>MDL
1	PFBS	8.698458	0.0000...	87.0		1.687e4		3.03	1	7	0.389	YES	1.001	05-Mar-17	14:39:40	24 076	SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
2	PFHpA	10.037598	0.0000...	100.4		2.523e4		3.91	2	8			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
3	PFHxS	9.332736	0.0000	93.3		8.941e3		4.03	3	9			1.001	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
4	PFOA	10.865712	0.0000...	108.7		2.256e4		4.31	4	10			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
5	PFNA	10.042823	0.0000	100.4		1.279e4		4.63	5	11			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
6	PFOS	7.5852330	0.122	75.9		1.296e3		4.69	6	12			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	13.351268	0.00517	106.8		6.541e3	0.410	3.03	7	14			0.888	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	13.214482	0.00629	105.7		1.734e4	1.098	3.91	8	14			0.971	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
9	1802-PFHxS	12.848532	0.00461	101.2		6.564e3	0.434	4.02	9	14			0.999	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
10	13C2-PFDA	11.761296	0.00247	94.1		3.201e4	4.608	4.31	10	15			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	12.488185	0.00143	99.9		5.797e3	0.887	4.63	11	16			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
12	13C8-PFOS	11.880781	0.00302	93.4		4.014e3	0.958	4.69	12	17			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00851	100.0		2.890e4	1.000	3.41	13	13			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
14	13C3-PFHxS	12.500000	0.00393	100.0		1.494e4	1.000	4.03	14	14			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
15	13C8-PFOA	12.500000	0.000376	100.0		7.382e3	1.000	4.31	15	15			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
16	13C9-PFNA	12.500000	0.00140	100.0		6.692e3	1.000	4.63	16	16			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00137	100.0		4.452e3	1.000	4.69	17	17			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V	NO
18	Total PFBS	8.698458							18					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
19	Total PFHxS	11.115463							19					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
20	Total PFOA	10.865712							20					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V	NO
21	Total PFOS	11.870726	0.122						21					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

Total PFOA



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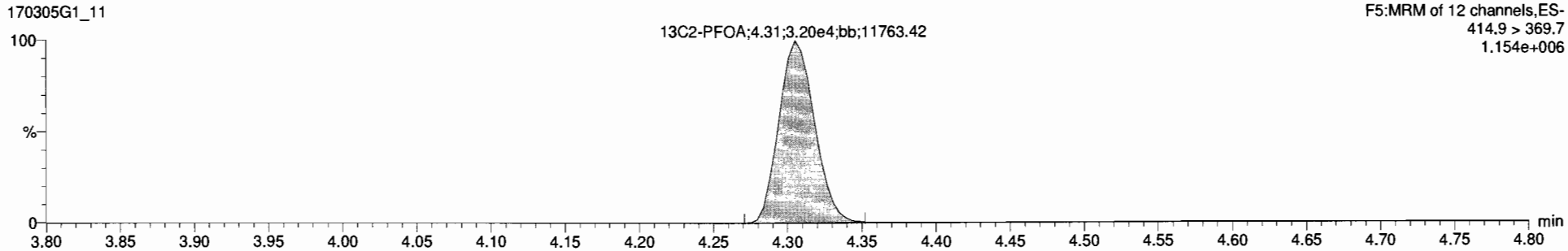

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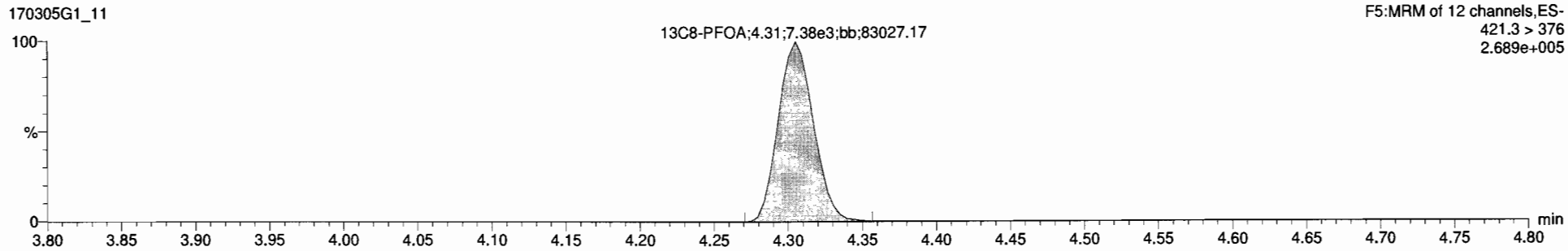

