2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Type I Data Package

Prepared for:

CenterPoint Properties

Suite 200 1301 Burlington Street North Kansas City MO 64116

Project: SSP-1428 Soil Samples Collected on 09/29/15-09/30/15

SDG# SSX50

GROUP SAMPLE NUMBERS 1676959 8450139-8450141

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:

Dana M. Kauffman Manager

Kong m Xayfman, Date: 08/10/2016

Any questions or concerns you might have regarding this data package should be directed to your client representative, Natalie Luciano at (717) 556-7258.



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Sample Reference List for SDG Number SSX50 with a Data Package Type of I

20613 - CenterPoint Properties Project: SSP-1428

Lab Sample			
Number	Client Sample ID	Collection Date	Date Received
8450139	CP-3122-A(0-2)	09/29/2015 15:40	06/28/2016 14:30
8450140	CP-3124-A(0-2)	09/29/2015 14:45	06/28/2016 14:30
8450141	CP-3123-A(0-2)	09/30/2015 09:35	06/28/2016 14:30



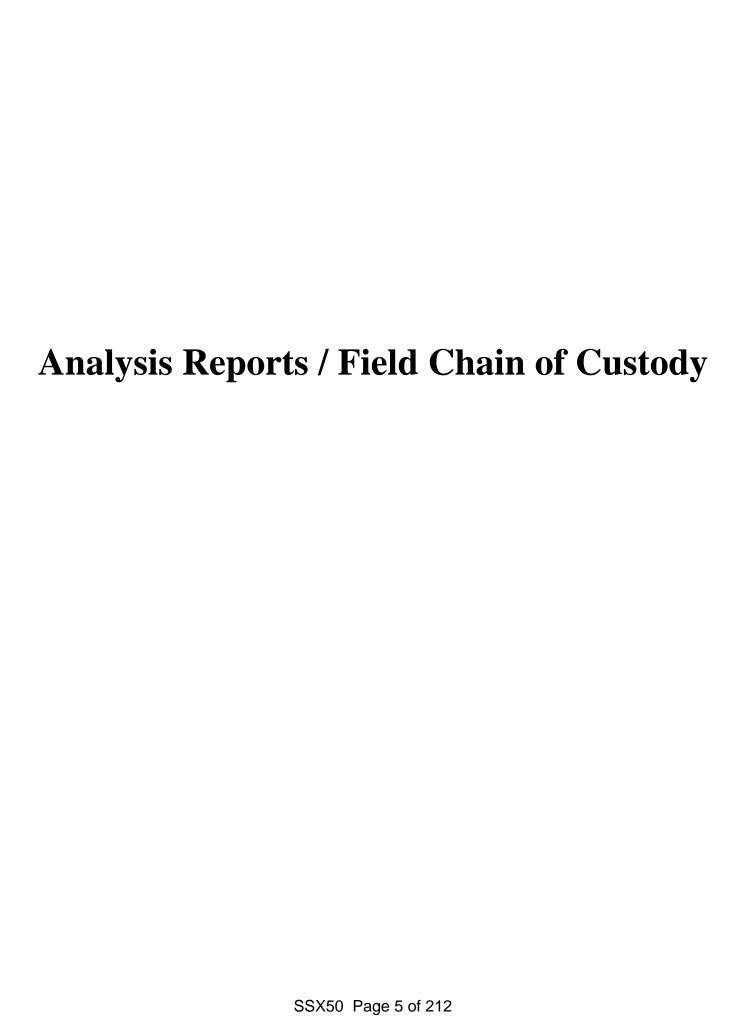
Method Summary/Reference for SDG# SSX50_I

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

14027 PFC s in Soil by LC/MS/MS 14090 PFC Solid Prep

This method is for determination of perfluorinated compounds in soil and sediment by liquid chromatography/ tandem mass spectrometry (LC/MS/MS). Solid samples are sonicated with an aqueous/acetonitrile solution and analyzed by LC/MS/MS.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), Version 1.1, September 2009.



Analysis Report

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ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 CenterPoint Properties Suite 200 1301 Burlington Street North Kansas City MO 64116

Report Date: July 19, 2016

Project: SSP-1428

Submittal Date: 06/28/2016 Group Number: 1676959 SDG: SSX50 State of Sample Origin: MO

 Client Sample Description
 (LL) #

 CP-3122-A(0-2) Grab Soil
 8450139

 CP-3124-A(0-2) Grab Soil
 8450140

 CP-3123-A(0-2) Grab Soil
 8450141

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/.

Electronic Copy To S.S. Papadopulos & Assoc Inc. Attn: Don A. Trego Electronic Copy To S.S. Papadopulos & Assoc Inc. Attn: Rachel Shannon Electronic Copy To S.S. Papadopulos & Assoc Inc. Attn: Harvey A. Cohen

Respectfully Submitted,

Matalie K-2

Natalie R. Luciano Senior Specialist

(717) 556-7258



Lancaster Laboratories Environmental

Analysis Report

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Sample Description: CP-3122-A(0-2) Grab Soil

SSP-1428

LL Sample # SW 8450139 LL Group # 1676959 Account # 20613

Project Name: SSP-1428

Collected: 09/29/2015 15:40

CenterPoint Properties

Suite 200

1301 Burlington Street

Submitted: 06/28/2016 14:30 Reported: 07/19/2016 13:18

North Kansas City MO 64116

3122A SDG#: SSX50-01

CAT No.	Analysis Name	CAS Number	As Rec Result	ceived t	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Misc.	Organics EPA 537 F	Rev. 1.1	ng/g		ng/g	ng/g	
	modified						
14027	NEtFOSAA	2991-50-6	2.0	U	2.0	1.0	1
	NEtFOSAA is the acronym for N-e	thyl perfluoroo	ctanesul	lfonamidoacetic	: Acid.		
14027	NMeFOSAA	2355-31-9	2.0	U	2.0	0.90	1
	NMeFOSAA is the acronym for N-m	ethyl perfluoro	octanesı	ılfonamidoaceti	c Acid.		
14027	Perfluorobutanesulfonate	375-73-5	1.6	U	1.6	0.50	1
14027	Perfluorodecanoic acid	335-76-2	0.40	U	0.40	0.20	1
14027	Perfluorododecanoic acid	307-55-1	0.80	U	0.80	0.40	1
14027	Perfluoroheptanoic acid	375-85-9	0.60	U	0.60	0.30	1
14027	Perfluorohexanesulfonate	355-46-4	1.6	U	1.6	0.50	1
14027	Perfluorohexanoic acid	307-24-4	0.40	U	0.40	0.20	1
14027	Perfluorononanoic acid	375-95-1	0.40	U	0.40	0.20	1
14027	Perfluoro-octanesulfonate	1763-23-1	1.6	U	1.6	0.70	1
14027	Perfluorooctanoic acid	335-67-1	0.60	U	0.60	0.30	1
14027	Perfluorotetradecanoic acid	376-06-7	0.80	U	0.80	0.30	1
14027	Perfluorotridecanoic acid	72629-94-8	1.2	U	1.2	0.60	1
14027	Perfluoroundecanoic acid	2058-94-8	0.60	U	0.60	0.30	1
The	holding time was not met. The a	nalysis was adde	ed after	the holding t	ime		

expired.

The recovery for a target analyte(s) in the Laboratory Control $\mbox{Spike}(\mbox{s})$ is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample Comments

This sample was originally submitted to the laboratory on 09/30/15 at 10:10. We received authorization for further testing on 06/28/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFC s in Soil by LC/MS/MS	EPA 537 Rev. 1.1 modified	1	16182005	07/12/2016 18:07	Jason W Knight	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16182005	06/30/2016 12:15	Robert Brown	1



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Analysis Report

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Sample Description: CP-3124-A(0-2) Grab Soil

SSP-1428

LL Sample # SW 8450140 LL Group # 1676959 Account # 20613

Project Name: SSP-1428

Collected: 09/29/2015 14:45

CenterPoint Properties

Suite 200

1301 Burlington Street

Submitted: 06/28/2016 14:30 Reported: 07/19/2016 13:18

North Kansas City MO 64116

3124A SDG#: SSX50-02

CAT No.	Analysis Name	CAS Number	As Rec Result	ceived t	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Misc.	Organics EPA 537 F	Rev. 1.1	ng/g		ng/g	ng/g	
	modified						
14027	NEtFOSAA	2991-50-6	2.0	U	2.0	1.0	1
	NEtFOSAA is the acronym for N-e	thyl perfluoroo	ctanesul	lfonamidoacetic	: Acid.		
14027	NMeFOSAA	2355-31-9	2.0	U	2.0	0.90	1
	NMeFOSAA is the acronym for N-m	ethyl perfluoro	octanesı	ılfonamidoaceti	c Acid.		
14027	Perfluorobutanesulfonate	375-73-5	1.6	U	1.6	0.50	1
14027	Perfluorodecanoic acid	335-76-2	0.40	U	0.40	0.20	1
14027	Perfluorododecanoic acid	307-55-1	0.80	U	0.80	0.40	1
14027	Perfluoroheptanoic acid	375-85-9	0.60	U	0.60	0.30	1
14027	Perfluorohexanesulfonate	355-46-4	1.6	U	1.6	0.50	1
14027	Perfluorohexanoic acid	307-24-4	0.40	U	0.40	0.20	1
14027	Perfluorononanoic acid	375-95-1	0.40	U	0.40	0.20	1
14027	Perfluoro-octanesulfonate	1763-23-1	1.6	U	1.6	0.70	1
14027	Perfluorooctanoic acid	335-67-1	0.60	U	0.60	0.30	1
14027	Perfluorotetradecanoic acid	376-06-7	0.80	U	0.80	0.30	1
14027	Perfluorotridecanoic acid	72629-94-8	1.2	U	1.2	0.60	1
14027	Perfluoroundecanoic acid	2058-94-8	0.60	U	0.60	0.30	1
The	holding time was not met. The a	nalysis was adde	ed after	the holding t	ime		

expired.

The recovery for a target analyte(s) in the Laboratory Control $\mbox{Spike}(\mbox{s})$ is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample Comments

This sample was originally submitted to the laboratory on 09/30/15 at 10:10. We received authorization for further testing on 06/28/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFC s in Soil by LC/MS/MS	EPA 537 Rev. 1.1 modified	1	16182005	07/12/2016 18:24	Jason W Knight	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16182005	06/30/2016 12:15	Robert Brown	1



Lancaster Laboratories Environmental

Analysis Report

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Sample Description: CP-3123-A(0-2) Grab Soil

SSP-1428

LL Sample # SW 8450141 LL Group # 1676959 Account # 20613

Project Name: SSP-1428

Collected: 09/30/2015 09:35

CenterPoint Properties

Suite 200

Submitted: 06/28/2016 14:30 Reported: 07/19/2016 13:18

1301 Burlington Street

North Kansas City MO 64116

3123A SDG#: SSX50-03

CAT No.	Analysis Name	CAS Number	As Re Resul	ceived t	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Misc.	Organics EP	A 537 Rev. 1.1	ng/g		ng/g	ng/g	
	mo	dified					
14027	NEtFOSAA	2991-50-6	2.0	U	2.0	1.0	1
	NEtFOSAA is the acronym	m for N-ethyl perfluoroc	ctanesu	lfonamidoaceti	c Acid.		
14027	NMeFOSAA	2355-31-9	2.0	U	2.0	0.90	1
	NMeFOSAA is the acronym	m for N-methyl perfluoro	octanes	ılfonamidoacet	ic Acid.		
14027	Perfluorobutanesulfonat	te 375-73-5	1.6	U	1.6	0.50	1
14027	Perfluorodecanoic acid	335-76-2	0.40	U	0.40	0.20	1
14027	Perfluorododecanoic aci	id 307-55-1	0.80	U	0.80	0.40	1
14027	Perfluoroheptanoic acid	d 375-85-9	0.60	U	0.60	0.30	1
14027	Perfluorohexanesulfonat	ce 355-46-4	1.6	U	1.6	0.50	1
14027	Perfluorohexanoic acid	307-24-4	0.40	U	0.40	0.20	1
14027	Perfluorononanoic acid	375-95-1	0.24	J	0.40	0.20	1
14027	Perfluoro-octanesulfona	ate 1763-23-1	1.6	U	1.6	0.70	1
14027	Perfluorooctanoic acid	335-67-1	0.60	U	0.60	0.30	1
14027	Perfluorotetradecanoic	acid 376-06-7	0.80	U	0.80	0.30	1
14027	Perfluorotridecanoic ac	cid 72629-94-8	1.2	U	1.2	0.60	1
14027	Perfluoroundecanoic aci	id 2058-94-8	0.60	U	0.60	0.30	1
The l	holding time was not met	. The analysis was add	ed after	the holding	time		
expi	red.						

The recovery for a target analyte(s) in the Laboratory Control $\mbox{\rm Spike}(s)$ is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample Comments

This sample was originally submitted to the laboratory on 10/01/15 at 09:20. We received authorization for further testing on 06/28/16.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFC s in Soil by LC/MS/MS	EPA 537 Rev. 1.1 modified	1	16182005	07/12/2016 18:42	Jason W Knight	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16182005	06/30/2016 12:15	Robert Brown	1



Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Client Name: CenterPoint Properties Group Number: 1676959

Reported: 07/19/2016 13:18

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result		LOQ**	MDL
	ng/g		ng/g	ng/g
Batch number: 16182005	Sample	number(s):	8450139-8450141	
NETFOSAA	2.0	U	2.0	1.0
NMeFOSAA	2.0	U	2.0	0.90
Perfluorobutanesulfonate	1.6	U	1.6	0.50
Perfluorodecanoic acid	0.40	U	0.40	0.20
Perfluorododecanoic acid	0.80	U	0.80	0.40
Perfluoroheptanoic acid	0.60	U	0.60	0.30
Perfluorohexanesulfonate	1.6	U	1.6	0.50
Perfluorohexanoic acid	0.40	U	0.40	0.20
Perfluorononanoic acid	0.40	U	0.40	0.20
Perfluoro-octanesulfonate	1.6	U	1.6	0.70
Perfluorooctanoic acid	0.60	U	0.60	0.30
Perfluorotetradecanoic acid	0.80	U	0.80	0.30
Perfluorotridecanoic acid	1.2	U	1.2	0.60
Perfluoroundecanoic acid	0.60	U	0.60	0.30

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16182005	Sample number	r(s): 8450	139-8450141						
NETFOSAA	20	25.13	20	19.82	126	99	70-130	24	30
NMeFOSAA	20	32.52	20	28.77	163*	144*	70-130	12	30
Perfluorobutanesulfonate	17.68	17.28	17.68	14.41	98	81	70-130	18	30
Perfluorodecanoic acid	20	27.73	20	25.45	139*	127	70-130	9	30
Perfluorododecanoic acid	20	23.35	20	20.57	117	103	70-130	13	30
Perfluoroheptanoic acid	20	24.57	20	28.39	123	142*	70-130	14	30
Perfluorohexanesulfonate	18.92	18.07	18.92	14.98	96	79	70-130	19	30
Perfluorohexanoic acid	20	18.5	20	24.8	92	124	70-130	29	30
Perfluorononanoic acid	20	16.38	20	20.06	82	100	70-130	20	30
Perfluoro-octanesulfonate	19.12	21.91	19.1	33.12	115	173*	70-130	41*	30
Perfluorooctanoic acid	20	20.33	20	20.02	102	100	70-130	2	30
Perfluorotetradecanoic acid	20	50.96	20	34.93	255*	175*	70-130	37*	30
Perfluorotridecanoic acid	20	21.56	20	22.21	108	111	70-130	3	30
Perfluoroundecanoic acid	20	26.87	20	26.77	134*	134*	70-130	0	30

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.



Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Client Name: CenterPoint Properties Group Number: 1676959

Reported: 07/19/2016 13:18

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody
1676959 8450139-41 3 04428166

Acct # 20613 Group # 15 97085 Sample # \$ 069930=65 eurofins Lancaster Laboratories Environmental Client: S.S. Papadopulos & Associates, Inc. Matrix Analyses Requested For Lab Use Only SSP-1428 Site ID#: **Preservation Codes** Project Name/#: SF#: Ground Surface Project Manager: Harvey Cohen P.O. #: SCR #: PWSID#: SSPA Sampler: Preservation Codes Chromium VI (SW-846 7196A) Total # of Containers pH (SW-846 9045D modified) Chromium III (SW-846 6020) Quote #: H = HCI T = Thiosulfate 8 RCRA Metals + U + VOCs + 15 TICs, GRO TPH- DRO, and ORO State where sample(s) were collected: ORP (ASTM D1498) N ≈ HNO. B = NaOH Cyanide (total and SVOCs + 15 TICs PCBs (Aroclors) Composite S = H2SO4 P = H₁PO₂ Collection Other: Water O = Other Grab Soil Sample Identification Date Time Remarks CP- 3122 - A(0-2) Х 5 Х 4 VOAs + 1L 9/29/15 15:40 Х 5 CP- 3122 - A(2-5) 9/29/15 15:50 Х Х 4 VOAs + 1L Х Х 5 CP- 3122 - B 9/29/15 χ Х Х 4 VOAs + 1L 16:00 Х Х Х Х Х CP- 3122 - C 9/29/15 16:10 Х Х Х Х Х Х 4 VOAs + 1L Х 5 CP- 3122 - D Х Х Х Х 4 VOAs + 1L 9/29/15 16:15 Х Х Х Х Х 5 BD- 12 - 09/29/15 Х Х 4 VOAs + 1L 9/29/15 15:40 Х TB- 12 - 09/29/15 9/29/15 Х 1 1 VOA Х Relipquished₄by: Received by: Turnaround Time Requested (TAT) Time Time Rush 🗆 Standard 18:00 FedEx 801301829298 (Rush TAT is subject to laboratory approval and surcharges.) Relinguished by: Received by: Time Time Date results are needed: Theodor Router Phone D Rush results requested by: E-Mail D Relinquished by: Date Received by: Time Date Time E-mail Address: Phone: Relinquished by: Date Received by Data Package Options (please check if required) Date Time Type I (Validation/non-CLP) MA MCP Relinquished by: Date Time Received by: Date Time Type III (Reduced non-CLP) CT RCP 9.30-15 Type IV (CLP SOW) TX TRRP-13 10:10 Relinquished by Commercial Carrier: Type VI (Raw Data Only) Temperature upon receipt 2.4 EDD Reg'd?? Yes ☑ NoD FedEx If yes, format:

Environmental Analysis Request/Chain of Custody

eurofins Lancaster Laboratories						20613			1	671 4-9	59 708	29 29			8	45	61	39 93	-4 0	(65	- (4) ame	<u> </u>
Environmental				Acc	t.#_ <u></u> /_			Group i	#	-)							0	7					8/16
Client: S.S. Papadopulo	s & Assoc	ciates, In	с.		<u> </u>	Matrix		4				Ana	alyse	s Re	ques	sted						For Lab U	se Only
Project Name/#: SSP-1428	Site ID #:								<u> </u>			Pre	eser	vatio	ı Co	des			,		T	SF #:	
Project Manager: Harvey Cohen	P.O. #;				٦	Ground			l													SCR #:	
Sampler: SSPA	PWSID#:				Sediment	Sur Sur		Ŋ	l								(g	(C)	6A)		ble)	Preserva	tion Codes
	Quote #:				Sec			iner	a								odifie	905	3 719		enda	H = HCI	T = Thiosulfate
State where sample(s) were collected:						Pee Si		ontai		tion		ORO ORO	SRC	s	ed 8015	(86)	5D m	V-846	V-846		dan	N = HNO ₃	B = NaOH
	Colle	ection		ite		Potable NPDES		Total # of Containers	RCRA Metals + U +	Lab Homogenization	clors)	TPH- DRO, and ORO	VOCs + 15 TICs, GRO	SVOCs + 15 TICs	Fingerprinting via Modified 8015	ORP (ASTM D1498)	pH (SW-846 9045D modified)	Chromium III (SW-846 6020)	Chromium VI (SW-846 7196A)		Cyanide (total and amendable)	S = H ₂ SO ₄	P = H ₃ PO ₄
	Cone	scuo _{li}	ء ا	Composite	ŀ	l i		# =	₹ Š	lomog	PCBs (Arodors)	DRO	1 + 15	S + 1	inting vi	(ASTI	W-84	micin	micm	l e	de (to	O ≃ Other	
Sample Identification	Date	Time	Grab	Co	Soil	Water	Air	Tota	8 RCI	Lab F	PCBs	표	ő	SVOC	Fingerpr	ORP	S) Hd	Chro	Chro	Fluoride	Cyani	Ren	narks
CP- 3124 - A(0-2)	9/29/15	14:45	Х		х			5							Х							4 VOAs + 1L	
CP- 3122 - F	9/29/15	16:30	Х		х			5	Х	Х	Х	Х	Х	Х	Х							4 VOAs + 1L	
CP- 3122 - E	9/29/15	16:25	Х		Х			5	Х	Х	Х	Х	Х	Х	Х							4 VOAs + 1L	
BD- 11 - 09/29/15	9/29/15	14:45	Х		х			5							Х							4 VOAs + 1L	
TB- 13 - 09/29/15	9/29/15					х		1					Х									1 VOA	
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Type III (Reduced non-CLP) ☑ CT RCP					Reli	nquished	bv	_		Di	ate	Tir	me	Rece	ived	hv.				 		Date	Time
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	es, format:				UPS	·		<u> </u>		Other				Tem	perati	ure up	oon re	ceipt		2 }		°C	

Environmental Analysis Request/Chain of Custody

Lancaster Laboratories Environmental			Ac	:ct. #	<u> 201</u>	613	Group	ا >#	24.	749	7	Sa	imple#	8	45 <u>CO</u>	,013 173	32 :	- 4, S== "	46		
Client: S.S. Papadopulo:	s & Assoc	iates, Inc				Matrix							alys	es Re	que	sted				- _For Lab Us	se Only
Project Name/#: SSP-1428	Site ID #:]				Pr	eser	vatio	n Co	des				_ _SF #:	
Project Manager: Harvey Cohen	P.O. #:] =	age ind												T	T	SCR #:	
Sampler: SSPA	PWSID #:				Sediment	Ground		S									ਰ		9A)	Preserval	tion Codes
	Quote #:				Sec			iner	88	'					,		odifie	, 602(2719	H = HCI	T = Thiosulfate
State where sample(s) were collected:						lble ES		onta	† n +	ation		ORO	, GRO	l y	ied 801	198)	15D m	N-846	N-846	N = HNO ₃	B = NaOH
	Colle	ection		Composite		Potable er NPDES		Total # of Containers	RCRA Metais + U +	Lab Homogenization	PCBs (Aroclors)	TPH- DRO, and ORO	; + 15 TIOs, (SVOCs + 15 TICs	ingerprinting via Modified 8015	ORP (ASTM D1498)	pH (SW-846 9045D modified)	Chromium III (SW-846 6020)	Chromium VI (SW-846 7196A)	S = H ₂ SO ₄	P = H ₃ PO ₄
Sample Identification	Date	Time	Grab	Con	Soil	Water	Air	Tota	8 RCF	Lab H	PCBs	TPH.	VOCS.	SVOC	ingerpri	ORP (S) Hd	Chron	Chron		narks
CP- 3123 - A(0-2)	9/30/15	9:35	Х		Х			5				†	Ť	<u> </u>	X	Ť	 	<u> </u>	Ť	4 VOAs + 1L	
CP- 3123 - A(2-5)	9/30/15	9:40	X		Х			5							Х		T		T	4 VOAs + 1L	
CP- 3123 - B	9/30/15	9:55	Х		Х			5	х	х	х	Х	х	х	Х					4 VOAs + 1L	
CP- 3123 - C	9/30/15	10:00	Х		х			5	Х	х	х	Х	Х	х	Х		<u> </u>			4 VOAs + 1L	
CP- 3123 - D	9/30/15	10:15	Х		х			5	Х	х	х	Х	Х	Х	Х					4 VOAs + 1L	
CP- 3123 - E	9/30/15	10:30	Х		Х			5	Х	Х	х	Х	Х	Х	Х					4 VOAs + 1L	
TB- 10 09/30/15	9/30/15					х		1					Х							1 VOA	
								$\underline{\mathbb{L}}$													
		<u> </u>			<u></u>					'											
Turnaround Time Requested (TAT) (Rush TAT is subject to laboratory ap		idard urcharges.)	Rusł	h 🗌		nguished	14	al	~	09/3	ate 30/5	Tir 1871		1	eived i FedE	•	3018	329313	3	Date 01/30/15	Time 76:15
Date results are needed:						nquished				D.	ate	Ti	ime	Rece	eived	by:					Time
Rush results requested by: E-M	1ail 🔲	Phor	ne [174	e doix	Kei	uto			1			,	\						
E-mail Address:					Relir	nquished	by:	***************************************		D:	ate	Tir	ime	Rece	elved	by:	_				Time
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Data Package Options (please check if re	quired)				Relir	nquished	БУ	$\overline{}$		Dr	ate	Tir	me	Rece	eived l	by:			_		Time
Type I (Validation/non-CLP)					L						'				1	_1					
Type III (Reduced non-CLP)					Relir	nquished	by:			Q	late	Tir	me	Redeived by:				***************************************	10.11	Time	
1	IV (CLP SOW) TX TRRP-13									<u>L</u>			N4//W					10.1.12	1420		
Type VI (Raw Data Only)					Relir	nquished	by C	omme	rcial	Jarrie	r:					7		,	-	$\overline{\Omega}$	
EDD Reg'd?? Yes 🔽 No 🗌 If ye						UPS FedEx Other Temperatu					ıre upon receipt <u> </u>										

Natalie Luciano

From:

Natalie Luciano

Sent:

Tuesday, June 28, 2016 2:39 PM

To:

'Donald A. Trego'

Cc:

'Harvey Cohen'

Subject:

RE: Extracts from Bannister

Just a quick FYI that we don't offer 8:2 fluorotelomersulfonate in soil, so that would the only difference in the reporting list.