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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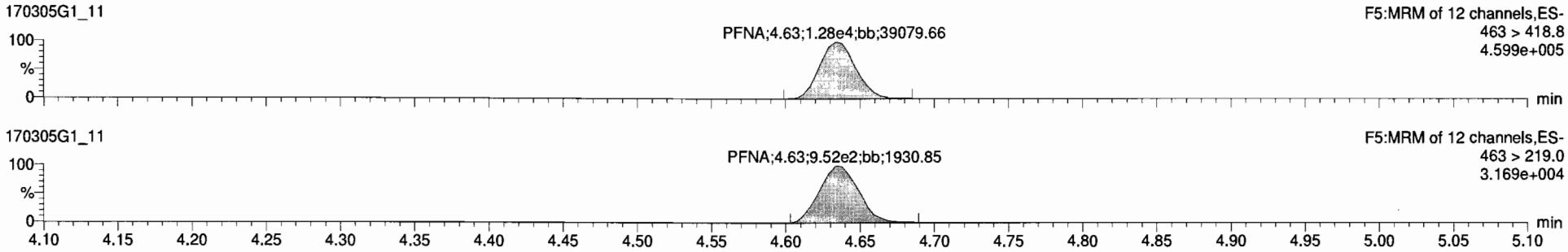
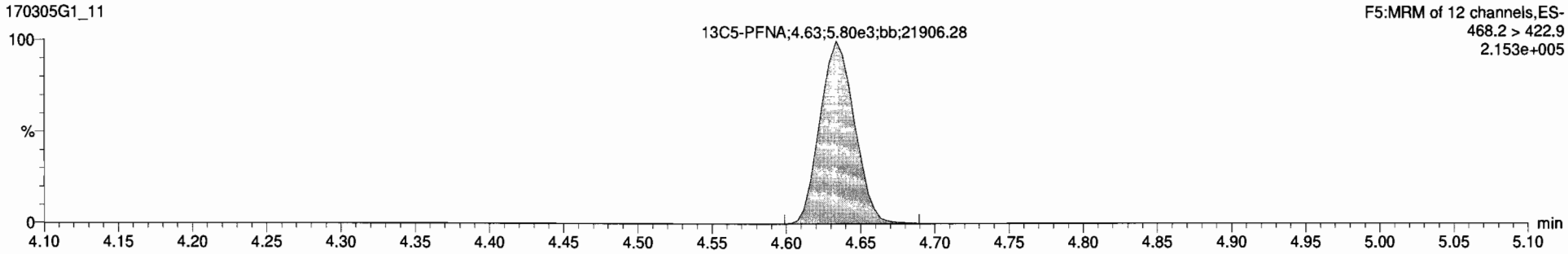
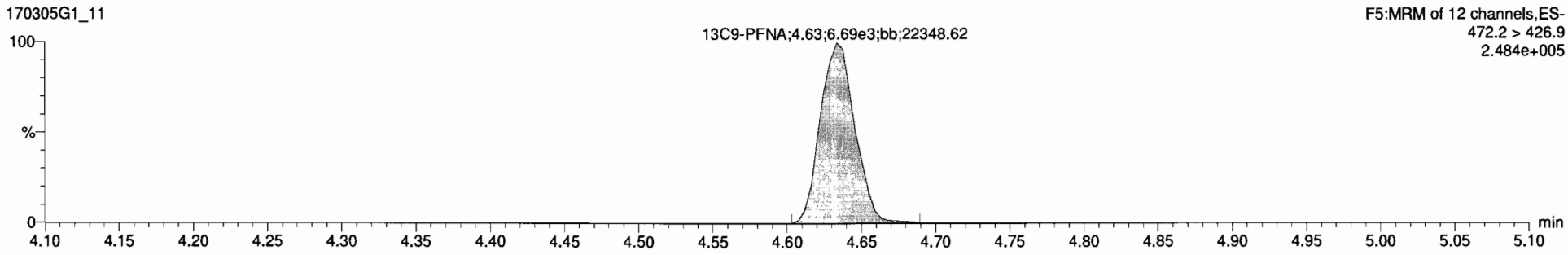
PFNA



13C5-PFNA



13C9-PFNA



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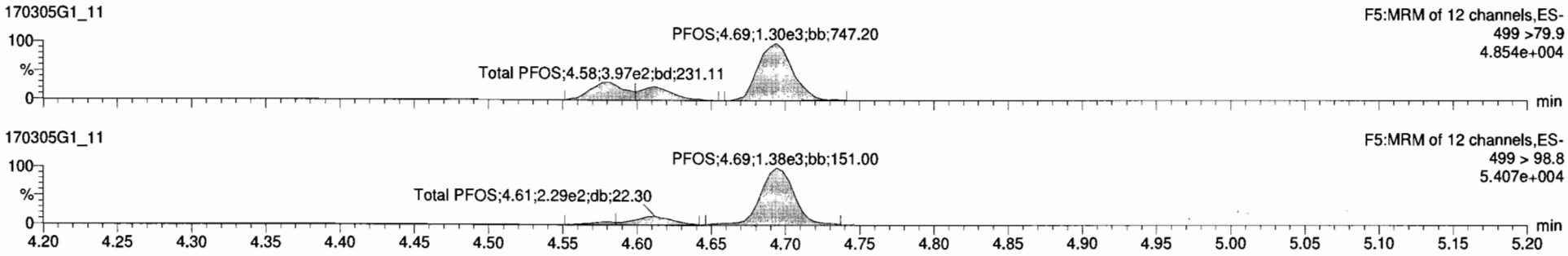
Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

Total PFOS



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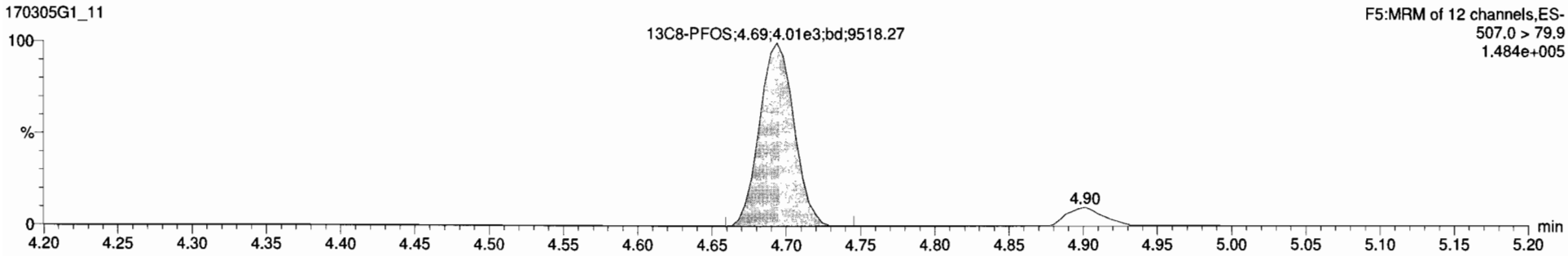

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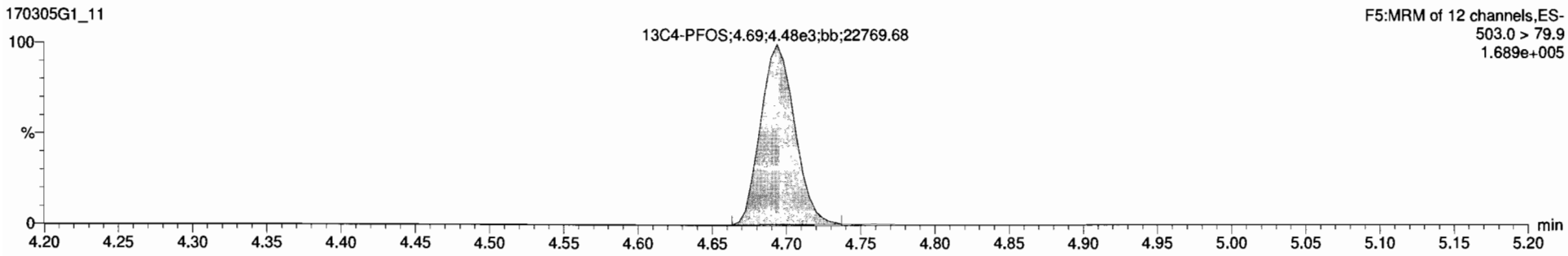