Natalie Luciano

Senior Specialist, Environmental Client Services

Phone: +1 717-556-7258

Look for Eurofins Lancaster Laboratories Environmental at these upcoming conferences and industry events.



From: Natalie Luciano

Sent: Tuesday, June 28, 2016 2:16 PM **To:** 'Donald A. Trego'; Charles Neslund **Cc:** Harvey Cohen; Jenifer Lewis **Subject:** RE: Extracts from Bannister

Ok. I'll work on getting this re-entered.

Natalie Luciano

Senior Specialist, Environmental Client Services

Phone: +1 717-556-7258

Look for Eurofins Lancaster Laboratories Environmental at these <u>upcoming conferences and industry events</u>.



From: Donald A. Trego [mailto:Dtrego@sspa.com]

Sent: Tuesday, June 28, 2016 1:41 PM **To:** Charles Neslund; Natalie Luciano **Cc:** Harvey Cohen; Jenifer Lewis **Subject:** RE: Extracts from Bannister

Thank you! Natalie, Please proceed with the PFC analyses for these three samples ASAP using the same analyte list as previously done for the water samples.

Sincerely,

Donald A. Trego, QEP

From: Natalie Luciano [mailto:NatalieLuciano@eurofinsUS.com]

Sent: Tuesday, June 28, 2016 12:22 PM
To: Donald A. Trego < Dtrego@sspa.com>

Cc: Charles Neslund < CharlesNeslund@eurofinsUS.com>

Subject: RE: Extracts from Bannister

These are the three:

CP-3122-A(0-2)

CP-3124-A(0-2)

CP-3123-A(0-2)

Natalie Luciano

Senior Specialist, Environmental Client Services

Phone: +1717-556-7258

Look for Eurofins Lancaster Laboratories Environmental at these upcoming conferences and industry events.



From: Donald A. Trego [mailto:Dtrego@sspa.com]

Sent: Tuesday, June 28, 2016 12:17 PM

To: Natalie Luciano Cc: Charles Neslund

Subject: RE: Extracts from Bannister

Can you please provide me the sample ID for each of the samples you have on hand?

Sincerely,

Donald A. Trego, QEP



Sample Administration Receipt Documentation Log

Doc Log ID:

109438

Group Number(s):

Client: Papadopulos

Lancaster Laboratories

Environmental

Delivery and Receipt Information

Delivery Method:

Fed Ex

Arrival Timestamp:

09/30/2015 10:10

Number of Packages:

<u>6</u>

Number of Projects:

1

Arrival Condition Summary

Shipping Container Sealed:

Yes Yes Sample IDs on COC match Containers: Sample Date/Times match COC:

No Yes

Custody Seal Present: Custody Seal Intact:

Paperwork Enclosed:

Yes

VOA Vial Headspace ≥ 6mm:

No 6

Samples Chilled:

Yes Yes

Total Trip Blank Qty: Trip Blank Type:

HCL

Samples Intact:

Missing Samples:

Yes

No

Extra Samples:

No No Air Quality Samples Present:

No

Discrepancy in Container Qty on COC:

Unpacked by Timothy Cubberley (6520) at 11:56 on 09/30/2015

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	3.2	TO	Wet	Υ	Bagged	N
2	DT131	2.0	DT	Wet	Y	Bagged	N
3	DT131	2.4	DT	Wet	Y	Bagged	N
4	DT131	2.3	DT	Wet	Υ	Bagged	N
5	DT131	1.5	DT	Wet	Υ	Bagged	N
6	DT131	3.8	DΤ	Wet	Υ	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC

Sample ID on Label

Comments

BD-20-09/29/15

Page 1 of 1

BD-21-09/29/15

On the CoC with TB-21



Sample Administration

Doc Log ID:

109958

Lancaster Laboratories Environmental

Receipt Documentation Log

Group Number(s): 1597492

Client: S.S. Papadopulos & Associates

Delivery and Receipt Information

Delivery Method:

Fed Ex

Arrival Timestamp:

10/01/2015 9:20

Number of Packages:

10

Number of Projects:

1

Arrival Condition Summary

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

No

Custody Seal Present:

Yes

Sample Date/Times match COC:

Yes No

No

Custody Seal Intact:

Yes Yes

VOA Vial Headspace ≥ 6mm: Total Trip Blank Qty:

Air Quality Samples Present:

10

Samples Chilled: Paperwork Enclosed:

Yes

Trip Blank Type:

HCL

Samples Intact:

Yes

Missing Samples:

No

Extra Samples: Discrepancy in Container Qty on COC: No No

Unpacked by Brandy Barclay (2299) at 11:49 on 10/01/2015

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm, Type	Ice Type	Ice Present?	<u>Ice Container</u>	Elevated Temp?
1	DT146	0.9	DT	Wet	Υ	Bagged	N
2	DT146	2.0	DT	Wet	Υ	Bagged	Ν
3	DT146	1.9	DT	Wet	Υ	Bagged	N
4	DT146	1.4	DT	Wet	Υ	Bagged	N
5	DT146	1.2	DT	Wet	Υ	Bagged	N
6	DT146	4,2	DT	Wet	Υ	Bagged	N
7	DT146	3.1	DT	Wet	Υ	Bagged	N
8	DT146	3.0	DT	Wet	Υ	Bagged	N
9	DT146	4.6	DT	Wet	Υ	Bagged	N
10	DT146	3.9	DT	Wet	Υ	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC CP-5008-A(2-5)

Sample ID on Label CP-5008-B

Comments



Lancaster Laboratories Environmental

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	Ě	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basisResults printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Miscellaneous LC/MS/MS Data

Case Narrative/Conformance Summary Miscellaneous LC/MS/MS



Case Narrative/Conformance Summary

CLIENT: CenterPoint Properties SDG: SSX50

Specialty Services Group Fraction: Miscellaneous LC/MS/MS

Matrix

Sample #	Client ID	Liquid	Solid	DF	Comments
8450139	CP-3122-A(0-2)		X	1	
8450140	CP-3124-A(0-2)		X	1	
8450141	CP-3123-A(0-2)		X	1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

(Sample number(s): 8450139-8450141: Analysis: 14027) The holding time was not met. The analysis was added after the holding time expired.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 8450139-8450141: Analysis: 14027)
The response for NMeFOSAA was outside acceptance limits in the CAL3 standard at 31.55% difference. Since the coefficient of determination for the calibration curve was >0.99, the data is reported.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

(Sample number(s): 8450139-8450141: Analysis: 14027)
The internal standard responses for several compounds in the method blank were less than 50% of the average area measured during the initial calibration. Since the response is low, any result should be considered biased high.
Sufficient sample was not available to perform a re-extraction.



Case Narrative/Conformance Summary

CLIENT: CenterPoint Properties SDG: SSX50

Specialty Services Group Fraction: Miscellaneous LC/MS/MS

LCS/LCSD

(Sample number(s): 8450139-8450141: Analysis: 14027)
The internal standard responses for several compounds in the LCS and LCSD were less than 50% of the average area measured during the initial calibration. Since the response is low, any result should be considered biased high.
Sufficient sample was not available to perform a re-extraction.

(Sample number(s): 8450139-8450141: Analysis: 14027) The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: 16182005 (Sample number(s): 8450139-8450141)
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: Perfluoro-octanesulfonate, Perfluorotetradecanoic acid

The recovery(ies) for the following analyte(s) in the LCS exceeds the acceptance window indicating a positive bias: Perfluorodecanoic acid Since the recovery is high and no analytes are detected above the quantitation limit, the data is reported.

The recovery(ies) for the following analyte(s) in the LCSD exceeds the acceptance window indicating a positive bias: Perfluoroheptanoic acid, Perfluoro-octanesulfonate Since the recovery is high and no analytes are detected above the quantitation limit, the data is reported.

The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeds the acceptance window indicating a positive bias: NMeFOSAA, Perfluorotetradecanoic acid, Perfluoroundecanoic acid

Since the recovery is high and no analytes are detected above the quantitation limit, the data is reported. Refer to the QC Summary forms for more information.

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.



Case Narrative/Conformance Summary

CLIENT: CenterPoint Properties SDG: SSX50

Specialty Services Group Fraction: Miscellaneous LC/MS/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Miscellaneous LC/MS/MS



Quality Control Reference List Specialty Services Group

CLIENT: CenterPoint Properties

SDG: SSX50

Fraction: Miscellaneous LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFC s in Soil by LC/MS/MS	16182005	BLK	07/14/2016 20:11:00
		LCS	07/14/2016 20:28:00
		LCSD	07/14/2016 20:45:00
		8450139	07/12/2016 18:07:00
		8450140	07/12/2016 18:24:00
		8450141	07/12/2016 18:42:00



Quality Control Summary Method Blank Specialty Services Group

SDG: SSX50 Matrix: SOLID

Fraction: Miscellaneous LC/MS/MS

16182005 / BLK					
Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Perfluorooctanoic acid	07/14/16	N.D.	ng/g	0.30	0.60
Perfluorononanoic acid	07/14/16	N.D.	ng/g	0.20	0.40
Perfluorodecanoic acid	07/14/16	N.D.	ng/g	0.20	0.40
Perfluoroundecanoic acid	07/14/16	N.D.	ng/g	0.30	0.60
Perfluorododecanoic acid	07/14/16	N.D.	ng/g	0.40	0.80
Perfluorotridecanoic acid	07/14/16	N.D.	ng/g	0.60	1.2
Perfluorotetradecanoic acid	07/14/16	N.D.	ng/g	0.30	0.80
Perfluorohexanoic acid	07/14/16	N.D.	ng/g	0.20	0.40
Perfluoroheptanoic acid	07/14/16	N.D.	ng/g	0.30	0.60
Perfluorobutanesulfonate	07/14/16	N.D.	ng/g	0.50	1.6
Perfluorohexanesulfonate	07/14/16	N.D.	ng/g	0.50	1.6
Perfluoro-octanesulfonate	07/14/16	N.D.	ng/g	0.70	1.6
NEtFOSAA	07/14/16	N.D.	ng/g	1.0	2.0
NMeFOSAA	07/14/16	N.D.	ng/g	0.90	2.0



Quality Control Summary Laboratory Control Standard (LCS) Laboratory Control Standard Duplicate(LCSD)

SDG: SSX50 Matrix: SOLID

Specialty Services Group Fraction: Miscellaneous LC/MS/MS

LCS: LCS	Batch: 16182005 (Sample number(s): 8450139-8450141)								
LCSD: LCSD	Spike	LCS	LCSD						
	Added	Conc	Conc	LCS	LCSD	%Rec		%RPD	
Analyte	ng/g	ng/g	ng/g	%Rec	%Rec	Limits	%RPD	Limits	
Perfluorooctanoic acid	20	20.33	20.02	102	100	70-130	2	30	
Perfluorononanoic acid	20	16.38	20.06	82	100	70-130	20	30	
Perfluorodecanoic acid	20	27.73	25.45	139 *	127	70-130	9	30	
Perfluoroundecanoic acid	20	26.87	26.77	134 *	134 *	70-130	0	30	
Perfluorododecanoic acid	20	23.35	20.57	117	103	70-130	13	30	
Perfluorotridecanoic acid	20	21.56	22.21	108	111	70-130	3	30	
Perfluorotetradecanoic acid	20	50.96	34.93	255 *	175 *	70-130	37 *	30	
Perfluorohexanoic acid	20	18.5	24.8	92	124	70-130	29	30	
Perfluoroheptanoic acid	20	24.57	28.39	123	142 *	70-130	14	30	
Perfluorobutanesulfonate	17.68	17.28	14.41	98	81	70-130	18	30	
Perfluorohexanesulfonate	18.92	18.07	14.98	96	79	70-130	19	30	
Perfluoro-octanesulfonate	19.12	21.91	33.12	115	173 *	70-130	41 *	30	
NEtFOSAA	20	25.13	19.82	126	99	70-130	24	30	
NMeFOSAA	20	32.52	28.77	163 *	144 *	70-130	12	30	



Instrument ID: 18881 Lab File ID: 16Jul11-25

Date/Time 07/11/2016 19:19 Lab Sample ID: CCV3

Analyzed:

Init. Calib. Date/Times: 07/11/2016 14:15 07/11/2016 15:41

Analytes	Average ICAL	CCV Response	Specified	Calculated	-	%Difference
типатуссь	Response	cev nesponse	Amount	Amount	Difference	Limit
PFBS	317604	711777	240.00	235.48	-1.88	±30
PFDA	313927	756566	60.00	68.14	13.57	±30
PFDoA	716264	1580373	120.00	112.94	10.02	±30
PFHxA	224846	509122	60.00	60.81	1.35	±30
PFHxS	227553	513794	240.00	237.27	-1.14	±30
PFNA	316495	728727	60.00	61.45	2.41	±30
PFOA	449887	1026579	60.00	55.42	-7.63	±30
PFOS	151877	342224	240.00	196.70	-18.04	±30
PFTeDA	552779	1274103	120.00	134.49	12.08	±30
PFTrDA	693924	1568732	120.00	115.78	-3.52	±30
PFUdA	353703	777355	60.00	64.47	7.45	±30
PFHpA	267475	559734	60.00	58.50	-2.51	±30
NEtFOSAA	1320106	3129091	240.00	224.53	-6.44	±30
NMeFOSAA	1461327	3397228	240.00	228.83	-4.65	±30

^{*} Outside QC Limits.



Instrument ID: 18881 Lab File ID: 16Jul12-34

Date/Time 07/12/2016 18:59 Lab Sample ID: CCV1

Analyzed:

Init. Calib. Date/Times: 07/11/2016 14:15 07/11/2016 15:41

Analytes	Average ICAL Response	CCV Response	Specified Amount	Calculated Amount	% Difference	%Difference Limit
PFBS	380363	71016	20.00	17.81	-10.94	±30
PFDA	383791	60865	5.00	4.34	-13.28	±30
PFDoA	792921	129486	10.00	9.54	-4.57	±30
PFHxA	341011	47178	5.00	4.94	-1.20	±30
PFHxS	279386	43517	20.00	15.63	-21.62	±30
PFNA	410665	76499	5.00	4.89	-2.28	±30
PFOA	617348	83551	5.00	4.38	-12.35	±30
PFOS	178139	32759	20.00	14.90	-25.48	±30
PFTeDA	671789	95893	10.00	8.30	-17.02	±30
PFTrDA	827018	127222	10.00	9.61	-3.95	±30
PFUdA	413103	69575	5.00	4.37	-12.64	±30
PFHpA	372324	61673	5.00	4.55	-9.00	±30
NEtFOSAA	772678	335966	20.00	16.62	-16.91	±30
NMeFOSAA	827784	377945	20.00	17.91	-10.45	±30

^{*} Outside QC Limits.



Instrument ID: 18881 Lab File ID: 16Jul14-17

Date/Time 07/14/2016 13:09 Lab Sample ID: CCV1

Analyzed:

Init. Calib. Date/Times: 07/14/2016 09:23 07/14/2016 12:16

	Average ICAL		Specified	Calculated	0)0	%Difference
Analytes	Response	CCV Response	Amount		Difference	
PFBS	380363	88555	20.00	18.40	-7.99	±30
PFDA	383791	74647	5.00	5.53	10.66	±30
PFDoA	792921	168391	10.00	10.21	2.10	±30
PFHxA	341011	62542	5.00	5.23	4.54	±30
PFHxS	279386	67862	20.00	18.76	-6.19	±30
PFNA	410665	89845	5.00	4.73	-5.41	±30
PFOA	617348	112463	5.00	4.77	-4.65	±30
PFOS	178139	42293	20.00	22.81	14.07	±30
PFTeDA	671789	135574	10.00	11.07	10.72	±30
PFTrDA	827018	166986	10.00	9.74	-2.60	±30
PFUdA	413103	88145	5.00	5.93	18.54	±30
PFHpA	372324	89020	5.00	5.43	8.61	±30
NEtFOSAA	772678	172185	20.00	22.18	10.91	±30
NMeFOSAA	827784	173375	20.00	21.29	6.45	±30

^{*} Outside QC Limits.



Form 7

Lancaster Laboratories Calibration Verification Summary
Environmental LC/MS/MS

Instrument ID: 18881 Lab File ID: 16Jul14-38

Date/Time 07/14/2016 19:19 Lab Sample ID: CCV3

Analyzed:

Init. Calib. Date/Times: 07/14/2016 09:23 07/14/2016 12:16

Analytes	Average ICAL	CCV Response	Specified	Calculated	%	%Difference
Analyces	Response	CCV Response	Amount	Amount	Difference	Limit
PFBS	380363	752810	240.00	190.82	-20.49	±30
PFDA	383791	754488	60.00	56.77	-5.36	±30
PFDoA	792921	1641537	120.00	119.83	-0.14	±30
PFHxA	341011	601442	60.00	61.13	1.88	±30
PFHxS	279386	593896	240.00	205.69	-14.29	±30
PFNA	410665	812873	60.00	53.47	-10.88	±30
PFOA	617348	1121018	60.00	61.58	2.63	±30
PFOS	178139	381208	240.00	297.07	23.78	±30
PFTeDA	671789	1309260	120.00	122.61	2.17	±30
PFTrDA	827018	1729459	120.00	121.01	0.84	±30
PFUdA	413103	861321	60.00	65.42	9.03	±30
PFHpA	372324	690763	60.00	59.15	-1.41	±30
NEtFOSAA	772678	1684413	240.00	236.13	-1.61	±30
NMeFOSAA	827784	1803368	240.00	223.83	-6.74	±30

^{*} Outside QC Limits.



Instrument ID: 18881 Lab File ID: 16Jul14-44

Date/Time 07/14/2016 21:03 Lab Sample ID: CCV2

Analyzed:

Init. Calib. Date/Times: 07/14/2016 09:23 07/14/2016 12:16

Analytes	Average ICAL	CCV Response	_	Calculated	-	%Difference
1	Response	_	Amount	Amount	Difference	Limit
PFBS	380363	289300	80.00	68.25	-14.69	±30
PFDA	383791	269296	20.00	21.20	5.97	±30
PFDoA	792921	695373	40.00	49.08	22.69	±30
PFHxA	341011	198473	20.00	20.78	3.90	±30
PFHxS	279386	241702	80.00	77.48	-3.15	±30
PFNA	410665	282335	20.00	19.81	-0.93	±30
PFOA	617348	382335	20.00	21.01	5.05	±30
PFOS	178139	139170	80.00	86.34	7.93	±30
PFTeDA	671789	517070	40.00	42.32	5.81	±30
PFTrDA	827018	627811	40.00	42.50	6.26	±30
PFUdA	413103	347066	20.00	23.10	15.50	±30
PFHpA	372324	264471	20.00	19.06	-4.71	±30
NEtFOSAA	772678	711789	80.00	99.25	24.06	±30
NMeFOSAA	827784	672163	80.00	98.94	23.68	±30

^{*} Outside QC Limits.



Quality Control Summary Internal Standards Specialty Services Group

SDG: SSX50 Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFHxA	13C-PFHpA	13C-PFHxS	13C-PFOA	
	Area	Area	Area	Area	
Average ICAL					
Response	85873	130642	24679	149580	
Upper Limit	128809	195962	37018	224369	
Lower Limit	42936	65321	12339	74790	
Sample					
8450139	98194	161733	37146	161147	
8450140	86391	127012	27558	119141	
8450141	96344	133826	31126	145720	

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

 $[\]mbox{\#}$ Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.



Quality Control Summary Internal Standards Specialty Services Group

SDG: SSX50 Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFOS	13C-PFNA	13C-PFDA	13C-PFUdA
	Area	Area	Area	Area
Average ICAL				
Response	14676	202680	143721	153062
Upper Limit	22014	304020	215582	229594
Lower Limit	7338	101340	71861	76531
Sample				
8450139	18148	249762	158926	153522
8450140	14212	175604	78540	57746 *
8450141	14627	213800	128642	122848

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

[#] Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.



Quality Control Summary Internal Standards Specialty Services Group

SDG: SSX50 Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFDoA	d3-NMeFOSAA	d3-NEtFOSAA	
	Area	Area	Area	
Average ICAL				
Response	150240	131712	95897	
Upper Limit	225360	197567	143846	
Lower Limit	75120	65856	47949	
Sample				
8450139	156829	121374	112304	
8450140	63019 *	39101 *	25515 *	
8450141	97004	92391	79876	

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

 $[\]mbox{\#}$ Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.