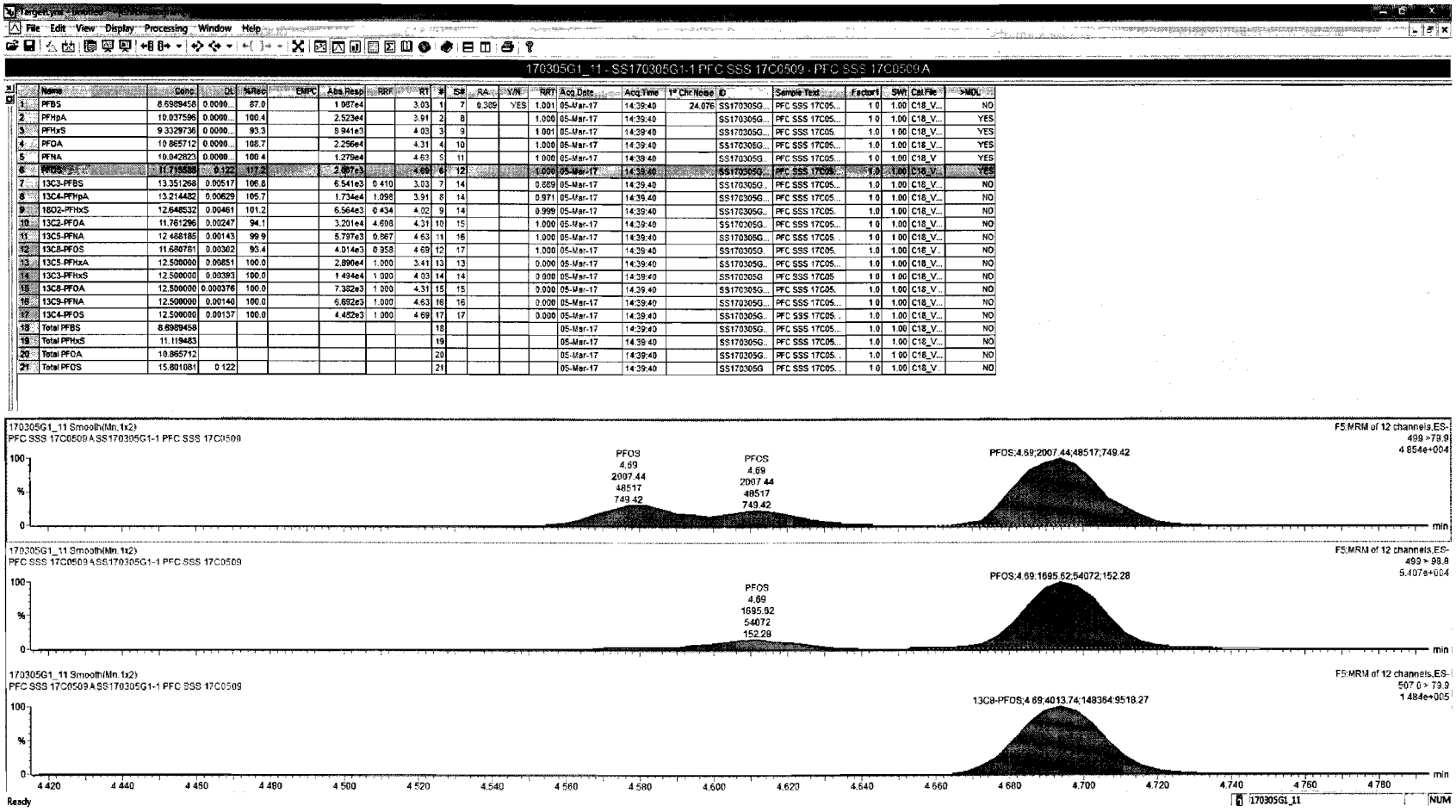

	Name	Conc	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	S#	RA	Y/N	RRT	Acq Date	Acq Time	1st Chl Noise	ID	Sample Text	Factor1	SWI	Cal File	>MDL
1	PFBS	8.6989458	0.0000...	87.0		1.087e4		3.03	1	7	0.389	YES	1.001	05-Mar-17	14:39:40	24.076	SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
2	PFHpA	10.037596	0.0000...	100.4		2.523e4		3.91	2	8			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
3	PFHxS	9.3329736	0.0000...	93.3		8.941e3		4.03	3	9			1.001	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
4	PFOA	10.865712	0.0000...	108.7		2.256e4		4.31	4	10			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
5	PFNA	10.042823	0.0000...	100.4		1.279e4		4.63	5	11			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V	YES
6	PFOS	11.719586	0.122	117.2		2.807e3		4.69	6	12			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	13.351268	0.00517	106.8		6.541e3	0.410	3.03	7	14			0.889	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	13.214482	0.00629	105.7		1.734e4	1.098	3.91	8	14			0.971	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
9	18O2-PFHxS	12.648532	0.00461	101.2		6.564e3	0.434	4.02	9	14			0.999	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
10	13C2-PFOA	11.761296	0.00247	94.1		3.201e4	4.698	4.31	10	15			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	12.488185	0.00143	99.9		5.797e3	0.867	4.63	11	16			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
12	13C8-PFOS	11.680781	0.00362	93.4		4.014e3	0.958	4.69	12	17			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00851	100.0		2.896e4	1.000	3.41	13	13			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
14	13C3-PFHxS	12.500000	0.00393	100.0		1.494e4	1.000	4.03	14	14			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05	1.0	1.00	C18_V...	NO
15	13C8-PFOA	12.500000	0.000376	100.0		7.382e3	1.000	4.31	15	15			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
16	13C9-PFNA	12.500000	0.00140	100.0		6.682e3	1.000	4.63	16	16			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00137	100.0		4.482e3	1.000	4.69	17	17			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
18	Total PFBS	8.6989458							18					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
19	Total PFHxS	11.119483							19					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
20	Total PFOA	10.865712							20					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
21	Total PFOS	15.801081	0.122						21					05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	NONE	WET	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	03/04/2017 12:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	03/03/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	03/04/2017 13:25	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	03/04/2017 14:30	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	03/04/2017 17:00	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	03/03/2017 17:05	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	03/04/2017 17:15	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	03/04/2017 17:45	03/07/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	16:51:00	1700296-01	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	17:03:00	1700296-02	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	17:16:00	1700296-03	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	17:28:00	1700296-04	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	17:41:00	1700296-05	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	17:53:00	1700296-06	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	18:06:00	1700296-07	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	18:18:00	1700296-08	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			Perfluorooctanoic acid (PFOA)