Quality Control Summary Internal Standards Specialty Services Group SDG: SSX50

Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFHxA	13С-РГНрА	13C-PFHxS	13C-PFOA
	Area	Area	Area	Area
Average ICAL				
Response	124497	199630	28629	195608
Upper Limit	186745	299445	42944	293412
Lower Limit	62248	99815	14315	97804
Sample				
BLK16182005	89494	127424	30558	111782
LCS16182005	106419	117888	28508	81298 *
LCSD16182005	77913	98198 *	30459	63318 *

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

 $[\]mbox{\#}$ Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.



Quality Control Summary Internal Standards Specialty Services Group

SDG: SSX50 Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFOS	13C-PFNA	13C-PFDA	13C-PFUdA
	Area	Area	Area	Area
Average ICAL				
Response	17352	224366	181535	173134
Upper Limit	26028	336548	272302	259700
Lower Limit	8676	112183	90767	86567
Sample				
BLK16182005	13710	98223 *	48600 *	42763 *
LCS16182005	18010	71247 *	35330 *	33414 *
LCSD16182005	11589	53394 *	33622 *	30978 *

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

 $[\]ensuremath{\mathtt{\#}}$ Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.



Quality Control Summary Internal Standards Specialty Services Group

SDG: SSX50 Matrix: Soil

Fraction: Miscellaneous Specialty Services

16182005	13C-PFDoA	d3-NMeFOSAA	d3-NEtFOSAA
	Area	Area	Area
Average ICAL			
Response	170170	59741	54776
Upper Limit	255254	89611	82164
Lower Limit	85085	29870	27388
Sample			
BLK16182005	46809 *	23379 *	24904 *
LCS16182005	50432 *	28260 *	25071 *
LCSD16182005	40620 *	31117	30363

UPPER LIMIT = +50% of internal standard area. LOWER LIMIT = -50% of internal standard area.

 $[\]ensuremath{\text{\#}}$ Column used to flag values outside QC limits with an asterisk

^{*} Values outside of QC limits.

Sample Data Miscellaneous LC/MS/MS



LOQ/MDL Summary Specialty Services Group

SDG: SSX50

Fraction: Miscellaneous LC/MS/MS

14027: PFC s in Soil by LC/MS/MS	Default	Default	
Analyte Name	MDL	LOQ	Units
Perfluorooctanoic acid	0.30	0.60	ng/g
Perfluorononanoic acid	0.20	0.40	ng/g
Perfluorodecanoic acid	0.20	0.40	ng/g
Perfluoroundecanoic acid	0.30	0.60	ng/g
Perfluorododecanoic acid	0.40	0.80	ng/g
Perfluorotridecanoic acid	0.60	1.2	ng/g
Perfluorotetradecanoic acid	0.30	0.80	ng/g
Perfluorohexanoic acid	0.20	0.40	ng/g
Perfluoroheptanoic acid	0.30	0.60	ng/g
Perfluorobutanesulfonate	0.50	1.6	ng/g
Perfluorohexanesulfonate	0.50	1.6	ng/g
Perfluoro-octanesulfonate	0.70	1.6	ng/g
NEtFOSAA	1.0	2.0	ng/g
NMeFOSAA	0.90	2.0	ng/g

PFBS Component Name:

			11.05 N/A -2.47 -1.88 N/A N/A N/A N/A N/A N/A
0.961098 0.226700 0.3361566 0.17.909853 0.68.061789 0.218.669268	19.505		19.505 235.479 235.479 18.319
N/A 1.600000 1.600000 2.0.000000 1.0.00000000000000000	20.000	20.000	20.00
			<u> </u>
22302.62 25690.47 22610.12 27541.67 28798.74 24493.26 18938.68	Undefined 26942.94 23177.27	Undefine 26942.9 23177.2 23177.2 Undefine 37192.6 26815.4	Undefined 26942.94 23177.27 Undefined Undefined 37192.68 26815.49 27657.41 37145.95 27558.07
742.13 5107.94 7851.95 61977.26 253733.78 698333.65 878620.58	N/A 66252.15 711777.15	N/A 66252.15 711777.15 N/A N/A N/A 68798.00	N/A 66252.15 71177.15 N/A N/A 68798.00 63718.27 N/A
16JUL11-27 16JUL11-28 16JUL11-29 16JUL11-30 16JUL11-31 16JUL11-32	16JUL11-34 16JUL11-35 16JUL12-25	16JUL11-34 16JUL11-35 16JUL12-25 16JUL12-26 16JUL12-27 16JUL12-28 16JUL12-28	16JUL11-34 16JUL11-35 16JUL12-25 16JUL12-26 16JUL12-27 16JUL12-29 16JUL12-30 16JUL12-31 16JUL12-31
MDL CAL1 CAL2 CAL3 CAL3 CAL4 CAL5 CAL6	solvent ICV1 CCV3	solvent ICV1 ICV3 CCV3 Solvent solvent MB 16182005 ICS 16182005	MB 163 LCS 163 LCSD 163 82 84

Jacon W. Knight Senior Chemist

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18 2016

S REPORT	
XSI	
ANA	
MSM	-
LC	

PFHxA

Component Name:

378.44 78192.43 0.005 5320.84 91180.47 0.058 5880.08 84822.85 0.069 33206.20 89149.57 0.372 169938.36 85625.36 1.985 473692.16 80808.09 5.862 661040.61 83651.12 7.902 N/A Undefined Undefined N/A Undefined Undefined N/A Undefined Undefined N/A Undefined N/A 6165.54 Undefined Undefined N/A 6165.54 Undefined N/A 98194.38 N/A N/A 96344.32 N/A N/A 96344.32 N/A N/A 96344.32 N/A 185218.98 92218.28 2.008 4224.59 1482.75 5.850	Sample ID	Data File Name	Area	Summary of Quan ISTD Area	n Results Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
\$320.84 91180.47 0.058 0.400000 0.598962 49.74 \$880.08 84822.85 0.069 1.000000 0.711264 -28.87 \$320.620 89149.57 0.069 1.000000 0.711264 -28.87 \$152.06 850.625.36 1.985 5.000000 20.324530 0.05 \$473692.16 80808.09 5.862 60.000000 60.027881 0.05 \$61040.61 83651.12 7.902 80.000000 60.027881 0.05 \$0150.15.4 83446.85 2.263 20.000000 60.027881 1.15 \$015.54 Undefined Undefined Undefined Undefined N/A N/A \$015.54 Undefined Undefined N/A N/A N/A \$0165.54 Undefined Undefined N/A N/A N/A \$0165.54 Undefined Undefined N/A N/A N/A \$0165.54 Undefined N/A N/A N/A \$0165.54		16.11.11-27	378,44	78192.43	0.005	N/A	0.050965	N/A	N/A
5880.08 84822.85 0.069 1.000000 0.711264 -28.87 33206.20 89149.57 0.372 5.000000 3.815587 -23.69 169938.36 85625.36 1.985 20.00000 3.815587 -23.69 169938.36 85625.36 1.985 60.00000 3.815587 -23.69 473692.16 880808.09 5.862 60.00000 60.027881 0.05 NA Undefined Undefined Undefined Undefined Undefined N/A N/A N/A Undefined Undefined Undefined Undefined N/A N/A N/A Undefined Undefined Undefined N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 165.54 Undefined Undefined Undefined N/A N/A N/A 188.12 1907.46 N/A N/A N/A N/A N/A N/A N/A N/A		16JUL11-28	5320.84	91180.47	0.058	0.400000	0.598962	49.74	N/A
33206.20 89149.57 0.372 5.000000 3.815587 -23.69 169938.36 85625.36 1.985 20.000000 20.324530 1.62 473692.16 80808.09 5.862 60.00000 60.027881 0.05 473692.16 83651.12 7.902 80.00000 60.027881 0.05 8446.81 2.263 20.00000 80.921776 1.15 1015.4 88446.85 5.238 60.00000 60.808155 15.87 50912.5.4 Undefined Undefined Undefined N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 88.12 Undefined Undefined N/A N/A N/A N/A 88.8.12 1907.46 1.514 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 18.8.8.12 1907.46 1.514 N/A N/A N/A <		16JUL11-29	5880.08	84822.85	690'0	1.000000	0.711264	-28.87	N/A
169938.36 85625.36 1.985 20.000000 20.324530 1.62 473692.16 80808.09 5.862 60.00000 60.027881 0.05 473692.16 83651.12 7.902 80.00000 60.027881 0.05 NA Undefined Undefined Undefined Undefined N/A N/A NA Undefined Undefined Undefined N/A N/A N/A N/A N/A N/A N/A N/A		16JUL11-30	33206.20	89149.57	0.372	5.000000	3.815587	-23.69	N/A
473692.16 80808.09 5.862 60.000000 60.027881 0.05 661040.61 83651.12 7.902 80.00000 80.921776 1.15 N/A Undefined Undefined Undefined 1.15 1.15 509121.54 88446.85 2.263 20.00000 53.174050 15.87 N/A Undefined Undefined Undefined N/A N/A N/A N/A N/A N/A N/A N/A N/A <td></td> <td>16JUL11-31</td> <td>169938.36</td> <td>85625.36</td> <td>1.985</td> <td>20.000000</td> <td>20.324530</td> <td>1.62</td> <td>N/A</td>		16JUL11-31	169938.36	85625.36	1.985	20.000000	20.324530	1.62	N/A
661040.61 83651.12 7.902 80.000000 80.921776 1.15 N/A Undefined Undefined Undefined N/A N/A N/A 200150.42 88446.85 2.263 20.00000 23.174050 15.87 509121.54 85737.57 5.938 60.00000 60.808155 1.35 N/A Undefined Undefined Undefined N/A N/A N/A N/A Undefined Undefined Undefined N/A N/A N/A N/A Undefined Undefined N/A N/A N/A N/A Undefined Undefined N/A N/A N/A 88.12 1907.46 1.514 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A 185218.98 92218.28		16JUL11-32	473692.16	80808.09	5.862	000000009	60.027881	0.05	N/A
N/A Undefined UNA N/A N/A N/A 2888.12 1907.46 1.514 N/A 0.000000 N/A N/A N/A 98194.38 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A N/A N/A 185218.98 92218.28 2.08 20.000000 20.568358 2.84 482448.61		16JUL11-33	661040.61	83651.12	7.902	80.000000	80.921776	1.15	N/A
200150.42 88446.85 2.263 20.000000 23.174050 15.87 509121.54 85737.57 5.938 60.00000 60.808155 1.35 N/A Undefined Undefined Undefined N/A N/A N/A N/A Undefined Undefined Undefined N/A N/A N/A 165.54 Undefined Undefined N/A N/A N/A N/A 288.12 1907.46 1.514 N/A 0.000000 N/A N/A N/A 98194.38 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A A7177.56 97819.69 0.482 5.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A N/A N/A 482448.61 82468.88 5.850 60.000000 59.906316		16JUL11-34	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
509121.54 85737.57 5.938 60.000000 60.808155 1.35 N/A Undefined Undefined N/A N/A N/A N/A Undefined Undefined N/A N/A N/A 6165.54 Undefined Undefined N/A N/A N/A 288.12 Undefined Undefined N/A N/A N/A N/A Undefined Undefined N/A N/A N/A N/A 1907.46 1.514 N/A 15.506033 N/A N/A 86391.32 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 47177.56 97819.69 0.482 5.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A N/A N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16 <td></td> <td>16JUL11-35</td> <td>200150.42</td> <td>88446.85</td> <td>2.263</td> <td>20.000000</td> <td>23.174050</td> <td>15.87</td> <td>N/A</td>		16JUL11-35	200150.42	88446.85	2.263	20.000000	23.174050	15.87	N/A
N/A Undefined Undefined N/A N/A N/A N/A Undefined Undefined N/A N/A N/A 6165.54 Undefined Undefined N/A N/A N/A 2888.12 Undefined Undefined N/A N/A N/A N/A 98194.38 Undefined N/A 15.506033 N/A N/A 98194.38 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A 47177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.00000 20.568358 2.84 4224.59 1482.75 2.849 N/A N/A N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-25	509121.54	85737.57	5.938	000000009	60.808155	1.35	N/A
N/A Undefined Undefined N/A N/A N/A N/A 6165.54 Undefined N/A N/A N/A N/A N/A 2888.12 1907.46 1.514 N/A 0.000000 N/A N/A N/A 98194.38 N/A N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A N/A N/A 47177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A N/A N/A N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-26	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
N/A 634.40 N/A N/A N/A N/A 6165.54 Undefined Undefined N/A 0.000000 N/A 288.12 1907.46 1.514 N/A 15.506033 N/A N/A 98194.38 N/A N/A N/A N/A N/A 86391.32 N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A A7177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A N/A N/A N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-27	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
6165.54 Undefined Undefined N/A 0.000000 N/A 288.12 1907.46 1.514 N/A 15.506033 N/A		16JUL12-28	N/A	634.40	NA	N/A	N/A	N/A	N/A
288.12 1907.46 1.514 N/A 15.506033 N/A N/A 98194.38 N/A N/A N/A N/A N/A 86391.32 N/A N/A N/A N/A N/A 96344.32 N/A N/A N/A N/A 47177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.00000 20.568358 2.84 4224.59 1482.75 2.849 N/A 29.176967 N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-29	6165.54	Undefined	Undefined	N/A	0.000000	N/A	N/A
N/A 98194.38 N/A 1.20 185218.98 92218.28 2.008 20.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A 29.176967 N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-30	2888.12	1907.46	1.514	N/A	15.506033	N/A	N/A
N/A 86391.32 N/A -0.16		16JUL12-31	N/A	98194.38	N/A	N/A	N/A	N/A	N/A
N/A 96344.32 N/A N/A N/A N/A 47177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.00000 20.568358 2.84 4224.59 1482.75 2.849 N/A 29.176967 N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-32	N/A	86391.32	N/A	N/A	N/A	N/A	N/A
47177.56 97819.69 0.482 5.000000 4.940083 -1.20 185218.98 92218.28 2.008 20.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A 29.176967 N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-33	N/A	96344.32	N/A	N/A	N/A	N/A	N/A
185218.98 92218.28 2.008 20.000000 20.568358 2.84 4224.59 1482.75 2.849 N/A 29.176967 N/A 482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL12-34	47177.56	97819.69	0.482	5.000000	4.940083	-1.20	N/A
4224.59 1482.75 2.849 N/A 29.176967 N/A 29.2448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL13-03	185218.98	92218.28	2.008	20.000000	20.568358	2.84	N/A
482448.61 82468.88 5.850 60.000000 59.906316 -0.16		16JUL13-09	4224.59	1482.75	2.849	N/A	29.176967	N/A	N/A
		16JUL13-10	482448.61	82468.88	5.850	000000009	59.906316	-0.16	N/A

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Jacon W. Kright Senior Chemist

LCMSMS ANALYSIS REPORT

PFHxS	
Component Name:	4

	Excluded	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
i i i	% Diff	N/A	26.87	3.01	-23.12	-7.51	-9.62	10.36	N/A	11.15	-1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-21.85	-12.62	N/A	0.56
	Calculated Amount	1.354258	2.029883	4.120497	15.376364	73.995035	216.910546	353.167675	N/A	22.229455	237.266190	N/A	N/A	N/A	21.242432	19.091225	N/A	N/A	N/A	15.630450	69.905072	21.053226	241.340171
	Specified Amount	N/A	1.600000	4.000000	20.000000	80.000000	240.000000	320.000000	N/A	20.000000	240.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.000000	80.000000	N/A	240.000000
n Results	Area Ratio	0.032	0.095	0.291	1.347	6.848	20.258	33.043	Undefined	1.990	22.168	Undefined	Undefined	N/A	1.898	1.696	N/A	N/A	N/A	1.371	6.464	1.880	22.550
Summary of Quan Results	ISTD Area	22302.62	25690.47	22610.12	27541.67	28798.74	24493.26	18938.68	Undefined	26942.94	23177.27	Undefined	Undefined	37192.68	26815.49	27657.41	37145.95	27558.07	31126.41	31737.06	32040.15	27415.41	21388.83
	Area	704.41	2440.09	6582.93	37107.61	197205.62	496183.71	625799.09	N/A	53626.56	513793.84	N/A	N/A	N/A	50889.35	46904.32	N/A	N/A	N/A	43516.83	207105.67	51541.11	482324.05
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDF WDF	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
												S	S	X5	50	F	a	ge	4	4	of	2	12

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	Sp																						
n Resulfs	Area Ratio	0.011	0.043	0.072	0.393	1.889	5.206	7.201	Undefined	2.099	5.206	Undefined	Undefined	N/A	1.652	3.288	N/A	N/A	N/A	0.404	1.833	1.632	5.620
Summary of Ouan Results	ISTD Area	139826.06	153139.87	145114.23	145438.91	129643.86	115333.66	95177.62	Undefined	144444.64	107524.09	Undefined	Undefined	3589.42	6087.43	1546.76	161732.89	127012.26	133825.91	152813.56	132036.09	5285.55	108419.56
	Area	1564.48	6561.40	10416.35	57148.99	244835.75	600475.65	685412.09	N/A	303185.66	559732.78	N/A	N/A	N/A	10059.39	5086.09	N/A	N/A	N/A	61672.85	242051.68	8623.39	609284.05
PFhpA	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
Component Name:	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
Com												S	S	X5	50	F	Pa	ge	4	5	of	2	12

NA N NA N

24.35 -17.76 -11.39

0.822426

 $\begin{array}{c} 0.400000 \\ 1.000000 \\ 5.000000 \end{array}$

4.430273

21.231307 58.503754

20.000000 60.000000 80.000000

0.141754 0.497382

Calculated Amount

pecified Amount

Excluded

% Diff

N/A N/A

 $\begin{array}{c} N'A\\N'A\\A\\A\\A\end{array}$

18.579687

36.955097

N/A

N/A

23.595442

20.000000 60.0000000

N/A

58.495087

80.914858

18.343970 63.146286

NA

60.000000

N/A N/A

 $\stackrel{N}{A}\stackrel{N}{A}$

4.549809 20.610056

5.000000 20.000000

N/A

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LCMSMS ANALYSIS REPORT

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	Excluded	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
	% Diff	N/A	32.78	-7.83	-20.50	-8.43	2.63	1.35	N/A	18.94	-7.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-12.35	-9.64	N/A	-1.43
	Calculated Amount	0.250343	0.531130	0.921737	3.974836	18.313097	61.578371	81.080829	N/A	23.787440	55.422232	N/A	N/A	N/A	23.403735	24.129607	A/X	A/A	N/A	4.382606	18.071568	18.117931	59.141301
	Specified Amount	N/A	0.400000	1.000000	5.000000	20.000000	000000009	80.000000	N/A	20.000000	000000009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.000000	20.000000	N/A	00000009
in Results	Area Ratio	0.020	0.053	0.099	0.457	2.140	7.218	9.507	Undefined	2.782	6.495	Undefined	Undefined	N/A	2.737	2.823	N/A	N/A	N/A	0.505	2.112	2.117	6.932
Summary of Quan Results	ISTDArea	132848.81	166091.88	146625.80	158539.02	152235.70	138662.31	134323.18	Undefined	141454.31	158048.11	Undefined	Undefined	3756.92	7605.50	2661.25	161147.31	119141.13	145719.65	165480.68	173860.89	9763.18	134963.48
	Area	2643.33	8778.44	14471.68	72458.15	325769.43	1000850.22	1276993.98	N/A	393585.15	1026579.00	N/A	N/A	N/A	20819.18	7511.58	N/A	N/A	N/A	83550.57	367116.61	20668.60	935547.99
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CALS	CAL6	solvent	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCVI	CCV2	LCS 16182005	CCV3
												S	S	X5	0	F	'a(ge	4	6	of	2	12

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PFOS
ent Name:
Component

	Excluded	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
	% Diff	N/A	34.51	-17.25	-12.17	-15.47	22.86	-12.47	N/A	-6.91	-18.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-25.48	-19.28	N/A	14.15
	Calculated Amount	1.442455	2.152192	3.309866	17.565008	67.624235	294.859596	280.089103	N/A	18.618549	196.700446	N/A	N/A	N/A	15.090131	19.612608	N/A	N/A	N/A	14.903960	64.578926	15.921460	273.950834
	Specified Amount	N/A	1.600000	4.000000	20.000000	80.000000	240.000000	320.000000	N/A	20.000000	240.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.00000	80.000000	N/A	240.000000
n Results	Area Ratio	0.033	0.116	0.253	1.930	7.822	34.565	32.826	Undefined	2.054	23.012	Undefined	Undefined	N/A	1.639	2.171	N/A	N/A	N/A	1.617	7.463	1.737	32.104
Summary of Quan Results	ISTD Area	11246.98	17486.40	16046.37	16199.31	16067.21	10137.51	12119.31	Undefined	14111.16	14871.22	Undefined	Undefined	16425.38	24431.32	14593.24	18148.19	14211.83	14627.30	20258.13	16674.63	21193.02	10340.67
	Area	369.00	2034.31	4053.03	31268.74	125672.26	350399.84	397833.14	N/A	28987.73	342223.54	N/A	N/A	N/A	40042.60	31685.29	N/A	N/A	N/A	32758.94	124447.08	36808.56	331976.50
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
												S	S	X5	50	F	'a(ge	4	7	of	2	12

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Jacon W. Knight Seniur Chemist

PFNA	
omponent Name:	

Sample ID								
	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
MUL	16JUL11-27	1979.73	178845.10	0.011	N/A	0.285214	N/A	N/A
CAL1	16JUL11-28	6142.53	232321.30	0.026	0.400000	0.513829	28.46	N/A
CAL	16JUL11-29	10039.83	220149.98	0.046	1.000000	0.798882	-20.11	N/A
CAL3	16JUL11-30	68728.10	224479.64	0.306	5.000000	4.674440	-6.51	N/A
CAL4	16JUL11-31	271106.94	213087.83	1.272	20.000000	19.044242	-4.78	N/A
CAL5	16JUL11-32	704320.58	166706.63	4.225	000000009	62.961268	4.94	N/A
CAL6	16JUL11-33	838633.06	159333.50	5.263	80.000000	78.407339	-1.99	N/A
solvent	16JUL11-34	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
ICA1	16JUL11-35	318145.47	218387.94	1.457	20.000000	21.788656	8.94	N/A
CCV3	16JUL12-25	728726.53	176740.06	4.123	000000.09	61.447762	2.41	N/A
solvent	16JUL12-26	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
solvent	16JUL12-27	N/A	Undefined	Undefined	N/A	A/Z	N/A	N/A
MB 16182005	16JUL12-28	N/A	9919.59	N/A	N/A	N/A	N/A	N/A
LCS 16182005	16JUL12-29	26171.65	16758.18	1.562	N/A	23.349418	N/A	N/A
LCSD 16182005	16JUL12-30	10593.07	7849.17	1.350	N/A	20.193988	N/A	N/A
8450139	16JUL12-31	N/A	249761.73	N/A	N/A	N/A	N/A	N/A
8450140	16JUL12-32	N/A	175604.21	N/A	N/A	N/A	N/A	N/A
8450141	16JUL12-33	474.45	213800.07	0.002	N/A	0.241111	N/A	N/A
CCVI	16JUL12-34	76498.57	238760.18	0.320	5.000000	4.886138	-2.28	N/A
CCV2	16JUL13-03	302735.53	213159.57	1.420	20.000000	21.244854	6.22	N/A
LCS 16182005	16JUL13-09	25285.16	16001.17	1.580	N/A	23.624341	N/A	N/A
CCV3	16JUL13-10	688839.45	162779.45	4.232	000000.09	63.062772	5.10	N/A

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Jason W. Knight Seniur Chemiet

LCMSMS ANALYSIS REPORT

Component Name: PFDA

	Excluded	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
	% Diff	N/A	11.79	-0.58	-14.84	3.69	80.0-	0.01	N/A	29.88	13.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-13.28	3.87	N/A	4.66
	Calculated Amount	0.259340	0.447159	0.994216	4.258097	20.738899	59.952467	80.009162	N/A	25.975068	68.139421	N/A	N/A	N/A	26.598079	26.015521	N/A	N/A	N/A	4.336062	20.773053	28.949294	62.798971
	Specified Amount	N/A	0.400000	1.000000	5.000000	20.000000	00000009	80.000000	N/A	20.000000	000000009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.000000	20.000000	N/A	00000009
1 Results	Area Ratio	0.022	0.036	0.079	0.331	1.606	4.639	6.190	Undefined	2.011	5.272	Undefined	Undefined	N/A	2.059	2.014	N/A	N/A	N/A	0.337	1.609	2.241	4.859
Summary of Quan Results	ISTDArea	122048.08	129639.81	146615.11	148343.49	145016.53	146127.04	146587.01	Undefined	158167.36	143500.33	Undefined	Undefined	13655.39	16450.11	6767.62	158926.17	78539.63	128642.18	180510.88	151013.21	15333.44	137566.75
	Area	2667.69	4716.95	11538.41	49124.28	232882.64	677880.81	907420.73	N/A	318060.27	756565.96	N/A	N/A	N/A	33872.39	13630.24	N/A	N/A	N/A	60865.14	242911.67	34361.62	668457.92
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
		-		•								S	S	X5	50	F	Pa	ge	4	9	of	2	12

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NMeFOSAA Component Name:

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	Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
1	MDF	16JUL11-27	8878.55	114668.02	0.077	N/A	1.197069	N/A	N/A
	CAL1	16JUL11-28	25342.21	162693.85	0.156	1.600000	1.796570	12.29	N/A
	CAL2	16JUL11-29	65502.35	155569.08	0.421	4.000000	3.826719	-4.33	N/A
	CAL3	16JUL11-30	340661.33	155602.48	2.189	20.000000	17.358733	-13.21	N/A
	CAL4	16JUL11-31	1332328.37	120945.75	11.016	80.000000	84.906577	6.13	N/A
	CAL5	16JUL11-32	3338774.93	107442.70	31.075	240.000000	238.413199	99.0-	N/A
	CAL6	16JUL11-33	3665352.86	88015.63	41.644	320.000000	319.298202	-0.22	N/A
	solvent	16JUL11-34	34653.03	857.93	40.392	N/A	309.711593	N/A	N/A
	ICV1	16JUL11-35	507101.72	127401.73	3.980	20.000000	31.065042	55.33	N/A
	CCV3	16JUL12-25	3397227.70	113912.57	29.823	240.000000	228.833334	-4.65	N/A
	solvent	16JUL12-26	58247.41	957.28	60.847	N/A	466.249522	N/A	N/A
	solvent	16JUL12-27	4627.89	Undefined	Undefined	N/A	0.000000	N/A	N/A
	MB 16182005	16JUL12-28	N/A	33042.13	N/A	N/A	N/A	N/A	N/A
	LCS 16182005	16JUL12-29	110582.06	24042.99	4.599	N/A	35.802184	N/A	N/A
	LCSD 16182005	16JUL12-30	83246.97	22161.42	3.756	N/A	29.351250	N/A	N/A
	8450139	16JUL12-31	N/A	121373.57	N/A	N/A	N/A	N/A	N/A
	8450140	16JUL12-32	N/A	39101.01	N/A	N/A	N/A	N/A	N/A
	8450141	16JUL12-33	N/A	92391.38	N/A	N/A	N/A	N/A	N/A
	CCVI	16JUL12-34	377944.98	167128.76	2.261	20.000000	17.910456	-10.45	N/A
	CCV2	16JUL13-03	1212254.03	109284.42	11.093	80.000000	85.493810	6.87	N/A
	LCS 16182005	16JUL13-09	82752.07	20371.62	4.062	N/A	31.690952	N/A	N/A
	CCV3	16JUL13-10	2869200.62	98775.35	29.048	240.000000	222.899577	-7.13	N/A

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PFUdA Component Name:

	nount	0.236590	0.432738	0.908075	4.289353	23.742824	60.535487	76.491523	N/A	25.165828	64.472168	0.00000	N/A	N/A	1.297964	24.700260	N/A	N/A	N/A	4.367861	18.596508	26.916699	59.610833
	Calculated Amount	0.23	0.43	0.90	4.28	23.74	60.53	76.49		25.16	64.47	0.00			21.29	24.70				4.36	18.59	26.91	59.61
	Specified Amount	N/A	0.400000	1.000000	5.000000	20.000000	000000009	80.000000	N/A	20.000000	000000009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.000000	20.000000	N/A	00000009
in Results	Area Ratio	0.015	0.032	0.074	0.374	2.100	5.363	6.778	Undefined	2.226	5.712	Undefined	Undefined	N/A	1.883	2.184	N/A	N/A	N/A	0.381	1.643	2.381	5.281
Summary of Quan Results	ISTD Area	143535.38	173189.41	149321.21	171630.19	133871.88	146832.92	143529.28	Undefined	153984.90	136100.45	Undefined	Undefined	22928.37	26769.32	11967.07	153522.40	57746.40	122847.67	182457.23	167367.17	19778.33	140572.31
	Area	2144.85	5600.64	11123.41	64251.34	281074.12	787392.18	972777.32	N/A	342735.51	777354.85	470.36	N/A	N/A	50400.07	26141.89	N/A	N/A	N/A	69574.88	275014.09	47093.16	742292.42
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
												S	S	X5	50	F	'a	ge	5	1	of	2	12

Excluded

% Diff

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Jason W. Knight Sentor Chemist

Jason W. Knight Seniur Chemist

LCMSMS ANALYSIS REPORT

Component Name: NEtFOSAA

	f Excluded						N/A																
	% Diff	N/A	-11.28	16.36	61.7-	4.03	-2.63	1.31	N/A	99:0-	-6.4	N/A	√/N	V/V	N/A	N/A	N/A	√/N	√/N	-16.91	2.17	N/A	0.85
	Calculated Amount	1.058599	1.419522	4.654463	18.442729	83.226077	233.680337	324.176872	0.000000	19.868102	224.533147	249.802078	0.000000	0.798519	19.760882	24.346562	N/A	N/A	N/A	16.618245	81.734409	26.036256	242.042785
	Specified Amount	N/A	1.600000	4.000000	20.000000	80.000000	240.000000	320.000000	N/A	20.000000	240.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.000000	80.000000	N/A	240.000000
in Results	Area Ratio	0.153	0.20	0.705	2.822	12.765	35.857	49.746	Undefined	3.040	34.453	38.331	Undefined	0.114	3.024	3.728	N/A	N/A	N/A	2.542	12.536	3.987	37.140
Summary of Quan Results	ISTD Area	85513.45	113083.49	99930.70	120029.66	92371.16	82909.30	67059.18	Undefined	107330.77	90823.06	2114.33	Undefined	34203.89	23414.84	13797.73	112303.60	25514.51	79876.34	132187.02	93807.28	15070.62	73809.63
	Area	13124.79	23620.53	70489.05	338677.79	1179084.40	2972839.32	3335927.89	40947.98	326326.89	3129090.90	81044.11	6854.24	3884.36	70804.80	51434.40	N/A	N/A	N/A	335965.72	1175939.38	60087.77	2741289.72
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDF	CAL1	CAL2	CAL3	CAL4	CALS	CAL6	solvent	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
												S	S	Χ5	50	F	'a(ge	5	2	of	2	12

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PFDoA Component Name:

			Summary of Quan Results	in Results				
Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
MDL	16JUL11-27	3849.53	129103.45	0.030	N/A	0.643049	N/A	N/A
CAL1	16JUL11-28	8252.01	154751.37	0.053	0.800000	0.907291	13.41	N/A
CAL2	16JUL11-29	23147.56	147502.82	0.157	2.000000	2.071924	3.60	N/A
CAL3	16JUL11-30	118047.56	148735.44	0.794	10.000000	9.229609	-7.70	N/A
CAL4	16JUL11-31	486074.81	152358.96	3.190	40.000000	36.170494	-9.57	N/A
CALS	16JUL11-32	1587433.29	165645.81	9.583	120.000000	108.034230	76.6-	N/A
CAL6	16JUL11-33	2074627.79	132446.54	15.664	160.000000	176.386452	10.24	N/A
solvent	16JUL11-34	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
ICV1	16JUL11-35	301430.37	148071.32	2.036	20.000000	23.191399	15.96	N/A
CCV3	16JUL12-25	1580373.22	157730.77	10.019	120.000000	112.936860	-5.89	N/A
solvent	16JUL12-26	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
solvent	16JUL12-27	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
MB 16182005	16JUL12-28	N/A	36657.51	N/A	N/A	N/A	N/A	N/A
LCS 16182005	16JUL12-29	56998.07	28550.95	1.996	N/A	22.749095	N/A	N/A
CSD 16182005	16JUL12-30	26403.18	14334.89	1.842	N/A	21.012559	N/A	N/A
8450139	16JUL12-31	N/A	156828.55	N/A	N/A	N/A	N/A	N/A
8450140	16JUL12-32	N/A	63019.13	N/A	N/A	N/A	N/A	N/A
8450141	16JUL12-33	N/A	97004.32	N/A	N/A	N/A	N/A	N/A
CCV1	16JUL12-34	129485.96	157615.57	0.822	10.000000	9.542734	-4.57	N/A
CCV2	16JUL13-03	520590.22	155950.89	3.338	40.000000	37.832386	-5.42	N/A
CS 16182005	16JUL13-09	50667.45	22756.76	2.226	N/A	25.335840	N/A	N/A
CCV3	16JUL13-10	1503900.19	136421.73	11.024	120.000000	124.228162	3.52	N/A

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Jason W. Knight Senior Chemist

Jacon W. Knight Seniur Chamist

LCMSMS ANALYSIS REPORT

Component Name: PFTrDA

% Diff Excluded			10.38 N/A													N/A N/A						
Calculated Amount	0.716406	0.752568	2.207627	9.698545	40.884048	104.718400	174.538813	N/A	19.859849	115.775011	N/A	N/A	N/A	20.001039	29.300061	N/A	N/A	N/A	9.605286	38.131566	25.520106	
Specified Amount	N/A	0.800000	2.000000	10.000000	40.000000	120.000000	160.000000	N/A	20.000000	120.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.000000	40.000000	N/A	
Area Ratio	0.042	0.045	0.170	0.815	3.499	8.994	15.004	Undefined	1.690	9.946	Undefined	Undefined	N/A	1.702	2.502	N/A	N/A	N/A	0.807	3.263	2.177	
ISTD Area Area R	129103.45	154751.37	147502.82	148735.44	152358.96	165645.81	132446.54	Undefined	148071.32	157730.77	Undefined	Undefined	36657.51	28550.95	14334.89	156828.55	63019.13	97004.32	157615.57	155950.89	22756.76	
Area	5430.29	92.0669	25136.99	121247.81	533173.39	1489808.51	1987184.16	N/A	250213.33	1568731.60	N/A	N/A	N/A	48592.83	35871.26	N/A	N/A	N/A	127221.61	508795.70	49541.87	
Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	
Sample ID	MDF	CAL1	CAL2	CAL3	CAL4	CALS	CAL6	solvent	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	10000
											S	S	X5	50	F	'a(ge	5	4	of	2	

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PFTeDA Component Name:

	Excluded	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
	% Diff	N/A	-7.76	21.75	-23.92	12.31	-2.28	-0.11	N/A	7.53	12.08	N/A	NA	NA	N/A	N/A	N/A	NA	N/A	-17.02	-11.20	N/A	-1.06
	Calculated Amount	0.832731	0.737899	2.435009	7.608413	44.925789	117.266696	159.826195	N/A	21.506261	134.493788	N/A	N/A	N/A	33.683485	50.776103	N/A	N/A	N/A	8.298161	35.518782	38.515023	118.726756
	Specified Amount	N/A	0.800000	2.000000	10.000000	40.000000	120.000000	160.000000	N/A	20.000000	120.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.000000	40.000000	N/A	120.000000
n Results	Area Ratio	0.019	0.012	0.131	0.492	3.101	8.157	11.132	Undefined	1.464	9.361	Undefined	Undefined	N/A	2.315	3.510	N/A	N/A	N/A	0.540	2.443	2.653	8.259
Summary of Quan Results	ISTD Area	143535.38	173189.41	149321.21	171630.19	133871.88	146832.92	143529.28	Undefined	153984.90	136100.45	Undefined	Undefined	22928.37	26769.32	11967.07	153522.40	57746.40	122847.67	182457.23	167367.17	19778.33	140572.31
	Area	2658.95	2060.24	19490.10	84467.44	415089.77	1197761.82	1597802.28	N/A	225374.43	1274103.38	N/A	N/A	N/A	61965.81	41999.51	N/A	N/A	N/A	98592.89	408893.94	52462.70	1161038.77
	Data File Name	16JUL11-27	16JUL11-28	16JUL11-29	16JUL11-30	16JUL11-31	16JUL11-32	16JUL11-33	16JUL11-34	16JUL11-35	16JUL12-25	16JUL12-26	16JUL12-27	16JUL12-28	16JUL12-29	16JUL12-30	16JUL12-31	16JUL12-32	16JUL12-33	16JUL12-34	16JUL13-03	16JUL13-09	16JUL13-10
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	solvent	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	8450139	8450140	8450141	CCV1	CCV2	LCS 16182005	CCV3
												S	S	X5	50	F	Pa	ge	5	5	of	2	12

Home Dale

Lynn Dodd Principal Specialist

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N/A

-10.70

17.859729

20.000000 320.000000 240.000000

0.444 2.581 53.876 32.177 11.721 2.664

353.083793 211.279375

3.893504

Excluded

% Diff

Calculated Amount

Specified Amount

Area Ratio

Summary of Quan Results

ISTD Area 38029.96 35181.64 29478.97 33266.54 18432.30 26194.70 29220.27 33243.42 29194.99 25916.79

Area

Data File Name 16JUL14-03 6JUL14-04 6JUL14-05 16JUL14-09

Sample ID

PFBS

Component Name:

2241.10

13077.91 85851.64

1.887959

1.6000004.000000

1.379386

-20.49

90.822658 N/A NAN/A 17.278386

> N/A N/A N/A N/A N/A

10.34 -11.97 -3.01 -7.99 -25.48

77.595639

18.402833 14.903564

20.000000 20.000000 240.000000

2.128

29.047

80.000000

842877.85 342502.32

6JUL14-12

16JUL14-14 6JUL14-17

CAL4

16JUL14-11

CAL6 CAL5

CAL3

CAL2

CAL1

993059.71

62137.85

6JUL14-19 16JUL14-38 6JUL14-39 .6JUL14-40

ICV1 CCV1

6JUL14-42 6JUL14-43 6JUL14-44

CCV2

SSX50 Page 56 of 212

6JUL14-41

solvent

solvent MB 16182005 LCS 16182005 LCSD 16182005

CCV3

752809.62

88554.67

N/A N/A N/A N/A N/A 14.69

14.408505 58.250111

80.000000

2.053 Undefined Undefined 2.492 Indefined Indefined 30557.75 28507.79 30459.06 28110.98 N/ANAN/A71034.69 62520.90

N 多を本一 Jason W. Knight Senior Chemat

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PFHxA Component Name:

ISTUArea	•	
	Area	1
122333.50	.02	2641.02
128045.65	.91	5395.91
129869.42	.97	12246.97
128080.33	.48	62484.48
124880.60	.86	937317.86
120164.14	.85	778440.85
115938.91	20	250180.20
118636.57	00.	62542
137739.29	31	220022.81
97664.82	22	601441.87
Undefined	Ą,	Ż
Undefined	_	N/A
89493.89	A	Ż
106419.15	13	198368.43
77912.54	.5	194675.75
94786.91	∞.	198473.48
		•

Jecon W. Knight Seniur Chemist

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PFhpA Component Name:

	Excluded	•			N/A															
	% Diff	N/A	8.61	-18.76	1.18	-5.85	4.53	10.29	8.61	5.59	-1.41	N/A	N/A	N/A	N/A	N/A	-4.71			
	Calculated Amount	0.293516	0.434459	0.812362	5.059199	75.319633	62.716835	22.057512	5.430477	21.117623	59.153452	N/A	N/A	N/A	24.570721	28.391445	19.057581			
	Specified Amount	N/A	0.400000	1.000000	5.000000	80.000000	000000009	20.000000	5.000000	20.000000	000000009	N/A	N/A	N/A	N/A	N/A	20.000000			
n Results	Area Ratio	0.014	0.026	0.058	0.410	6.238	5.192	1.820	0.441	1.742	4.897	Undefined	Undefined	N/A	2.028	2.345	1.571		·	
Summary of Quan Results	ISTD Area	229709.18	224985.66	244065.90	217862.12	145784.54	163402.26	201678.93	202060.69	167721.46	141068.72	Undefined	Undefined	127424.36	117887.80	98198.27	168360.10			
	Area	3324.23	5886.08	14035.60	89271.98	909338.98	848418.54	366994.77	89019.76	292126.93	690762.92	N/A	N/A	N/A	239095.03	230281.79	264471.36			
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL14-44			
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCV1	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2			
												S	SS	Χŧ	50	F	Page	58 d	of 2	12

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Summary of Quan Results ISTD Area 38029.96 35181.64 29478.97 33266.54 18432.30 26194.70 Area 11679.06 726872.68 502992.76 5008.18 66033.88 2589.83

Data File Name

Sample ID

PFHxS

Component Name:

16JUL14-03 6JUL14-04 6JUL14-05 16JUL14-09

Excluded

% Diff

Calculated Amount N/AN/A N/A N/A N/A Specified Amount 1.6000004.000000 20.000000 320.000000 240.000000 80.000000 20.000000 20.000000 240.000000 80.000000 Area Ratio 23.020 9.026 1.767 22.915 1.619 0.142 0.396 1.985 39.435 1.964 2.041 Undefined Undefined 29220.27 33243.42 29194.99 25916.79 Undefined 28507.79 30459.06 Undefined 30557.75 51588.70 593895.88 N/A NAN/A 67861.99 55991.19 263731.55 49299.24

6JUL14-39

(6JUL14-38

CCV3 ICVI

solvent

solvent

6JUL14-40

6JUL14-42

6JUL14-4

MB 16182005 LCS 16182005 LCSD 16182005

6JUL14-44 6JUL14-43

CCV2

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16JUL14-19

16JUL14-17

6JUL14-12 (6JUL14-14

CAL5

CAL4

CCV1

CAL2 CAL3 CAL6

CAL1

(6JUL14-11

-14.29 N/A N/A N/A N/A N/A N/A -3.15

18.069734

14.975503 77.478725

NAN/A NA

-13.91 1.63 -6.19 -18.47

-8.71 10.51

1.756015 4.029105 18.257143 353.625014 206.625586 81.307137 18.761962 16.305330 205.692774

1.091073

J. W. Kyk Jason W. Knight Senior Chemist

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PFOA
mponent Name:
20

	% Diff Excluded			0.25 N/A	11.06	-3.36	2.42	3.67	4.65	-18.57	2.63						
ii a the dail in the san a s	Calculated Amount	0.251302	0.343825	1.002547	5.552887	77.314934	61.452439	20.733368	4.767560	16.285606	61.580269	N/A	N/A	N/A	20.329194	20.017297	21.010180
	Specified Amount	N/A	0.400000	1.000000	5.000000	80.000000	000000009	20,000000	5.000000	20.00000	000000009	N/A	N/A	N/A	N/A	N/A	20.000000
uan Results	Area Ratio	0.023	0.035	0.117	989.0	9.659	7.676	2.584	0.588	2.028	7.692	Undefined	Undefined	N/A	2.534	2.495	2.619
Summary of Quan Results	ISTD Area	226101.69	212107.95	216400.46	207129.54	170447.97	183273.16	184289.30	191315.95	183650.31	145747.48	Undefined	Undefined	111782.01	81298.26	63318.11	145998.42
	Area	5232.81	7362.76	25335.43	142098.19	1646342.31	1406717.27	476231.27	112463.33	372446.05	1121017.61	N/A	N/A	N/A	205978.40	157954.32	382335.11
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL14-44
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCV1	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2
												S	S	Χŧ	50	F	Page 60 of 212

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	Excluded	N/A	N/A	N/A	N/A																
	% Diff	N/A	-14.05	-7.43	-0.43	-5.23	-2.73	29.87	14.07	-20.09	23.78	N/A	N/A	N/A	N/A	N/A	7.93				
	Calculated Amount	1.138255	1.375226	3.702704	19.913763	303.266892	233.442829	103.898585	22.814316	15.982465	297.064683	N/A	N/A	N/A	21.910036	33.118218	86.340789				
	Specified Amount	N/A	1.600000	4.000000	20.000000	320.000000	240.000000	80.00000	20.000000	20.00000	240.000000	N/A	N/A	N/A	N/A	N/A	80.000000				
Results	Area Ratio	0.095	0.118	0.341	1.901	29.158	22.441	9.980	2.180	1.523	28.561	Undefined	Undefined	N/A	2.093	3.171	8.291				
Summary of Quan Results	ISTD Area	16763.22	16931.36	19088.34	18662.80	15984.37	18056.10	15390.01	19401.47	17676.24	13347.10	Undefined	Undefined	13710.02	18009.91	11589.08	16786.21				
	Area	1588.41	1990.29	6517.52	35475.09	466067.44	405197.77	153587.30	42292.50	26915.23	381207.61	N/A	N/A	N/A	37692.49	36749.37	139169.81				
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL14-44				
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCVI	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2				
												S	S	Χţ	50	F	Page	61	of	21	2



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PFNA Component Name:

		Summary of Quan Results	n Results	4 m	4	2. Y. Y.	-
Sample ID Data File Name	 Area	ISTDArea	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
16JUL14-03	3545.20	270826.13	0.013	N/A	0.281119	N/A	N/A
16JUL14-04	7378.66	301477.26	0.024	0.400000	0.418122	4.53	N/A
П	14811.13	272353.68	0.054	1.000000	0.778022	-22.20	N/A
CAL3 16JUL14-09	98398.97	224484.36	0.438	5.000000	5.398490	7.97	N/A
	1047617.14	165305.61	6.337	80.000000	76.388502	-4.51	N/A
	923857.07	183043.00	5.047	000000.09	60.861721	1.44	N/A
16JUL14-14	371926.95	199529.94	1.864	20.000000	22.555144	12.78	N/A
	89845.28	234740.48	0.383	5.000000	4.729517	-5.41	N/A
	278471.93	240846.38	1.156	20.000000	14.037560	-29.81	N/A
	812873.01	183356.14	4.433	000000009	53.473908	-10.88	N/A
	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
MB 16182005 16JUL14-41	N/A	98222.62	N/A	N/A	N/A	N/A	N/A
16JUL14-42	96266.54	71247.36	1.351	N/A	16.383432	N/A	N/A
CSD 16182005 16JUL14-43	88461.91	53393.64	1.657	N/A	20.061357	N/A	N/A
CCV2 16JUL14-44	282334.71	172557.51	1.636	20.000000	19.813339	-0.93	N/A