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	375-73-5		3.91	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	335-67-1		1.95	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	1763-23-1		0.879	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	13C3-PFBS		117	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	13C2-PFOA		91.9	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	13C8-PFOS		110	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	375-73-5		4.13	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	335-67-1		2.07	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	1763-23-1		0.930	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	13C3-PFBS		105	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	13C2-PFOA		81.9	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	13C8-PFOS		101	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	375-73-5		4.39	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	335-67-1		2.19	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	1763-23-1		0.987	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	13C3-PFBS		112	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	13C2-PFOA		91.0	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	13C8-PFOS		123	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	375-73-5		4.03	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	335-67-1		2.02	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	1763-23-1		0.907	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	13C3-PFBS		101	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	13C2-PFOA		89.1	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	13C8-PFOS		107	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	375-73-5		111	NG_L			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	335-67-1		166	NG_L			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	1763-23-1		0.898	NG_L	J		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	13C3-PFBS		95.5	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	13C2-PFOA		95.4	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	13C8-PFOS		122	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	375-73-5		4.07	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	335-67-1		2.03	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	1763-23-1		0.915	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	13C3-PFBS		101	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	13C2-PFOA		89.4	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	13C8-PFOS		119	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	375-73-5		3.91	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	335-67-1		1.95	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	1763-23-1		0.844	NG_L	J		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	13C3-PFBS		112	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	13C2-PFOA		90.0	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	13C8-PFOS		124	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	375-73-5		3.91	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	335-67-1		1.95	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	1763-23-1		0.879	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	13C3-PFBS		110	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	13C2-PFOA		102	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	13C8-PFOS		114	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	375-73-5		4.00	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	335-67-1		2.00	NG_L	U		PR