Jacon W Knight Senior Chemist

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PFDA

Component Name:

			Summary of Quan Results	n Results				
Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
MDF	16JUL14-03	4483.71	211895.24	0.021	N/A	0.321743	N/A	N/A
CAL1	16JUL14-04	5294.71	199769.15	0.027	0.400000	0.388992	-2.75	N/A
CAL2	16JUL14-05	12796.59	173265.95	0.074	1,000000	0.984849	-1.52	N/A
CAL3	16JUL14-09	72159.56	196784.77	0.367	5.000000	4.669870	-6.60	N/A
CAL6	16JUL14-11	1093889.96	185886.07	5.885	80.000000	74.107974	-7.37	N/A
CALS	16JUL14-12	810987.67	159841.42	5.074	000000.09	63.902084	6.50	N/A
CAL4	16JUL14-14	307618.00	173660.00	1.771	20.000000	22.346231	11.73	N/A
CCVI	16JUL14-17	74646.93	171483.72	0.435	5.000000	5.533216	10.66	N/A
ICV1	16JUL14-19	275605.63	165351.18	1.667	20.000000	21.030071	5.15	N/A
CCV3	16JUL14-38	754487.79	167414.00	4.507	60.000000	56.767266	-5.39	N/A
solvent	16JUL14-39	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
solvent	16JUL14-40	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
MB 16182005	16JUL14-41	N/A	48599.78	N/A	N/A	N/A	N/A	N/A
LCS 16182005	16JUL14-42	77690.61	35330.05	2.199	N/A	27.727260	N/A	N/A
LCSD 16182005	16JUL14-43	67857.11	33622.48	2.018	N/A	25.452245	N/A	N/A
CCV2	16JUL14-44	269296.06	160307.61	1.680	20.000000	21.194681	5.97	N/A

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NMeFOSAA Component Name:

Summary of Quan Results	Area ISTD Area Area Ratio Specified Amount Calculated Amount % Diff Excluded		0.231 1.600000 1.226041 -23.37	0.531 4.000000 3.474031 -13.15	4 48206.52 3.575 20.000000 26.310178 31.55	57283.57 40.522 320.000000 303.504065 -5.15	54679.03 32.655	54537.96 11.612 80.000000 86.608032 8.26	59673.55 2.905 20.000000 21.289019 6.45	61381.75 2.144 20.000000 15.579663 -22.10	60308.85 29.902 240.000000 223.828964 -6.74	Undefined Undefined N/A 0.000000 N/A	Undefined Undefined N/A N/A N/A	N/A N/A N/A	28259.91 4.402 N/A 32.519259 N/A	7 31117.15 3.902 N/A 28.767321 N/A	50706.60 13.256 80.000000 98.942393 23.68
			1.60(.,										
Quan Results	a Area Rati											Un	_				,-
Summary of	ISTDAre	67660.76	73350.3	70387.08	48206.52	57283.57	54679.0	54537.90	59673.5	61381.7:	60308.8	Undefine	Undefine	23378.9	28259.9	31117.1	50706.60
	Area	10784.51	16956.74	37362.33	172322.54	2321257.18	1785516.75	633286.78	173375.28	131626.30	1803368.08	17863.72	N/A	N/A	124408.32	121424.97	672162.55
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL14-44
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCVI	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2
												S	SS	Χţ	50	F	Page 64 of 21

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PFUdA Component Name:

	Excluded	N/A	N/A	N/A	N/A												
	% Diff	N/A	17.27	-8.12	-20.48	-0.79	-1.89	14.02	18.54	-8.77	9.03	N/A	N/A	N/A	N/A	N/A	15.50
	Calculated Amount	0.251884	0.469078	0.918787	3.975892	79.369335	58.863651	22.803258	5.927078	18.245417	65.416234	N/A	N/A	N/A	26.866251	26.770774	23.100704
	Specified Amount	N/A	0.400000	1.000000	5.000000	80.000000	60.000000	20.000000	5.000000	20.000000	60.00000	N/A	N/A	N/A	N/A	N/A	20.000000
1 Results	Area Ratio	600.0	0.029	0.070	0.349	7.228	5.357	2.067	0.527	1.651	5.955	Undefined	Undefined	N/A	2.438	2.429	2.094
Summary of Quan Results	ISTD Area	188369.48	193956.02	191684.67	163204.64	161994.79	168321.86	159639.75	167243.01	192714.36	144638.61	Undefined	Undefined	42763.17	33413.61	30977.51	165741.93
	Area	1738.74	5633.99	13433.33	56961.38	1170914.82	901719.17	329955.16	88145.30	318172.34	861320.99	N/A	N/A	N/A	81448.72	75240.63	347065.79
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL 14-44
	Sample ID	MDL	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCVI	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2
												S	S	Χŧ	50	F	Page 65 of 212

Senior Chemist

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N/AN/A N/A N/A N/A 20.000000 320.000000 240.000000 80.000000 20.000000 20.000000 240.000000 1.6000004.000000 80.000000 0.529 42.329 33.599 32.889 3.518 0.190 3.442 12.680 3.107 3.501 NA3.835 Undefined 2.778 Undefined 79872.17 68499.78 40257.41 50828.90 55411.76 43988.58 51215.32 Indefined Undefined 25071.19 30363.09 70767.63 50186.50 48114.77 24904.39 51448.25 N/AN/A36203.50 138555.76 686227.60 13465.80 2151526.34 610090.72 1684413.38 22459.28 88204.74 84363.05 711789.08 6561.63 154020.46 172184.71 6JUL14-09 [6JUL14-19 (6JUL14-39 6JUL14-40 6JUL14-04 6JUL14-05 [6JUL14-12 6JUL14-14 (6JUL14-38 6JUL14-42 6JUL14-43 16JUL14-03 6JUL14-11 (6JUL14-17 6JUL14-44 6JUL14-41

10.91 25.06 -1.61

22.181075 25.011639 236.133233 0.000000 N/A

90.950797

241.236541

N/A N/A N/A N/A N/A 24.06

N/A

25.132315

19.818282

99.249434

N/A N/A

-8.64 22.92

3.654465 24.583263 303.950393

-5.02 0.52 13.69

-23.47

Excluded

% Diff

Calculated Amount

Specified Amount

Area Ratio

Summary of Quan Results

ISTD Area

Data File Name

Sample ID

CAL3 CAL6

CAL2

CAL1

CAL5 CAL4 CCV3

CCV1 ICV1 solvent

solvent

MB 16182005 LCS 16182005 LCSD 16182005

CCV2

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NEtFOSAA

Component Name:

0.447727 1.224541 いとが後継川 Jason W. Knight Senior Chamisi

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Jason W. Knight Senior Chempsi

LCMSMS ANALYSIS REPORT

PFDoA
Component Name:

	Excluded	N/A	N/A	N/A	N/A												
	% Diff	N/A	7.57	-12.16	-4.67	-1.16	-2.09	12.50	2.10	-13.96	-0.14	N/A	N/A	N/A	N/A	N/A	22.69
	Calculated Amount	0.386088	0.860559	1.756727	9.533082	158.151392	117.496356	45.001883	10.210429	17.207516	119.826367	N/A	N/A	N/A	23.352720	20.570566	49.077798
	Specified Amount	N/A	0.800000	2.000000	10.000000	160.000000	120.000000	40.000000	10.000000	20.000000	120.000000	N/A	N/A	N/A	N/A	N/A	40.000000
ın Results	Area Ratio	0.037	0.080	0.162	0.871	14.432	10.722	4.108	0.933	1.572	10.935	Undefined	Undefined	N/A	2.132	1.878	4.480
Summary of Quan Results	ISTD Area	193240.88	177574.49	181760.51	187579.05	150125.98	159205.64	164773.06	180776.14	172447.88	150119.49	Undefined	Undefined	46809.36	50431.74	40620.08	155233.28
	Area	7100.83	14212.75	29410.24	163446.59	2166583.63	1707046.04	676828.02	168691.46	271017.08	1641537.03	N/A	N/A	N/A	107535.44	76302.54	695373.30
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL 14-44
	Sample ID	WDF	CAL1	CAL2	CAL3	CAL6	CAL5	CAL4	CCV1	ICVI	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2
												S	S	Χţ	50	F	Page 67 of 212

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PFTrDA Component Name:

Data File Name Area ISTD Area Area Area Area		Summary of Q ISTDArea		n Kesults Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
	16JUL14-03	6166.64	193240.88	0.032	N/A	0.370360	N/A	N/A
	6JUL14-04	13042.65	177574.49	0.073	0.800000	0.806524	0.82	N/A
	16JUL14-05	31265.50	181760.51	0.172	2.000000	1.841521	-7.92	N/A
	16JUL14-09	181692.65	187579.05	0.969	10.000000	10.206310	2.06	N/A
	16JUL14-11	2245401.34	150125.98	14.957	160.000000	157.089805	-1.82	N/A
	16JUL14-12	1821366.99	159205.64	11.440	120.000000	120.165241	0.14	N/A
	16JUL14-14	669340.58	164773.06	4.062	40.00000	42.690599	6.73	N/A
	16JUL14-17	N/A	180776.14	N/A	10.000000	N/A	N/A	N/A
	16JUL14-19	212668.63	172447.88	1.233	20.000000	12.984916	-35.08	N/A
	16JUL14-38	1729458.84	150119.49	11.521	120.000000	121.007445	0.84	N/A
	16JUL14-39	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
	16JUL14-40	N/A	Undefined	Undefined	N/A	N/A	N/A	N/A
	16JUL14-41	N/A	46809.36	N/A	N/A	N/A	N/A	N/A
	16JUL14-42	103383.99	50431.74	2.050	N/A	21.561189	N/A	N/A
	16JUL14-43	85790.67	40620.08	2.112	N/A	22.212722	N/A	N/A
	16JUL 14-44	627811.01	155233.28	4.044	40.000000	42.502745	6.26	N/A

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PFTeDA

Component Name:

	Excluded	N/A	N/A	N/A	N/A															
	% Diff	N/A	-10.67	-4.50	0.48	-5.24	89.0	19.25	10.72	-22.50	2.17	N/A	N/A	N/A	N/A	N/A	5.81			
	Calculated Amount	0.443683	0.714616	1.910016	10.048469	151.611650	120.814772	47.700476	11.071523	15.499772	122.607966	N/A	N/A	N/A	50.959317	34.934338	42.322381			
	Specified Amount	N/A	0.800000	2.000000	10.000000	160.000000	120.000000	40.000000	10.000000	20.000000	120.000000	N/A	N/A	N/A	N/A	N/A	40.000000			
n Results	Area Ratio	0.025	0.045	0.134	0.735	11.195	8.919	3.517	0.811	1.138	9.052	Undefined	Undefined	N/A	3.758	2.574	3.120			
Summary of Quan Results	ISTD Area	188369.48	193956.02	191684.67	163204.64	161994.79	168321.86	159639.75	167243.01	192714.36	144638.61	Undefined	Undefined	42763.17	33413.61	30977.51	165741.93			
	Area	4777.37	8801.85	25629.65	119963.28	1813529.58	1501337.03	561470.75	135573.96	219277.84	1309259.85	N/A	N/A	N/A	125565.12	79731.02	517070.09			
	Data File Name	16JUL14-03	16JUL14-04	16JUL14-05	16JUL14-09	16JUL14-11	16JUL14-12	16JUL14-14	16JUL14-17	16JUL14-19	16JUL14-38	16JUL14-39	16JUL14-40	16JUL14-41	16JUL14-42	16JUL14-43	16JUL14-44			
	Sample ID	MDL	CAL1	CAL2	CAT3	CAL6	CAL5	CAL4	CCV1	ICV1	CCV3	solvent	solvent	MB 16182005	LCS 16182005	LCSD 16182005	CCV2			
												S	S	X5	50	F	age 6	9 of	212	2

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Sample Name: Sample ID: 8450139 8450139

Original Data Path:
Instrument Method:

C:\Xcalibur\PFC\2016\16JUL12 C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

1.85

Data File: Acquisition Date: Sample Type: 16JUL12-31

07/12/16 06:07:43 PM Dilution Factor: Unknown Instrument Mod

Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: Run Time(min): a:4 16.51 Instrument Software Version: Instrument Serial Number:

TQU01408

Injection Volume(μ l): 10.00 Operator:

US19_USR_INS00022

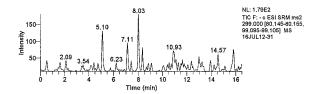
Extracted Ion Chromatogram

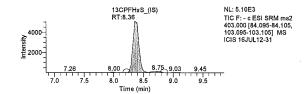
Quan Peak Table

mponent Name	Calculated Amount	RT	Response	ISTD Response	Response Ratio	Units
3C-PFNA_(IS)		8.90	249761.73	N/A	N/A	N/A
3C-PFOA_(IS)	N/A	8.64	161147.31	N/A	N/A	N/A
13CPFDA (IS)	N/A	9.15	158926.17	N/A	N/A	N/A
3CPFDoA_(IS)	N/A	9.80	156828.55	N/A	N/A	N/A
3CPFHpA_(IS)	N/A	8.39	161732.89	N/A	N/A	N/A
3CPFHxA (IS)	N/A	8.11	98194.38	N/A	N/A	N/A
3CPFHxS (IS)	N/A	8.36	37145.95	N/A	N/A	N/A
13CPFOS (IS)	N/A	8.86	18148.19	N/A	N/A	N/A
3CPFUdA_(IS)	N/A	9.44	153522.40	N/A	N/A	N/A
NEtFOSAA	N/A	N/A	N/A	N/A	N/A	ng/g
NMeFOSAA	N/A	N/A	N/A	N/A	N/A	ng/g
PFBS	N/A	N/A	N/A	N/A	N/A	ng/g
PFDA	N/A	N/A	N/A	N/A	N/A	ng/g
PFDoA	N/A	N/A	N/A	N/A	N/A	ng/g
PFHxA	N/A	N/A	N/A	N/A	N/A	ng/g
PFHxS	N/A	N/A	N/A	N/A	N/A	ng/g
PFNA	N/A	N/A	N/A	N/A	N/A	ng/g
PFOA	N/A	N/A	N/A	N/A	N/A	ng/g
PFOS	N/A	N/A	N/A	N/A	N/A	ng/g
PFTeDA	N/A	N/A	N/A	N/A	N/A	ng/g
PFTrDA	N/A	N/A	N/A	N/A	N/A	ng/g
PFUdA	N/A	N/A	N/A	N/A	N/A	ng/g
PFhpA	N/A	N/A	N/A	N/A	N/A	ng/g
3-NMeFOSAA	N/A	9.30	121373.57	N/A	N/A	N/A
d5-NEtFOSAA	N/A	9.48	112303.60	N/A	N/A	N/A

Component Name:

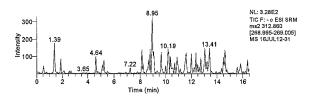
PFBS





Component Name:

PFHxA



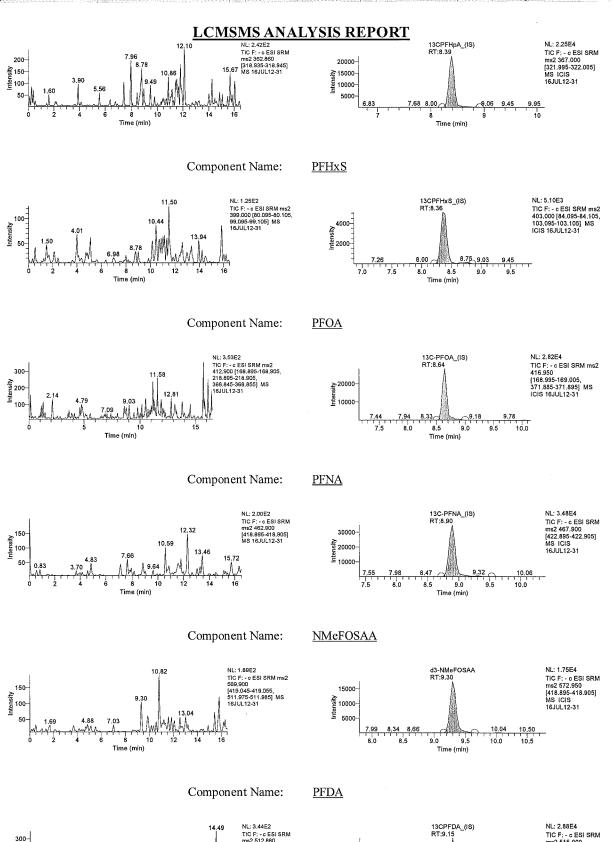
15000-

NL: 1.74E4 TIC F: - o ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL12-31

Component Name:

PFhpA

Jacon W. Knight Seniur Chemist



300-200-200-10.42
10.51 - ESI SRM mr. 25-12.880 [468.875 - 468.885] MS 16JUL12-31 13CPFDA_(IS)
RT:9.15
TICF: - c ESI SRM
ms2 515.000
MS ICIS
160JUL12-31

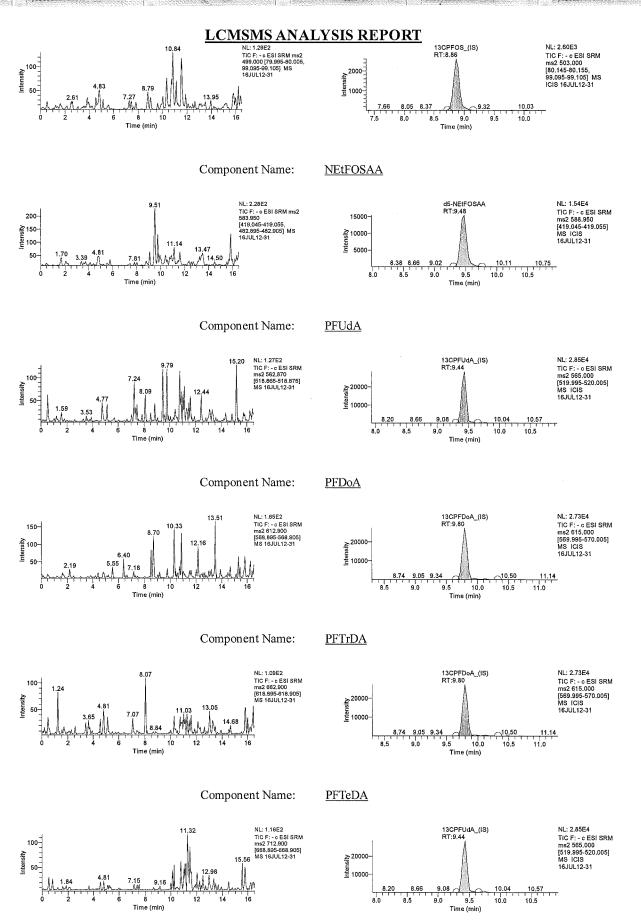
13CPFDA_(IS)
RT:9.15
TICF: - c ESI SRM
ms2 515.000
MS ICIS
16JUL12-31

100007.84 8.30 8.83 9.0 9.5 10.0 10.5
Time (min)

Component Name:

PFOS

Jacon W. Knight Seniur Chemist



Jason W. Knight Senior Chemist

JUL 1 9 2016

JUL 1 8 2016

Sample Name:

8450140

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\16JUL12

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Sample ID: Data File:

8450140 16JUL12-32

Dilution Factor:

1.74

Acquisition Date: Sample Type:

07/12/16 06:24:58 PM Unknown

Instrument Model:

TSQ Quantum Access

Vial: Run Time(min): a:5 16.51 Instrument Software Version:

2.5.0.1311

Injection Volume(µl):

10.00

Instrument Serial Number:

TQU01408

Operator:

US19_USR_INS00022

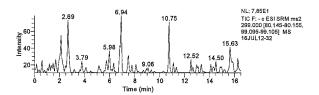
Extracted Ion Chromatogram

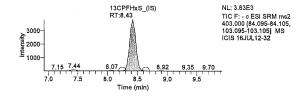
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
					· · · · · · · · · · · · · · · · · · ·	
N/A	N/A	N/A	175604.21	8.93	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	119141.13	8.79	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	78539.63	9.15	N/A	13CPFDA_(IS)
N/A	N/A	N/A	63019.13	9.80	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	127012.26	8.46	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	86391.32	8.07	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	27558.07	8.43	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	14211.83	8.93	N/A	13CPFOS (IS)
N/A	N/A	N/A	57746.40	9.44	N/A	13CPFUdA (IS)
ng/g	N/A	N/A	N/A	N/A	N/A	NEtFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	NMeFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	PFBS
ng/g	N/A	N/A	N/A	N/A	N/A	PFDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFDoA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxS
ng/g	N/A	N/A	N/A	N/A	N/A	PFNA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOS
ng/g	N/A	N/A	N/A	N/A	N/A	PFTeDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFTrDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFUdA
ng/g	N/A	N/A	N/A	N/A	N/A	PFhpA
N/A	N/A	N/A	39101.01	9.33	N/A	d3-NMeFOSAA
N/A	N/A	N/A	25514.51	9.48	N/A	d5-NEtFOSAA

Component Name:

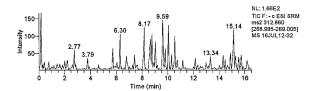
PFBS

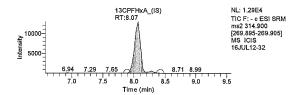




Component Name:

PFHxA

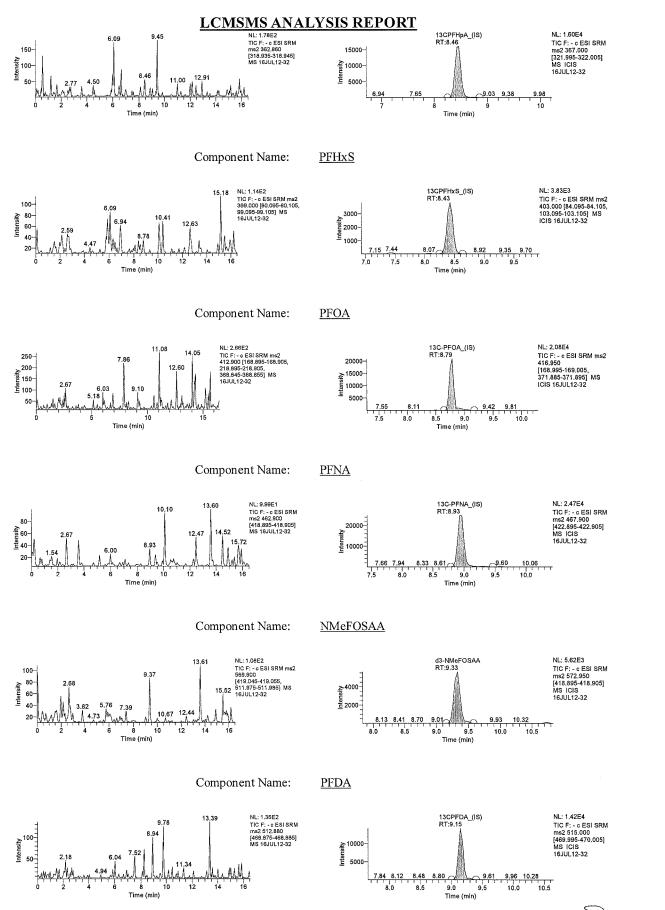




Component Name:

PFhpA

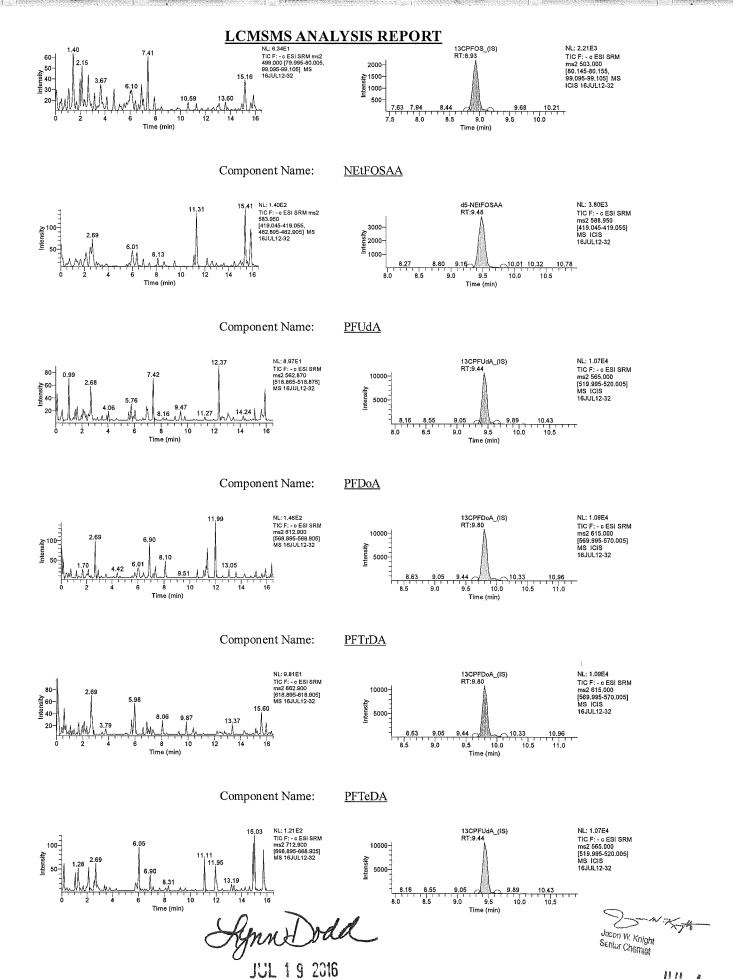
Jason W. Knight Seniur Chemist



Jason W. Knight Senior Chemist

PFOS

Component Name:



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Principal Specialist Page 75 of 242nesday, July 13, 2016, 11:13:31

Sample Name:

8450141

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\16JUL12

Sample ID:

8450141

16JUL12-33

Dilution Factor:

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Data File: Acquisition Date:

07/12/16 06:42:12 PM

1.57 TSQ Quantum Access

Sample Type:

Unknown

Instrument Model:

2.5.0.1311

Vial: Run Time(min): a:6

Instrument Software Version:

Injection Volume(µl):

16.51

Instrument Serial Number:

TQU01408

10.00

Operator:

US19_USR_INS00022

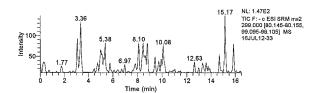
Extracted Ion Chromatogram

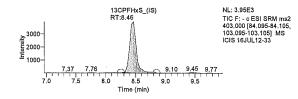
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A		213800.07	8.97		13C-PFNA_(IS)
N/A	N/A	N/A	145719.65	8.72	N/A	13C-PFOA (IS)
N/A	N/A	N/A	128642.18	9.22	N/A	13CPFDA_(IS)
N/A	N/A	N/A	97004.32	9.94	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	133825.91	8.46	N/A	13CPFHpA (IS)
N/A	N/A	N/A	96344.32	8.11	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	31126.41	8.46	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	14627.30	8.94	N/A	13CPFOS (IS)
N/A	N/A	N/A	122847.67	9.51	N/A	13CPFUdA_(IS)
ng/g	N/A	N/A	N/A	N/A	N/A	NEtFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	NMeFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	PFBS
ng/g	N/A	N/A	N/A	N/A	N/A	PFDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFDoA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxS
ng/g	0.002	213800.07	474.45	8.93	0.241	PFNA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOS
ng/g	N/A	N/A	N/A	N/A	N/A	PFTeDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFTrDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFUdA
ng/g	N/A	N/A	N/A	N/A	N/A	PFhpA
N/A	N/A	N/A	92391.38	9.37	N/A	d3-NMeFOSAA
N/A	N/A	N/A	79876.34	9.55	N/A	d5-NEtFOSAA

Component Name:

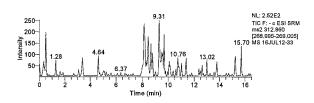
PFBS

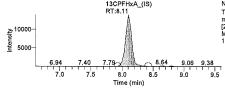




Component Name:

PFHxA



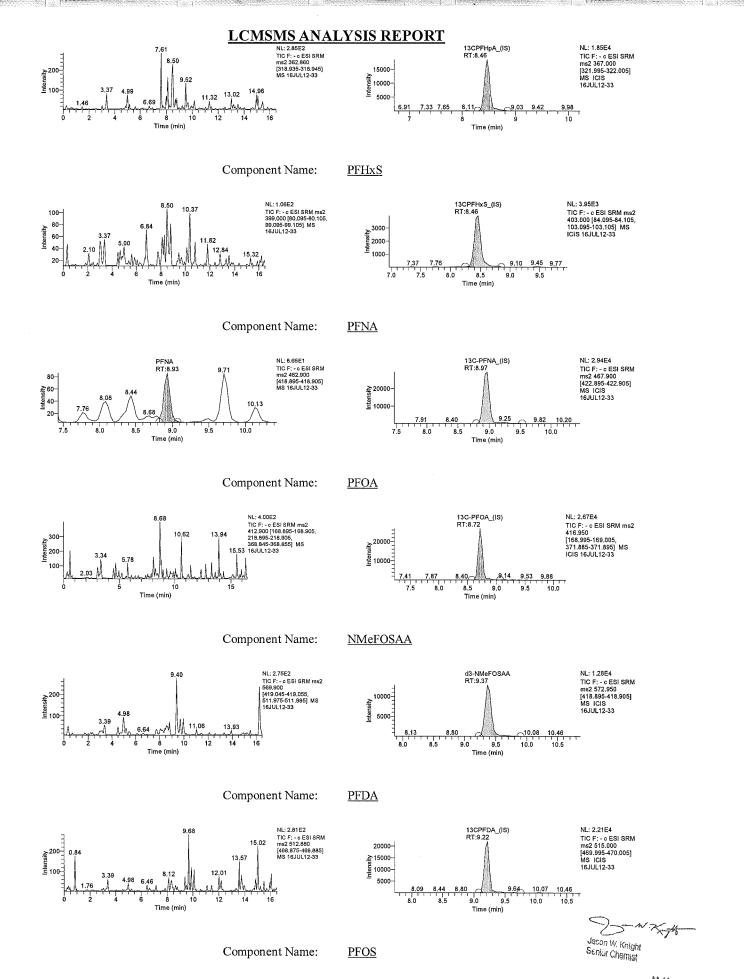


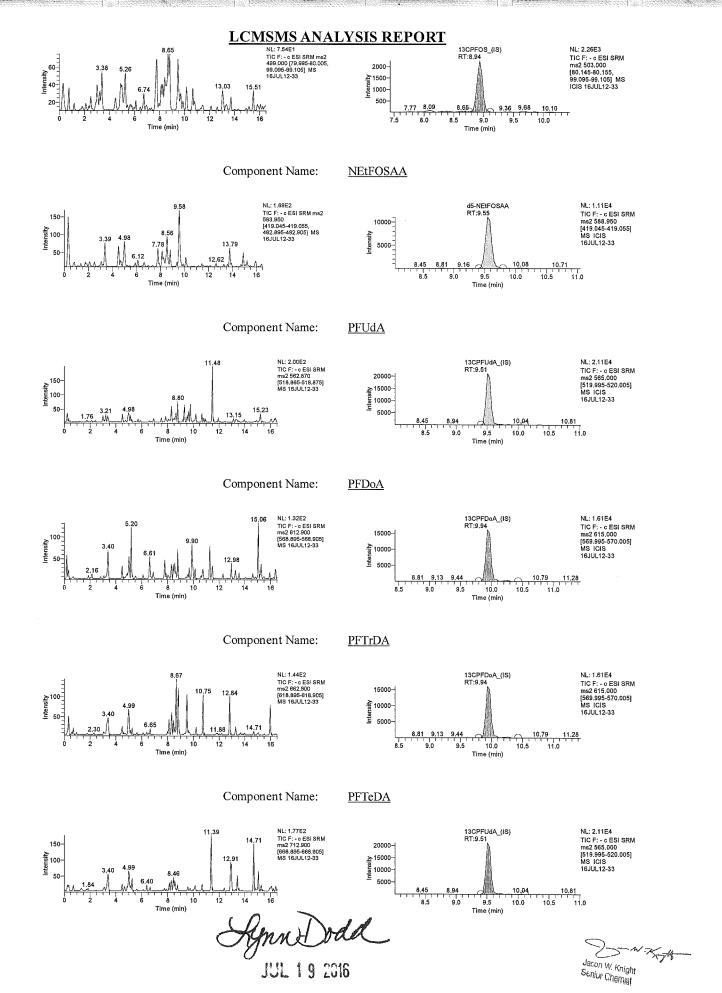
NL: 1.38E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL12-33

Component Name:

PFhpA

Jason W. Knight Senior Chemist





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Principal Specialist Page 78 of 242_{nesday, July 13, 2016, 11:13:32}

Standards Data Miscellaneous LC/MS/MS

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				,	;	Sec	nenc	Sequence Table		
	File Name	Sample ID	Sample Type	Level	Vıal	Vo.	Dil Factor	Fath	Inst Method	Proc Method
	16JUL11-27	MDL	N/A	N/A	c:2	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									MNHWell 16.5minutes	MAPFC_14_Soils
	16JUL11-28	CAL1	N/A	-	c:3	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
	16ПП.11-29	CALZ	A/N	2	6:4	10.0	1.000	C:XCALJBUR\PFC\2016\16JUL11	C:\X calibur\PFC\A cauistion	C:\Xcalibur\PFC\Ouan
			•	l	:				M\HWell_16.5minutes	M\PFC_14_Soils
	16JUL11-30	CAL3	N/A	æ	c:5	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
	***************************************		*****	•		9	-		M\HWell_16.5minutes	MAPFC 14 Soils
	16JUL11-31	CAL4	N/A	4	0:5	10.0	1.000	C:\ACALIBUR\FFC\Z010\10JUL11	C:\Acanour\r\C\Acquisuon M\HWell 16 5minutes	C. Acanour r C. Quan MAPFC 14 Soils
	16JUL11-32	CALS	N/A	S	C:7	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									M\HWell_16.5minutes	MNPFC_14_Soils
	16JUL11-33	CAL6	N/A	9	c:8	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
	1511111134	the state of the s	V/\	V/1/	;	10.0	1 000	CAYCAT BITP\PECA9016\16IIII 11	C.\Yealihur\PF(') A conistion	V.V.Calibur(DEC/Quan
5	1010111-54	SOLVEILL	V/NI	V/N		0.01	1.000		M/HWell 16.5minutes	MAPFC 14 Soils
SS	16JUL11-35	ICV1	N/A	ICV1	6:3	10.0	1.000	C:\XCALIBUR\PFC\2016\16JUL11	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
X									M\HWell_16.5minutes	M\PFC_14_Soils
50	16JUL12-25	CCV3	N/A	33	C:2	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
F					,	4	4		M\HWell_16.5minutes	MAPFC_14_Soils
Pa	16JUL12-26	solvent	N/A	N/A	c: J	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
ge	161111.12-27	solvent	N/N	Y /Z	c:1	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\X calibur\PFC\A cquistion	C:\Xcalibur\PFC\Ouan
80			1	: :	;				M\HWell_16.5minutes	M\PFC_14_Soils
) o	16JUL12-28	MB 16182005	N/A	N/A	a:1	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
of 2				:		:			M\H\Well 16.5minutes	M\PFC_14_Soils
212	16JUL12-29	LCS 16182005	N/A	N/A	a:2	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion M\HWell 16 5minutes	C:\Xcalibur\PFC\Quan
2	16JUL12-30	LCSD 16182005	N/A	N/A	a:3	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									M\HWell_16.5minutes	MNPFC_14_Soils
	16JUL12-31	8450139	N/A	N/A	a:4	10.0	1.850	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
	00 00 11110		1716	1	i,	9		C1 HH21 \ 100 \ \Q ad t - E1 - At \ \	M/HWell_16.5minutes	MAPFC_14_Soils
	I6JUL12-32	8450140	N/A	N/A	c:e	10.0	1.740	C:\Xcalibur\PFC\Z016\16JUL1Z	C:\Acanour\P\C\Acquisuon M\HWell 16 5minutes	C. Acallour F. C. Quan MAPFC 14 Soils
	16ПП.12-33	8450141	N/A	A/N	9:6	10.0	1.570	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Ouan
				4	i				M\HWell 16.5minutes	MAPFC 14 Soils
	16JUL12-34	CCV1	N/A	_	c:5	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									M\HWell_16.5minutes	M\PFC_14_Soils
	16JUL13-03	CCV2	N/A	2	9:o	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL13	C:\Xcalibur\PFC\Acquistion M\HWell 16 5minutes	C:\Xcalibur\PFC\Quan
	161111.13-09	LCS 16182005	N/A	N/A	a:2	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									M\HWell_16.5minutes	M/PFC_14_Soils
	16JUL13-10	CCV3	N/A	m	c:7	10.0	1.000	C:\Xcalibur\PFC\2016\16JUL12	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
									MAT WELL TO JUHUNDA	SUNCE THE SOUR

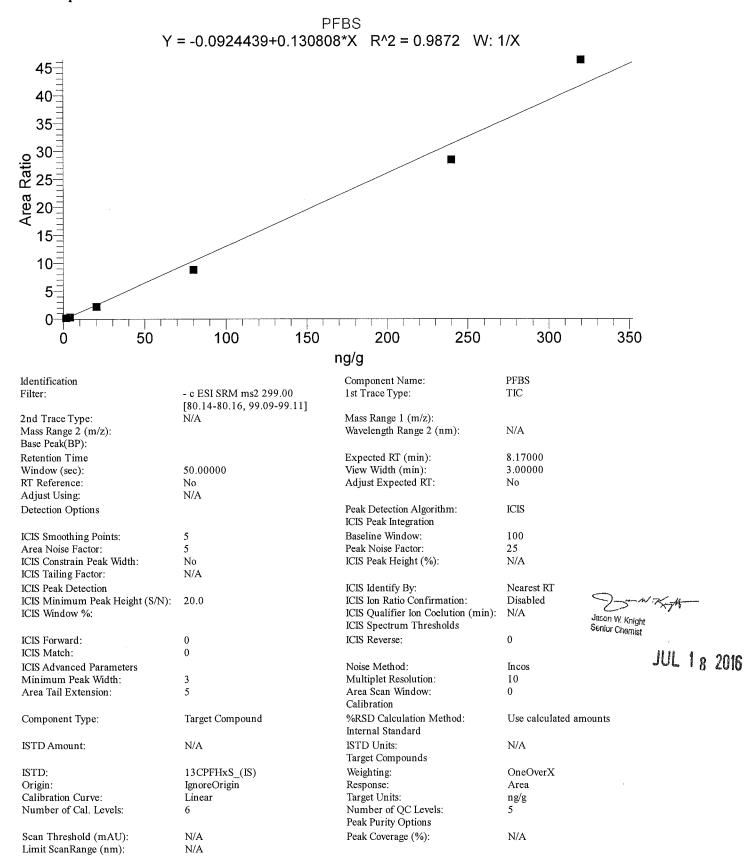
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File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
16JUL14-03	MDL	N/A	N/A	c:2	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
161111.14-04	CAL1	A/N	-	63	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
			ı	!			DATA	M\HWell_16.5minutes	MVPFC_14_Soils
16JUL14-05	CAL2	N/A	7	c:4	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
	3	1)11	,	· ·	•	•	DATA DATA DATA DATA DATA DATA	M/HWell 16.5minutes	MAPFC_14_Soils
16JUL14-09	CAL3	N/A	n	8	10.0	1.000	C:CXCalibury FC/2010/Kaw FFC DATA	C:vxcanburvrrcvacquisuon M\HWell 16.5minutes	C.v.canoury F.C.v.cuan MAPFC 14 Soils
16JUL14-11	CAL6	N/A	9	8:3	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	MNPFC_14_Soils
16JUL14-12	CALS	N/A	5	C:2	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-14	CAL4	N/A	4	9:o	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
						٠	DATA	M\HWell_16.5minutes	MNPFC_14_Soils
16JUL14-17	CCV1	N/A	_	c:5	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-19	ICV1	N/A	ICV1	6:3	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-38	CCV3	N/A	33	C:2	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-39	solvent	N/A	N/A	c:1	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-40	solvent	N/A	N/A	c:1	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-41	MB 16182005	N/A	N/A	d:13	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-42	LCS 16182005	N/A	N/A	d:14	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DATA	M\HWell_16.5minutes	M\PFC_14_Soils
16JUL14-43	LCSD 16182005	N/A	N/A	d:15	10.0	1.000	C:\Xcalıbur\PFC\2016\Raw PFC DATA	C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes	C:\Xcalibur\PFC\Quan M\PFC 14 Soils
16JUL14-44	CCV2	N/A	2	9:2	10.0	1.000	C:\Xcalibur\PFC\2016\Raw PFC	C:\Xcalibur\PFC\Acquistion	C:\Xcalibur\PFC\Quan
							DAIA	M\H Well_16.5mmutes	MVFC_14_Soils

Koon W. Knight

Page 1 of 1 Monday, July 18, 2016, 07:23:40

Component Name:

PFBS



Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	1.600				
2	4.000				
3	20.000				
4	80.000				
5	240.000				
6	320.000				

Component QC Level Table

Component Q C Ecter 1d	IDIC
QC Level	Amount
ICV1	20.000
ICV2	40.000
1	20.000
2	80.000
3	240.000

ICV & CCV Result Table

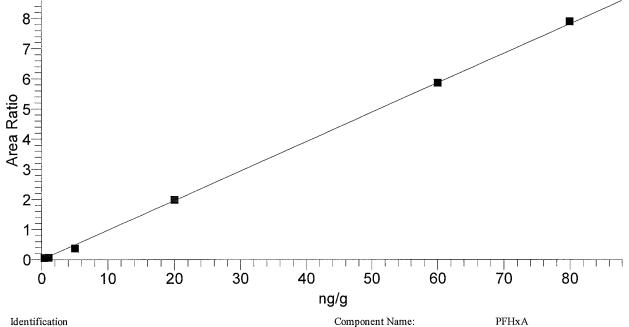
	10	V CC V ICCS	uit Labic			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	2.227	5107.94	25690.47	0.199	39.17
CAL2	16JUL11-29	3.362	7851.95	22610.12	0.347	-15.96
CAL3	16JUL11-30	17.910	61977.26	27541.67	2.250	-10.45
CAL4	16JUL11-31	68.062	253733.78	28798.74	8.811	-14.92
CAL5	16JUL11-32	218.669	698333.65	24493.26	28.511	-8.89
CAL6	16JUL11-33	355.371	878620.58	18938.68	46.393	11.05
ICV1	16JUL11-35	19.505	66252.15	26942.94	2.459	-2.47
CCV3	16JUL12-25	235.479	711777.15	23177.27	30.710	-1.88
CCV1	16JUL12-34	17.813	71015.77	31737.06	2.238	-10.94
CCV2	16JUL13-03	67.555	280168.77	32040.15	8.744	-15.56
CCV3	16JUL13-10	256.799	716502.67	21388.83	33,499	7.00

Jason W. Knight Senior Chamist

Component Name:

PFHxA





Identification		Component Name:	PFHxA	
Filter:	- c ESI SRM ms2 312.86 [269.00-269.01]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):	- ,, - ,	Wavelength Range 2 (nm):	N/A	
Base Peak(BP):		<i>5 5 7</i>		
Retention Time		Expected RT (min):	8.49000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A	<i>J</i>		
Detection Options		Peak Detection Algorithm:	ICIS	
2 coccuon options		ICIS Peak Integration		
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	· · · · · · · · · · · · · · · ·	_	
ICIS Peak Detection		ICIS Identify By:	Nearest RT	-W:
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled Jason W. K.	-1-4.
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A Senior Cher	miet
		ICIS Spectrum Thresholds		
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			•
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts	
		Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFHxA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	
		Peak Purity Options		
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
Limit ScanRange (nm):	N/A			

Component Cal Level Table

Component Car Deve	Table
Cal Level	Amount
1	0.400
2	1.000
3	5.000
4	20.000
5	60.000
6	80.000

Component QC Level Table

Component QC Ecter labic					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	5.000				
2	20.000				
3	60.000				

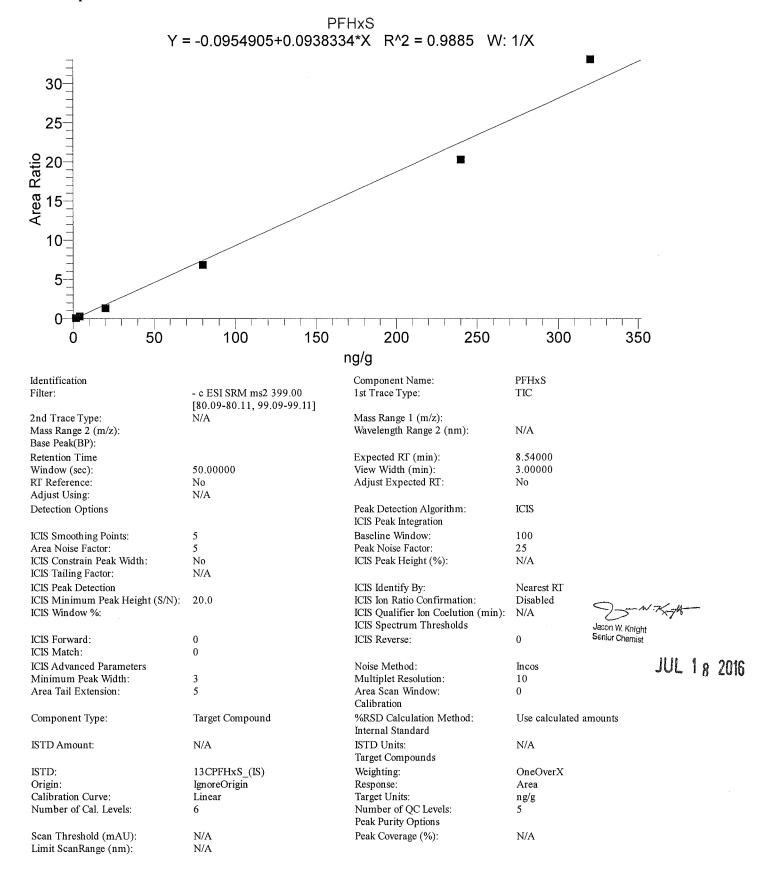
ICV & CCV Result Table

	_	IC V & CC V NES	suit Table			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.599	5320.84	91180.47	0.058	49.74
CAL2	16JUL11-29	0.711	5880.08	84822.85	0.069	-28.87
CAL3	16JUL11-30	3.816	33206.20	89149.57	0.372	-23.69
CAL4	16JUL11-31	20.325	169938.36	85625.36	1.985	1.62
CAL5	16JUL11-32	60.028	473692.16	80808.09	5.862	0.05
CAL6	16JUL11-33	80.922	661040.61	83651.12	7.902	1.15
ICV1	16ЛUL11-35	23.174	200150.42	88446.85	2.263	15.87
CCV3	16JUL12-25	60.808	509121.54	85737.57	5.938	1.35
CCV1	16JUL12-34	4.940	47177.56	97819.69	0.482	-1.20
CCV2	16JUL13-03	20.568	185218.98	92218.28	2.008	2.84
CCV3	16JUL13-10	59.906	482448.61	82468.88	5.850	-0.16