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	TRG					

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0	1.74	3.91	7.79	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0	0.634	1.95	7.79	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0	0.786	0.879	7.79	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW08M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0	1.85	4.13	8.28	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0	0.674	2.07	8.28	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0	0.836	0.930	8.28	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB12-030317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0	1.97	4.39	8.81	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0	0.717	2.19	8.81	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0	0.889	0.987	8.81	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0	1.81	4.03	8.08	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0	0.657	2.02	8.08	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0	0.815	0.907	8.08	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB13-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0	1.82	4.07	8.14	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0	0.662	2.03	8.14	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0	0.821	0.915	8.14	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW14M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0	1.81	4.07	8.11	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0	0.660	2.03	8.11	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0	0.818	0.915	8.11	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13S-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0	1.75	3.91	7.80	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0	0.635	1.95	7.80	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0	0.787	0.879	7.80	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW07M-0317				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0	1.75	3.91	7.82	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0	0.636	1.95	7.82	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0	0.789	0.879	7.82	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB14-030417				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0	1.79	4.00	8.00	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0	0.651	2.00	8.00	1700296	S7C0021		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONE	WET	METHOD	000	BLK	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONE	WET	METHOD	000	BS	W	4

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	03/08/2017 08:40	03/08/2017			20170308	08:40:00	20170309

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	16:38:00	B7C0034-BLK1	1	-999			13C8-PFOS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			Perfluorooctanoic acid (PFOA)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			13C3-PFBS
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			13C2-PFOA
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	16:13:00	B7C0034-BS1	1	-999			13C8-PFOS

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	1763-23-1		0.900	NG_L	U		PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	13C3-PFBS		127	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	13C2-PFOA		89.3	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	13C8-PFOS		118	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	375-73-5		81.9	NG_L			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	335-67-1		86.5	NG_L			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	1763-23-1		88.6	NG_L			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	13C3-PFBS		107	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	13C2-PFOA		81.7	PCT_REC			PR
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	13C8-PFOS		108	PCT_REC			PR

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	TRG					
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	IS		SLSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	TRG		LSA	130	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	TRG		LSA	130	70	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	TRG		LSA	130	70	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	IS		LSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	IS		LSA	150	60	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	IS		LSA	150	60	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0	0.807	0.900	8.00	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0	1.79	4.00	8.00	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0	0.651	2.00	8.00	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0	0.807	0.900	8.00	1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0				1700296	S7C0021		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS				5.0				1700296	S7C0021		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
COUPEVILLE, WASHINGTON

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1700296
Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
Site: Coupeville, CTO-0008, Washington
Date: March 24, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	WI-CV-GW08M-0317	1700296-01	Water
2	WI-CV-EB12-030317	1700296-02	Water
3	WI-CV-GW07S-0317	1700296-03	Water
4	WI-CV-EB13-030417	1700296-04	Water
5	WI-CV-GW14M-0317	1700296-05	Water
6	WI-CV-GW13S-0317	1700296-06	Water
7	WI-CV-GW07M-0317	1700296-07	Water
8	WI-CV-EB14-030417	1700296-08	Water

A full data validation was performed on the analytical data for five water samples and three aqueous equipment blank samples collected on March 3-4, 2017 by CH2M HILL at the Coupeville site in Washington. 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	*Method References*
PFCs	USEPA Method 537 Modified

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 Superfund Organic Methods Data Review," August 2014;
- 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
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate recovery (%R)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Ongoing Precision and Recovery (OPR)
- 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.

Initial Calibration

- All percent difference (%D) 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

- The equipment blank samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-CV-EB12-030317	None - ND	-	-	-
WI-CV-EB13-030417	None - ND	-	-	-
WI-CV-EB14-030417	None - ND	-	-	-
WI-CV-FB01-030217 (SDG 1700293)	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- A MS/MSD sample was not collected.