Jason W. Knight Senior Chemist

Component Name:

PFHxS



Component Cal Level Table

Component Car Level Table	
Cal Level	Amount
1	1.600
2	4.000
3	20.000
4	80.000
5	240.000
6	320.000

Component QC Level Table

Component QC Level Table				
	QC Level	Amount		
	ICV2	40.000		
	ICV1	20.000		
	1	20.000		
	2	80.000		
	3	240.000		

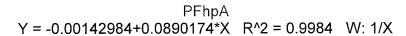
ICV & CCV Result Table

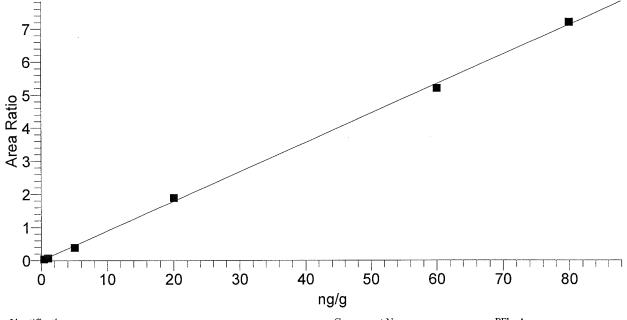
1C C C C C RESULT TUDIC						
 Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	2.030	2440.09	25690.47	0.095	26.87
CAL2	16JUL11-29	4.120	6582.93	22610.12	0.291	3.01
CAL3	16JUL11-30	15.376	37107.61	27541.67	1.347	-23.12
CAL4	16JUL11-31	73.995	197205.62	28798.74	6.848	-7.51
CAL5	16JUL11-32	216.911	496183.71	24493.26	20.258	-9.62
CAL6	16JUL11-33	353.168	625799.09	18938.68	33.043	10.36
ICV1	16JUL11-35	22.229	53626.56	26942.94	1.990	11.15
CCV3	16JUL12-25	237.266	513793.84	23177.27	22.168	-1.14
CCV1	16JUL12-34	15.630	43516.83	31737.06	1.371	-21.85
CCV2	16JUL13-03	69.905	207105.67	32040.15	6.464	-12.62
CCV3	16JUL13-10	241.340	482324.05	21388.83	22.550	0.56

Jason W. Knight Senior Chemist

Component Name:

PFhpA





Identification		Component Name:	PFhpA	
Filter:	- c ESI SRM ms2 362.86	1st Trace Type:	TIC	
2nd Trace Type:	[318.94-318.94] N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):	IVA	Wavelength Range 2 (nm):	N/A	
Base Peak(BP):		wavelength range 2 (mm).	1,171	
Retention Time		Expected RT (min):	8.50000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A	7 Injunt 1914 poster Acc.	110	
Detection Options		Peak Detection Algorithm:	ICIS	
Detection Options		ICIS Peak Integration	1015	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A	O-W:
		ICIS Spectrum Thresholds		ر بند جومط
ICIS Forward:	0	ICIS Reverse:	0	Jason W. Knight Senior Chemist
ICIS Match:	0			Chemist
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amou	nts
	-	Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFHpA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	
		Peak Purity Options		
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
Limit ScanRange (nm):	N/A			

Component Cal Level Table

Component Car Level Table				
al Level Amour	Cal Level			
0.40	1			
2 1.00	2			
3 5.00	3			
4 20.00	4			
5 60.00	5			
6 80.00	6			

Component QC Level Table

<u> </u>	Component Q C Elever 12	
Amount	QC Level	
40.000	ICV2	
20.000	ICV1	
5.000	1	
20.000	2	
60.000	3	

ICV & CCV Result Table

IC V & CC V Result Table						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11 -2 8	0.497	6561.40	153139.87	0.043	24.35
CAL2	16JUL11-29	0.822	10416.35	145114.23	0.072	-17.76
CAL3	16JUL11-30	4.430	57148.99	145438.91	0.393	-11.39
CAL4	16JUL11-31	21.231	244835.75	129643.86	1.889	6.16
CAL5	16JUL11-32	58.504	600475.65	115333.66	5.206	-2.49
CAL6	16JUL11-33	80.915	685412.09	95177.62	7.201	1.14
ICV1	16JUL11-35	23.595	303185.66	144444.64	2.099	17.98
CCV3	16JUL12-25	58.495	559732.78	107524.09	5.206	-2.51
CCV1	16JUL12-34	4.550	61672.85	152813.56	0.404	-9.00
CCV2	16JUL13-03	20.610	242051.68	132036.09	1.833	3.05
CCV3	16JUL13-10	63.146	609284.05	108419.56	5.620	5.24

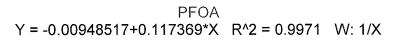
Jason W. Knight Senior Chemist

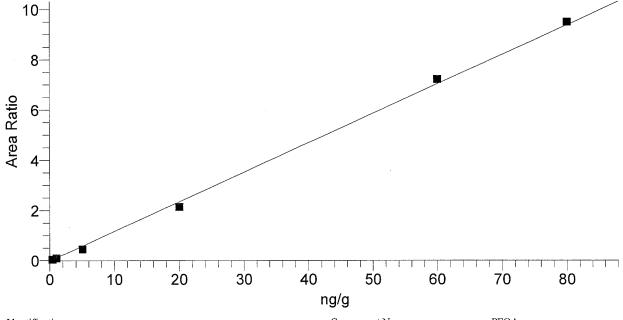
Component Name:

Limit ScanRange (nm):

N/A

PFOA





Identification Filter:	- c ESI SRM ms2 412.90	Component Name: 1st Trace Type:	PFOA TIC	
riter.	[168.90-168.91, 218.90-218.91, 368.85-368.86]	ist frace type.	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A	
Base Peak(BP):				
Retention Time		Expected RT (min):	9.13000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm:	ICIS	
		ICIS Peak Integration		
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	15	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	O-With the
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A	- XT
		ICIS Spectrum Thresholds		Jason W. Knight
ICIS Forward:	0	ICIS Reverse:	0	Senior Chemist
ICIS Match:	0			22 AD 20
ICIS Advanced Parameters		Noise Method:	Incos	JUL 1 8 2016
Minimum Peak Width:	3	Multiplet Resolution:	10	0 444
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated am	ounts
		Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13C-PFOA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	
		Peak Purity Options		
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
Limit Coam Dom oo (mm)	NI/A	S . ,		

Component Cal Level Table

Component Car Level Table				
Cal Level	Amount			
1	0.400			
2	1.000			
3	5.000			
4	20.000			
5	60.000			
6	80.000			

Component OC Level Table

Component QC Dever Table				
QC Level	Amount			
ICV2	40.000			
ICV1	20.000			
1	5.000			
2	20.000			
3	60.000			

ICV & CCV Result Table

<u>ICV & CCV Result Table</u>						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.531	8778.44	166091.88	0.053	32.78
CAL2	16JUL11-29	0.922	14471.68	146625.80	0.099	-7.83
CAL3	16JUL11-30	3.975	72458.15	158539.02	0.457	-20.50
CAL4	16JUL11-31	18.313	325769.43	152235.70	2.140	-8.43
CAL5	16JUL11-32	61.578	1000850.22	138662.31	7.218	2.63
CAL6	16JUL11-33	81.081	1276993.98	134323.18	9.507	1.35
ICV1	16JUL11-35	23.787	393585.15	141454.31	2.782	18.94
CCV3	16JUL12-25	55.422	1026579.00	158048.11	6.495	-7.63
CCV1	16JUL12-34	4.383	83550.57	165480.68	0.505	-12.35
CCV2	16JUL13-03	18.072	367116.61	173860.89	2.112	-9.64
CCV3	16JUL13-10	59.141	935547.99	134963.48	6.932	-1.43

Jason W. Knight Senior Chemist

Component Name:

ISTD Amount:

Calibration Curve:

Number of Cal. Levels:

Scan Threshold (mAU):

Limit ScanRange (nm):

ISTD:

Origin:

N/A

Linear

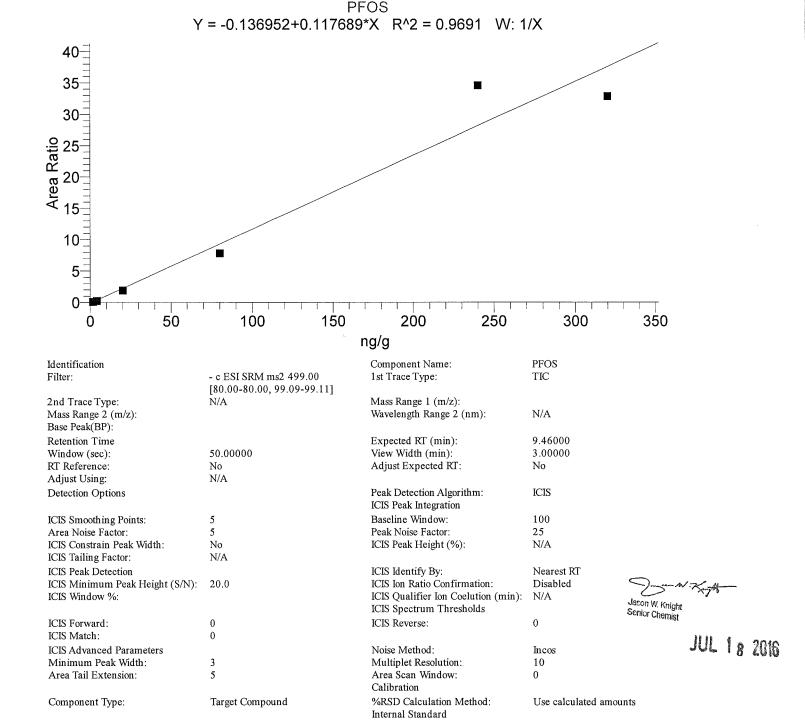
N/A

N/A

13CPFOS (IS)

IgnoreOrigin

PFOS



N/A

Area

ng/g

N/A

OneOverX

ISTD Units:

Response:

Target Units:

Target Compounds Weighting:

Number of QC Levels: Peak Purity Options

Peak Coverage (%):

Component Cal Level Table

Component Car Level Table				
Amount	Cal Level			
1.600	1			
4.000	2			
20.000	3			
80.000	4			
240.000	5			
320.000	6			

Component QC Level Table

QC Level	Amount			
ICV2	40.000			
ICV1	20.000			
1	20.000			
2	80.000			
3	240.000			

ICV & CCV Result Table

10 / CO C C / REBUIL PUBLIC						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	2.152	2034.31	17486.40	0.116	34.51
CAL2	16JUL11-29	3.310	4053.03	16046.37	0.253	-17.25
CAL3	16JUL11-30	17.565	31268.74	16199.31	1.930	-12.17
CAL4	16JUL11-31	67.624	125672.26	16067.21	7.822	-15.47
CAL5	16JUL11-32	294.860	350399.84	10137.51	34.565	22.86
CAL6	16JUL11-33	280.089	397833.14	12119.31	32.826	-12.47
ICV1	16JUL11-35	18.619	28987.73	14111.16	2.054	-6.91
CCV3	16JUL12-25	196.700	342223.54	14871.22	23.012	-18.04
CCV1	16JUL12-34	14.904	32758.94	20258.13	1.617	-25.48
CCV2	16JUL13-03	64.579	124447.08	16674.63	7.463	-19.28
CCV3	16JUL13-10	273.951	331976.50	10340.67	32.104	14.15

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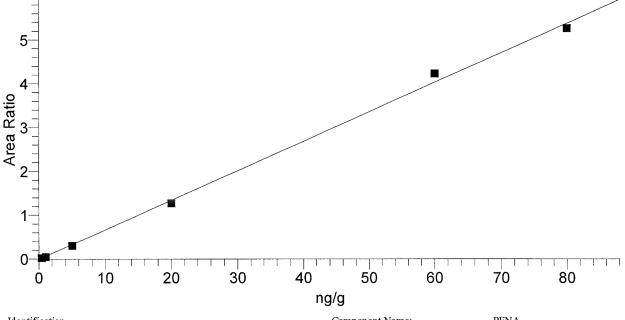
Component Name:

Limit ScanRange (nm):

N/A

PFNA

PFNA Y = -0.00810597+0.0672321*X R^2 = 0.9980 W: 1/X



Identification		Component Name:	PFNA	
Filter:	- c ESI SRM ms2 462.90 [418.89-418.90]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	9.15000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS	
ICIS Smoothing Points:	5	Baseline Window:	100	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	9
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	Jason W. Knight
ICIS Forward:	0	ICIS Reverse:	0	Senior Chemist
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	•
Area Tail Extension:	5	Area Scan Window: Calibration	0	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amount	nts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD:	13C-PFNA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels: Peak Purity Options	5	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
Limit Coon Don oo (nm)	NT/A	- , ,		

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	0.400				
2	1.000				
3	5.000				
4	20.000				
5	60.000				
6	80.000				

Component QC Level Table

Component QC Ecter lubic					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	5.000				
2	20.000				
3	60.000				

ICV & CCV Result Table

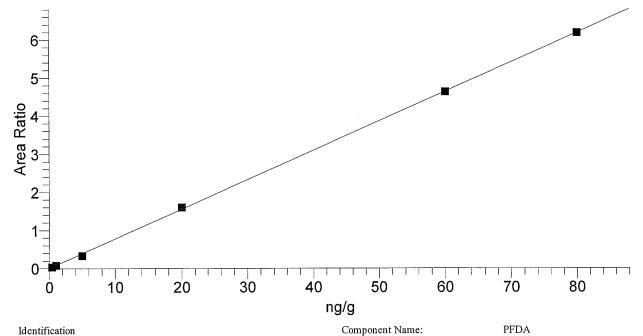
	ICV & CCV Result Table					
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.514	6142.53	232321.30	0.026	28.46
CAL2	16JUL11-29	0.799	10039.83	220149.98	0.046	-20.11
CAL3	16JUL11-30	4.674	68728.10	224479.64	0.306	-6.51
CAL4	16JUL11-31	19.044	271106.94	` 213087.83	1.272	-4.78
CAL5	16JUL11-32	62.961	704320.58	166706.63	4.225	4.94
CAL6	16JUL11-33	78.407	838633.06	159333.50	5.263	-1.99
ICV1	16JUL11-35	21.789	318145.47	218387.94	1.457	8.94
CCV3	16JUL12-25	61.448	728726.53	176740.06	4.123	2.41
CCV1	16JUL12-34	4.886	76498.57	238760.18	0.320	-2.28
CCV2	16JUL13-03	21.245	302735.53	213159.57	1.420	6.22
CCV3	16JUL13-10	63.063	688839.45	162779.45	4.232	5.10

Jason W. Knight Senior Chemist

Component Name:

PFDA





identification		component rume.	*****	
Filter:	- c ESI SRM ms2 512.88 [468.88-468.88]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A	
Base Peak(BP):				
Retention Time		Expected RT (min):	9.41000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	ions reak freight (70).	14/11	
ICIS Peak Detection	14/11	ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:	30.0	ICIS Qualifier Ion Coelution (min):	N/A	$\overline{}$
icis window 70.		ICIS Spectrum Thresholds	1021	
ICIS Forward:	0	ICIS Reverse:	0	Jason W. Knight Senior Chemist
ICIS Match:	0			- strict Criemist
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amou	ints
		Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFDA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	
		Peak Purity Options		
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	•

N/A

Limit ScanRange (nm):

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	0.400				
2	1.000				
3	5.000				
4	20.000				
5	60.000				
6	80.000				

Component QC Level Table

Component QC Ecver Table					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	5.000				
2	20.000				
3	60.000				

ICV & CCV Result Table

<u>ICV & CCV Result Table</u>						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.447	4716.95	129639.81	0.036	11.79
CAL2	16JUL11-29	0.994	11538.41	146615.11	0.079	-0.58
CAL3	16JUL11-30	4.258	49124.28	148343.49	0.331	-14.84
CAL4	16JUL11-31	20.739	232882.64	145016.53	1.606	3.69
CAL5	16JUL11-32	59.952	677880.81	146127.04	4.639	-0.08
CAL6	16JUL11-33	80.009	907420.73	146587.01	6.190	0.01
ICV1	16JUL11-35	25.975	318060.27	158167.36	2.011	29.88
CCV3	16JUL12-25	68.139	756565.96	143500.33	5.272	13.57
CCV1	16JUL12-34	4.336	60865.14	180510.88	0.337	-13.28
CCV2	16ЛUL13-03	20.773	242911.67	151013.21	1.609	3.87
CCV3	16JUL13-10	62,799	668457.92	137566.75	4.859	4 66

Jason W. Knight Senior Chemist

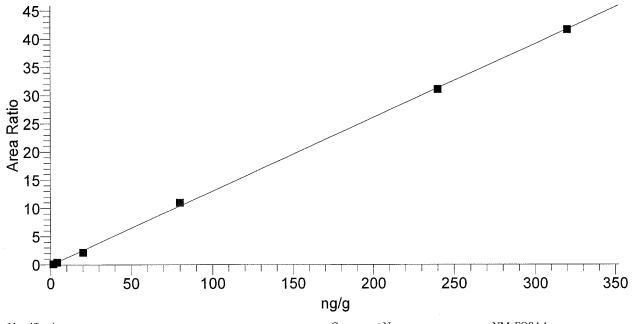
Component Name:

Limit ScanRange (nm):

N/A

NMeFOSAA





Identification	TGI GD) 4 - 0.5(0.00	Component Name:	NMeFOSAA	
Filter:	- c ESI SRM ms2 569.90 [419.05-419.06, 511.98-511.99]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	9.37000	
Window (sec):	60.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS	
ICIS Smoothing Points:	5	Baseline Window:	100	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Highest Peak	_
ICIS Minimum Peak Height (S/N):	100.0	ICIS Ion Ratio Confirmation:	Disabled)-5-N
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	Jason W. Knight Seniur Chemist
ICIS Forward:	0	ICIS Reverse:	0	- nethist
ICIS Match:	0 ,			
ICIS Advanced Parameters		Noise Method:	Incos	•
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window: Calibration	0	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amour	nts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD:	d3-NMeFOSAA	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	
		Peak Purity Options		
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	1.600				
2	4.000				
3	20.000				
4	80.000				
5	240.000				
6	320.000				

Component QC Level Table

Component QC Ecver Table					
QC Level	Amount				
ICV1	20.000				
ICV2	40.000				
1	20.000				
2	80.000				
3	240.000				

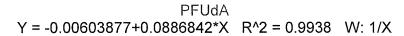
ICV & CCV Result Table

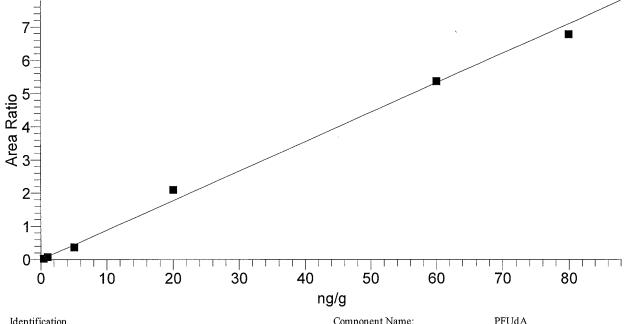
ICV & CCV Result Table							
	Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
	CAL1	16JUL11-28	1.797	25342.21	162693.85	0.156	12.29
	CAL2	16JUL11-29	3.827	65502.35	155569.08	0.421	-4.33
	CAL3	16JUL11-30	17.359	340661.33	155602.48	2.189	-13.21
	CAL4	16JUL11-31	84.907	1332328.37	120945.75	11.016	6.13
	CAL5	16JUL11-32	238.413	3338774.93	107442.70	31.075	-0.66
	CAL6	16JUL11-33	319.298	3665352.86	88015.63	41.644	-0.22
	ICV1	16JUL11-35	31.065	507101.72	127401.73	3.980	55.33
	CCV3	16JUL12-25	228.833	3397227.70	113912.57	29.823	-4.65
	CCV1	16JUL12-34	17.910	377944.98	167128.76	2.261	-10.45
	CCV2	16JUL13-03	85.494	1212254.03	109284.42	11.093	6.87
	CCV3	16JUL13-10	222.900	2869200.62	98775.35	29.048	-7.13

Jason W. Knight Senior Chemist

Component Name:

PFUdA





	Identification		Component Name:	PFUdA	
		- c ESI SRM ms2 562.87 [518.87-518.88]	1st Trace Type:	TIC	
	2nd Trace Type:	N/A	Mass Range 1 (m/z):		
	Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A	
	Base Peak(BP):				
	Retention Time		Expected RT (min):	9.95000	
	Window (sec):	50.00000	View Width (min):	3.00000	
	RT Reference:	No	Adjust Expected RT:	No	
	Adjust Using:	N/A			
	Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
	ICIS Smoothing Points:	3	Baseline Window:	75	
	Area Noise Factor:	5	Peak Noise Factor:	10	
	ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
	ICIS Tailing Factor:	N/A	Tells Team Treight (70).	11111	
	ICIS Peak Detection		ICIS Identify By:	Nearest RT	0
	ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	255m
	ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	Jason W. Knight Senior Chemist
	ICIS Forward:	0	ICIS Reverse:	0	
	ICIS Match:	0			
	ICIS Advanced Parameters		Noise Method:	Incos	
	Minimum Peak Width:	3	Multiplet Resolution:	10	
	Area Tail Extension:	5	Area Scan Window:	0	
			Calibration		
	Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated an	nounts
	ISTD Amount:	N/A	ISTD Units:	N/A	
			Target Compounds		
	ISTD:	13CPFUdA_(IS)	Weighting:	OneOverX	
	Origin:	IgnoreOrigin	Response:	Area	
	Calibration Curve:	Linear	Target Units:	ng/g	
	Number of Cal. Levels:	6	Number of QC Levels:	5	
			Peak Purity Options		
	Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	

N/A

Limit ScanRange (nm):

Component Cal Level Table

Component Car Level Table						
Cal Level	Amount					
1	0.400					
2	1.000					
3	5.000					
4	20.000					
5	60.000					
6	80.000					

Component QC Level Table

Component QC Ecter Table					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	5.000				
2	20.000				
3	60.000				