Ongoing Precision and Recovery (OPR)

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

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 Dated: 3/24/17

Nancy Weaver
Senior Chemist

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: WI-CV-GW08M-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-01	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.128 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 12:00			Date Analyzed:	09-Mar-17 16:51	Column:	BEH C18
Location:	MW-08M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.74	3.91	7.79	
PFOA	ND	0.634	1.95	7.79	
PFOS	ND	0.786	0.879	7.79	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	117	60 - 150	
IS	13C2-PFOA	91.9	60 - 150	
IS	13C8-PFOS	110	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

LW 3/24/17

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Sample ID: WI-CV-EB12-030317 — **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-02	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.121 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	03-Mar-2017 17:15			Date Analyzed:	09-Mar-17 17:03	Column:	BEH C18
Location:	EB12						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.85	4.13	8.28	
PFOA	ND	0.674	2.07	8.28	
PFOS	ND	0.836	0.930	8.28	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	105	60 - 150	
IS	13C2-PFOA	81.9	60 - 150	
IS	13C8-PFOS	101	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

MW 3/24/17

Sample ID: WI-CV-GW07S-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-03	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.114 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 13:25			Date Analyzed:	09-Mar-17 17:16	Column:	BEH C18
Location:	MW-07S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.97	4.39	8.81	
PFOA	ND	0.717	2.19	8.81	
PFOS	ND	0.889	0.987	8.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	91.0	60 - 150	
IS	13C8-PFOS	123	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

NW 3/24/17

4

Sample ID: WI-CV-EB13-030417 — **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-04	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.124 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 14:30			Date Analyzed:	09-Mar-17 17:28	Column:	BEH C18
Location:	EB-13						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.03	8.08	
PFOA	ND	0.657	2.02	8.08	
PFOS	ND	0.815	0.907	8.08	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.1	60 - 150	
IS	13C8-PFOS	107	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

NW 3/24/17

5

Sample ID: WI-CV-GW14M-0317 — Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-05	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.123 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 17:00			Date Analyzed:	09-Mar-17 17:41	Column:	BEH C18
Location:	MW-14M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	111	1.82	4.07	8.14	
PFOA	166	0.662	2.03	8.14	
PFOS	0.898	0.821	0.915	8.14	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.5	60 - 150	
IS	13C2-PFOA	95.4	60 - 150	
IS	13C8-PFOS	122	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

MW 3/24/17

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Sample ID: WI-CV-GW13S-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-06	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.123 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	03-Mar-2017 17:05			Date Analyzed:	09-Mar-17 17:53	Column:	BEH C18
Location:	MW-13S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.81	4.07	8.11	
PFOA	ND	0.660	2.03	8.11	
PFOS	ND	0.818	0.915	8.11	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C2-PFOA	89.4	60 - 150	
IS	13C8-PFOS	119	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

MW3/24/17

7

Sample ID: WI-CV-GW07M-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-07	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.128 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 17:15			Date Analyzed:	09-Mar-17 18:06	Column:	BEH C18
Location:	MW-07M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.80	
PFOA	ND	0.635	1.95	7.80	
PFOS	0.844	0.787	0.879	7.80	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	90.0	60 - 150	
IS	13C8-PFOS	124	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

MW 3/24/17

Sample ID: WI-CV-EB14-030417

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700296-08	Date Received:	07-Mar-2017 10:32
Project:	Navy Clean CTO-08	Sample Size:	0.128 L	QC Batch:	B7C0034	Date Extracted:	08-Mar-2017 8:40
Date Collected:	04-Mar-2017 17:45			Date Analyzed:	09-Mar-17 18:18	Column:	BEH C18
Location:	EB-14						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.82	
PFOA	ND	0.636	1.95	7.82	
PFOS	ND	0.789	0.879	7.82	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	110	60 - 150	
IS	13C2-PFOA	102	60 - 150	
IS	13C8-PFOS	114	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

NEW 3/24/17

R:\N\Navy\CLEAN\MULTI_REGION\PFC_679580\MapFiles\NW\Whidbey_NAS\Coupeville_Reporting\Figure_10_Detections_PFAS_GW.mxd5/25/2017bmailhes

CV-MW11-M	2/26/17
Depth (ft bgs)	170.43
PFBS	7.66 U
PFOS	1.72 U
PFOA	3.83 U

CV-MW11-S	2/26/17
Depth (ft bgs)	140.43
PFBS	3.91 U
PFOS	**1.0 J**
PFOA	1.95 U

CV-MW08-S	3/2/17
Depth (ft bgs)	131.26
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U

CV-MW08-M	3/4/17
Depth (ft bgs)	165.21
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW07-S	3/4/17
Depth (ft bgs)	145.02
PFBS	4.39 U
PFOS	0.987 U
PFOA	2.19 U

Building 11	9/19/16
Depth (ft bgs)	162
PFBS	10 U
PFOS	10 U
PFOA	3 U

CV-MW01-M	2/28/17
Depth (ft bgs)	163.36
PFBS	3.94 U
PFOS	0.886 U
PFOA	1.97 U

CV-MW07-M	3/4/17
Depth (ft bgs)	193.75
PFBS	3.91 U
PFOS	**0.844 J**
PFOA	1.95 U

CV-MW01-D	2/28/17
Depth (ft bgs)	217.42
PFBS	4 U
PFOS	0.9 U
PFOA	2 U

CV-MW04-M	2/28/17
Depth (ft bgs)	159.05
PFBS	4.03 U
PFOS	0.907 U
PFOA	2.02 U

CV-MW02-S	3/1/17
Depth (ft bgs)	106.86
PFBS	**332** D
PFOS	**54.7**
PFOA	**571**

CV-MW04-S	3/1/17
Depth (ft bgs)	126.93
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW02-M	3/1/17
Depth (ft bgs)	167.96
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U

CV-MW14-M	3/4/17
Depth (ft bgs)	176.34
PFBS	**111**
PFOS	**0.898 J**
PFOA	**166**

CV-MW05-S	2/24/17
Depth (ft bgs)	124.56
PFBS	**12.9**
PFOS	0.922 U
PFOA	**9.87**

CV-MW03-D	2/27/17
Depth (ft bgs)	237.43
PFBS	3.91 U
PFOS	**0.914 J**
PFOA	1.95 U

CV-MW05-M	2/23/17
Depth (ft bgs)	175.35
PFBS	**473**
PFOS	**3.26 J**
PFOA	**1190**

CV-MW03-M	2/27/17
Depth (ft bgs)	160.35
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U

CV-MW06-S	2/22/17
Depth (ft bgs)	140.43
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U

CV-MW13-S	3/3/17
Depth (ft bgs)	114.98
PFBS	4.07 U
PFOS	0.915 U
PFOA	2.03 U

CV-MW13-M	2/22/17
Depth (ft bgs)	187.76
PFBS	**139**
PFOS	0.872 U
PFOA	**20.4**

CV-MW06-M	2/21/17
Depth (ft bgs)	189.51
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW09-M	2/23/17
Depth (ft bgs)	197.33
PFBS	**11.2**
PFOS	0.915 U
PFOA	2.03 U

CV-MW10-D	2/20/17
Depth (ft bgs)	206.67
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U

CV-MW09-S	NA
Depth (ft bgs)	110.92
PFBS	NS
PFOS	NS
PFOA	NS

Building 2807	9/19/16
Depth (ft bgs)	178
PFBS	**110**
PFOS	10 U
PFOA	**17.5 J**

CV-MW10-S	2/22/17
Depth (ft bgs)	159.45
PFBS	**3.07 J**
PFOS	0.938 U
PFOA	2.08 U

CV-MW12-S	NA
Depth (ft bgs)	106.92
PFBS	NS
PFOS	NS
PFOA	NS

CV-MW12-D	3/1/17
Depth (ft bgs)	198.03
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U

Building 11

WI-CV-WL01

Building 2807

WI-CV-WL02

Notes
PFBS - Perfluorobutanesulfonic acid
PFOS - Perfluorooctane Sulfonate
PFOA - Perfluorooctanoic acid
LHA - lifetime health advisory
units - nanograms per liter (ng/L)
ft bgs - feet below ground surface
NS - not sampled
J - analyte detected, concentration is estimated
U - not detected
D - diluted sample
Bold indicates detection
Shaded text indicates exceedance of USEPA LHA
Samples were not collected from CV-GW09S and CV-GW12S because the wells were dry at the time of sampling.
Samples collected from the wells within Buildings 2807 and 11 were analyzed by ALS-Kelso using Method 537 for drinking water.

	LHA
PFBS	--
PFOS	70
PFOA	70

Legend
- Base Supply Well
- Monitoring well with no exceedance of LHA
- Monitoring well with LHA exceedance
- No detections of PFAS
- Not Sampled
- Direction of Middle Zone Groundwater Flow
- Direction of Deep Zone Groundwater Flow
- Base Boundary

N

0 0.1 0.2 Miles

1 inch = 0.2 mile

Imagery Source: Esri

Figure 10
Detections of PFAS in Groundwater
Outlying Landing Field Coupeville
Coupeville, Washington

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