ICV & CCV Result Table

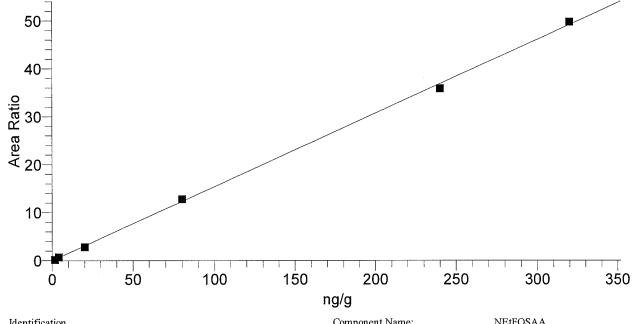
1C y & CC y Result Table						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.433	5600.64	173189.41	0.032	8.18
CAL2	16JUL11-29	0.908	11123.41	149321.21	0.074	-9.19
CAL3	16JUL11-30	4.289	64251.34	171630.19	0.374	-14.21
CAL4	16JUL11-31	23.743	281074.12	133871.88	2.100	18.71
CAL5	16JUL11-32	60.535	787392.18	146832.92	5.363	0.89
CAL6	16JUL11-33	76.492	972777.32	143529.28	6.778	-4.39
ICV1	16JUL11-35	25.166	342735.51	153984.90	2.226	25.83
CCV3	16JUL12-25	64.472	777354.85	136100.45	5.712	7.45
CCV1	16JUL12-34	4.368	69574.88	182457.23	0.381	-12.64
CCV2	16JUL13-03	18.597	275014.09	167367.17	1.643	-7.02
CCV3	16JUL13-10	59.611	742292.42	140572.31	5.281	-0.65

Jason W. Knight Seniur Chemist

Component Name:

NEtFOSAA

NEtFOSAA Y = -0.00899283+0.153481*X R^2 = 0.9990 W: 1/X



Identification Filter:	- c ESI SRM ms2 583.95 [419.00-5419.06, 482.89-482.90]	Component Name: 1st Trace Type:	NEtFOSAA TIC	
2nd Trace Type: Mass Range 2 (m/z): Base Peak(BP):	N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A	
Retention Time Window (sec): RT Reference: Adjust Using:	60.00000 No N/A	Expected RT (min): View Width (min): Adjust Expected RT:	9.58000 3.00000 No	
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS	
ICIS Smoothing Points: Area Noise Factor: ICIS Constrain Peak Width: ICIS Tailing Factor:	5 5 No N/A	Baseline Window: Peak Noise Factor: ICIS Peak Height (%):	100 25 N/A	
ICIS Peak Detection ICIS Minimum Peak Height (S/N): ICIS Window %:	100.0	ICIS Identify By: ICIS Ion Ratio Confirmation: ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	Highest Peak Disabled N/A	Jason W. Knight Senior Chemist
ICIS Forward: ICIS Match:	0	ICIS Reverse:	0	-
ICIS Advanced Parameters Minimum Peak Width: Area Tail Extension:	3 5	Noise Method: Multiplet Resolution: Area Scan Window: Calibration	Incos 10 0	•
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amour	its
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD: Origin: Calibration Curve; Number of Cal. Levels:	d5-NEtFOSAA IgnoreOrigin Linear 6	Weighting: Response: Target Units: Number of QC Levels: Peak Purity Options	OneOverX Area ng/g 5	
Scan Threshold (mAU): Limit ScanRange (nm):	N/A N/A	Peak Coverage (%):	N/A	

Component Cal Level Table

Component Car Level Table						
Cal Level Amoun						
1	1.600					
2	4.000					
3	20.000					
4	80.000					
5	240.000					
6	320.000					

Component QC Level Table

Component QC Ecter Table					
QC Level	Amount				
ICV1	20.000				
ICV2	40.000				
1	20.000				
2	80.000				
3	240.000				

ICV & CCV Result Table

ic v & cc v Result Table						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	1.420	23620.53	113083.49	0.209	-11.28
CAL2	16JUL11-29	4.654	70489.05	99930.70	0.705	16.36
CAL3	16JUL11-30	18.443	338677.79	120029.66	2.822	-7.79
CAL4	16JUL11-31	83.226	1179084.40	92371.16	12.765	4.03
CAL5	16JUL11-32	233.680	2972839.32	82909.30	35.857	-2.63
CAL6	16JUL11-33	324.177	3335927.89	67059.18	49.746	1.31
ICV1	16JUL11-35	19.868	326326.89	107330.77	3.040	-0.66
CCV3	16JUL12-25	224.533	3129090.90	90823.06	34.453	-6.44
CCV1	16JUL12-34	16.618	335965.72	132187.02	2.542	-16.91
CCV2	16JUL13-03	81.734	1175939.38	93807.28	12.536	2.17
CCV3	16JUL13-10	242.043	2741289.72	73809.63	37.140	0.85

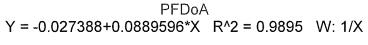
Jason W. Knight Seniur Chemist

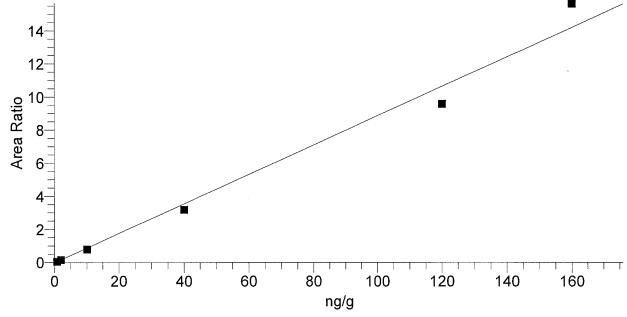
Component Name:

Limit ScanRange (nm):

N/A

PFDoA





Identification		Component Name:	PFDoA	
Filter:	- c ESI SRM ms2 612.90 [568.89-568.90]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	10.60000	
Window (sec):	60.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	Jason W. Knight Senior Chemist
ICIS Forward:	0	ICIS Reverse:	0	· · · · · · · · · · · · · · · · · · ·
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	•
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window: Calibration	0	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts	
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD:	13CPFDoA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels: Peak Purity Options	5	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
T ! !4 C D ().	NT/A			

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Component Cal Level Table

Component Car Level Table						
Cal Level	Amount					
1	0.800					
2	2.000					
3	10.000					
4	40.000					
5	120.000					
6	160.000					

Component OC Level Table

Component QC Level Table					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	10.000				
2	40.000				
3	120.000				

ICV & CCV Result Table

IC V & CC V Result Table						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.907	8252.01	154751.37	0.053	13.41
CAL2	16JUL11-29	2.072	23147.56	147502.82	0.157	3.60
CAL3	16JUL11-30	9.230	118047.56	148735.44	0.794	-7.70
CAL4	16JUL11-31	36.170	486074.81	152358.96	3.190	-9.57
CAL5	16JUL11-32	108.034	1587433.29	165645.81	9.583	-9.97
CAL6	16JUL11-33	176.386	2074627.79	132446.54	15.664	10.24
ICV1	16JUL11-35	23.191	301430.37	148071.32	2.036	15.96
CCV3	16JUL12-25	112.937	1580373.22	157730.77	10.019	-5.89
CCV1	16JUL12-34	9.543	129485.96	157615.57	0.822	-4.57
CCV2	16JUL13-03	37.832	520590.22	155950.89	3.338	-5.42
CCV3	16JUL13-10	124.228	1503900.19	136421.73	11.024	3.52

Jason W. Knight Senior Chemist

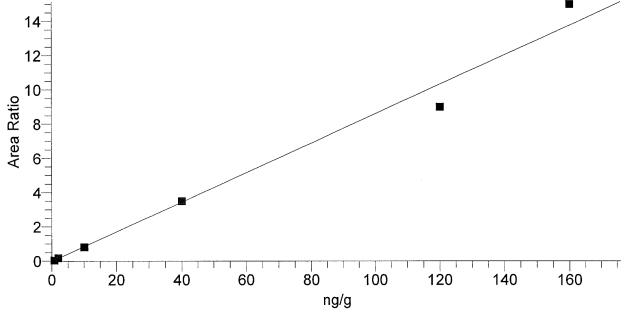
Component Name:

Limit ScanRange (nm):

N/A

PFTrDA





Identification		Component Name:	PFTrDA
Filter: - c ESI SRM ms2 662.90 [618.89-618.90]		1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A
Retention Time		Expected RT (min):	11.46000
Window (sec):	60.00000	View Width (min):	3.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A Jason W. Knight Senior Chemist
ICIS Forward:	0	ICIS Reverse:	0
ICIS Match:	0		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A
ISTD:	13CPFDoA (IS)	Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ng/g
Number of Cal. Levels:	6	Number of QC Levels:	5
rumber of Car, Levels.	•	Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Scan Threshold (mAU).	ING	I Cak Coverage (70).	14/71

Component Cal Level Table

Component Car Level Table				
Cal Level	Amount			
1	0.800			
2	2.000			
3	10.000			
4	40.000			
5	120.000			
6	160.000			

Component QC Level Table

Component Q & Level luble				
	QC Level	Amount		
	ICV2	40.000		
	ICV1	20.000		
	1	10.000		
.r	2	40.000		
	3	120.000		

ICV & CCV Result Table

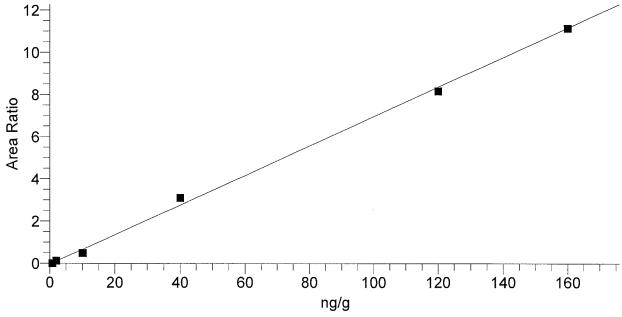
TO VACC VICESUIT TUDIC						
Sample ID	Data File Name	Calculated Amount	Ārea	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.753	6990.76	154751.37	0.045	-5.93
CAL2	16JUL11-29	2.208	25136.99	147502.82	0.170	10.38
CAL3	16JUL11-30	9.699	121247.81	148735.44	0.815	-3.01
CAL4	16JUL11-31	40.884	533173.39	152358.96	3.499	2.21
CAL5	16JUL11-32	104.718	1489808.51	165645.81	8.994	-12.73
CAL6	16JUL11-33	174.539	1987184.16	132446.54	15.004	9.09
ICV1	16JUL11-35	19.860	250213.33	148071.32	1.690	-0.70
CCV3	16JUL12-25	115.775	1568731.60	157730.77	9.946	-3.52
CCV1	16JUL12-34	9.605	127221.61	157615.57	0.807	-3.95
CCV2	16JUL13-03	38.132	508795.70	155950.89	3.263	-4.67
CCV3	16JUL13-10	127.068	1489406.01	136421.73	10.918	5.89

Jason W. Knight Seniur Chemist

Component Name:

PFTeDA





Identification		Component Name:	PFTeDA	
Filter:	- c ESI SRM ms2 712.90 [668.89-668.90]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	12.63000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A	•		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	2 ()		
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	25-N:
ICIS Forward:	0	ICIS Reverse:	0	Jason W. Knight
ICIS Match:	0	2010 212 12227	v	Senior Chemist
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	•
	-	Calibration	V	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts	
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD:	13CPFUdA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels: Peak Purity Options	5	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	

N/A

Limit ScanRange (nm):

Component Cal Level Table

Component Car Level Table	
Cal Level	Amount
1	0.800
2	2.000
3	10.000
4	40.000
5	120.000
6	160.000

Component QC Level Table

Component QC Bever lubic	
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	10.000
2	40.000
3	120.000

ICV & CCV Result Table

	10	V & CC V ICES	uit Labie			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL11-28	0.738	2060.24	173189.41	0.012	-7.76
CAL2	16JUL11-29	2.435	19490.10	149321.21	0.131	21.75
CAL3	16JUL11-30	7.608	84467.44	171630.19	0.492	-23.92
CAL4	16JUL11-31	44.926	415089.77	133871.88	3.101	12.31
CAL5	16JUL11-32	117.267	1197761.82	146832.92	8.157	-2.28
CAL6	16JUL11-33	159.826	1597802.28	143529.28	11.132	-0.11
ICV1	16JUL11-35	21.506	225374.43	153984.90	1.464	7.53
CCV3	16JUL12-25	134.494	1274103.38	136100.45	9.361	12.08
CCV1	16JUL12-34	8.298	98592.89	182457.23	0.540	-17.02
CCV2	16JUL13-03	35.519	408893.94	167367.17	2.443	-11.20
CCV3	16JUL13-10	118.727	1161038.77	140572.31	8.259	-1.06

Jason W. Knight Senlur Chemist

JUL 1 9 2016

Lynn Dodd Principal Specialist

Sample Name:

Acquisition Date:

MDL MDL Original Data Path:

C:\XCALIBUR\PFC\2016\16JUL11

Instrument Method: C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Sample ID: Data File:

16JUL11-27 07/11/16 01:58:16 PM

Dilution Factor:

1.00 TSQ Quantum Access

Sample Type: Vial:

Unknown c:2

Instrument Model:

Run Time(min): Injection Volume(µ1): 10.00

16.51

2.5.0.1311 Instrument Software Version: Instrument Serial Number: TQU01408

Operator:

US19_USR_INS00022

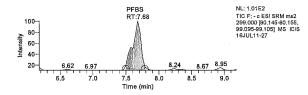
Extracted Ion Chromatogram

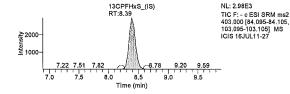
Quan Peak Table

Component Name	Calculated Amount	RT	Response	ISTD Response	Response Ratio	Units
13C-PFNA_(IS)	N/A	8.93	178845.10	N/A	N/A	N/A
13C-PFOA_(IS)	N/A	8.71	132848.81	N/A	N/A	N/A
13CPFDA_(IS)	N/A	9.22	122048.08	N/A	N/A	N/A
13CPFDoA_(IS)	N/A	10.01	129103.45	N/A	N/A	N/A
13CPFHpA_(IS)	N/A	8.42	139826.06	N/A	N/A	N/A
13CPFHxA_(IS)	N/A	8.07	78192.43	N/A	N/A	N/A
13CPFHxS_(IS)	N/A	8.39	22302.62	N/A	N/A	N/A
13CPFOS (IS)	N/A	8.93	11246.98	N/A	N/A	N/A
13CPFUdA (IS)	N/A	9.57	143535.38	N/A	N/A	N/A
NEtFOSAA	1.059	9.61	13124.79	85513.45	0.153	ng/g
NMeFOSAA	1.197	9.40	8878.55	114668.02	0.077	ng/g
PFBS	0.961	7.68	742.13	22302.62	0.033	ng/g
PFDA	0.259	9.22	2667.69	122048.08	0.022	ng/g
PFDoA	0.643	10.04	3849.53	129103.45	0.030	ng/g
PFHxA	0.051	8.14	378.44	78192.43	0.005	ng/g
PFHxS	1.354	8.46	704.41	22302.62	0.032	ng/g
PFNA	0.285	8.93	1979.73	178845.10	0.011	ng/g
PFOA	0.250	8.71	2643.33	132848.81	0.020	ng/g
PFOS	1.442	8.93	369.00	11246.98	0.033	ng/g
PFTeDA	0.833	11.56	2658.95	143535.38	0.019	ng/g
PFTrDA	0.716	10.64	5430.29	129103.45	0.042	ng/g
PFUdA	0.237	9.57	2144.85	143535.38	0.015	ng/g
PFhpA	0.142	8.46	1564.48	139826.06	0.011	ng/g
d3-NMeFOSAA	N/A	9.40	114668.02	N/A	N/A	N/A
d5-NEtFOSAA	N/A	9.58	85513.45	N/A	N/A	N/A

Component Name:

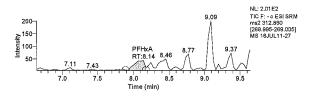
PFBS

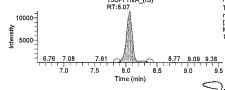




Component Name:

PFHxA



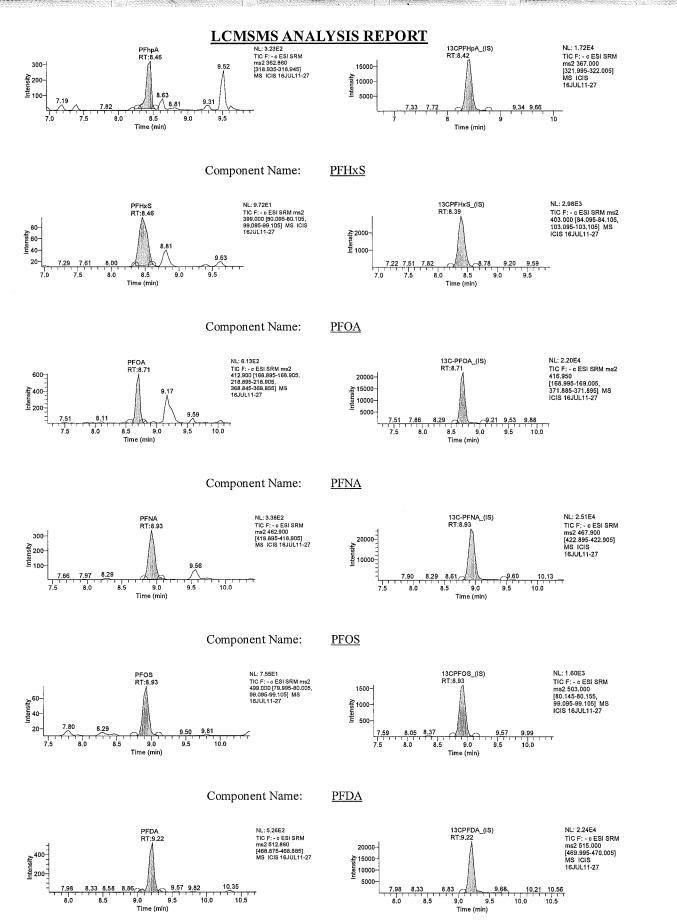


NL: 1.15E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL11-27

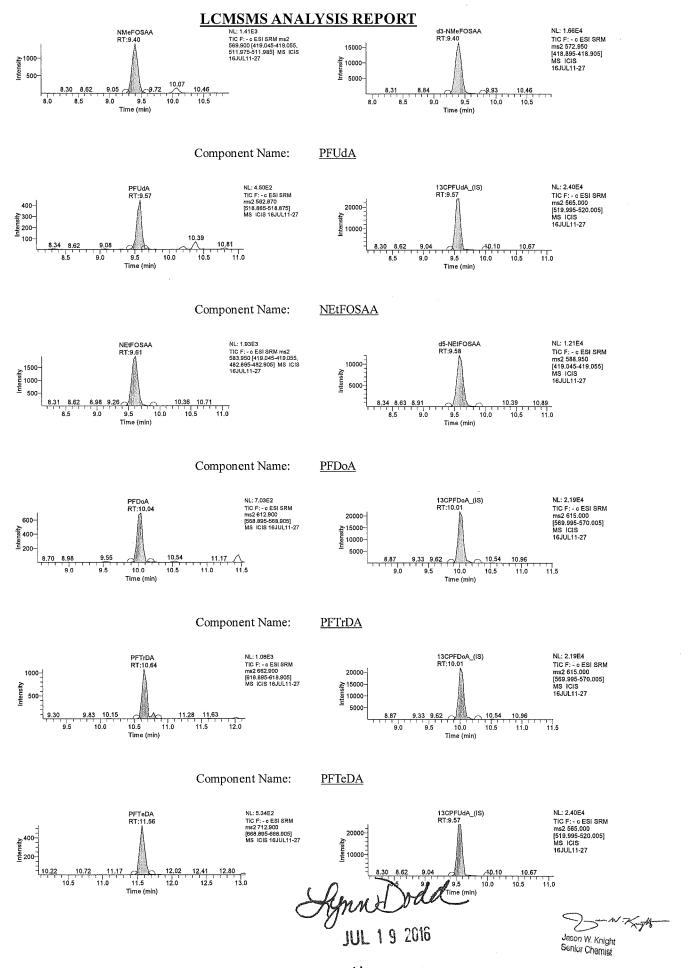
Jason W. Knight Senior Chemist

Component Name:

PFhpA



Jason W. Knight Senior Chemist Component Name: **NMeFOSAA**



Lynn Dodd Principal Specialist3 of 3 SSX50 Page 112 of 2002 esday, July 13, 2016, 11:13:20

Sample Name:

CAL1

Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

Sample ID: CAL1 Data File:

16JUL11-28

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Acquisition Date: Sample Type:

07/11/16 02:15:30 PM

TSQ Quantum Access

Vial: c:3 Run Time(min):

Std Bracket Instrument Model: 16.51

Instrument Software Version: 2.5.0.1311 Instrument Serial Number: TQU01408

Injection Volume(μl): 10.00 Operator: US19_USR_INS00022

Extracted Ion Chromatogram

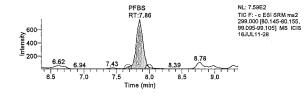
Dilution Factor:

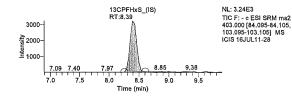
Quan Peak Table

Units	Response	ISTD Response	Response	RT	Calculated	Component Name
	Ratio				Amount	
N/A	N/A	N/A	232321.30	8.90	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	166091.88	8.65	N/A	13C-PFOA (IS)
N/A	N/A	N/A	129639.81	9.15	N/A	13CPFDA_(IS)
N/A	N/A	N/A	154751.37	9.90	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	153139.87	8.43	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	91180.47	8.11	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	25690.47	8.39	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	17486.40	8.86	N/A	13CPFOS_(IS)
N/A	N/A	N/A	173189.41	9.47	N/A	13CPFUdA_(IS)
ng/g	0.209	113083.49	23620.53	9.51	1.420	NEtFOSAA
ng/g	0.156	162693.85	25342.21	9.33	1.797	NMeFOSAA
ng/g	0.199	25690.47	5107.94	7.86	2.227	PFBS
ng/g	0.036	129639.81	4716.95	9.15	0.447	PFDA
ng/g	0.053	154751.37	8252.01	9.90	0.907	PFDoA
ng/g	0.058	91180.47	5320.84	8.11	0.599	PFHxA
ng/g	0.095	25690.47	2440.09	8.39	2.030	PFHxS
ng/g	0.026	232321.30	6142.53	8.90	0.514	PFNA
ng/g	0.053	166091.88	8778.44	8.68	0.531	PFOA
ng/g	0.116	17486.40	2034.31	8.86	2.152	PFOS
ng/g	0.012	173189.41	2060.24	11.32	0.738	PFTeDA
ng/g	0.045	154751.37	6990.76	10.51	0.753	PFTrDA
ng/g	0.032	173189.41	5600.64	9.47	0.433	PFUdA
ng/g	0.043	153139.87	6561.40	8.43	0.497	PFhpA
N/A	N/A	N/A	162693.85	9.33	N/A	d3-NMeFOSAA
N/A	N/A	N/A	113083.49	9.51	N/A	d5-NEtFOSAA

Component Name:

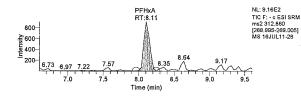
PFBS

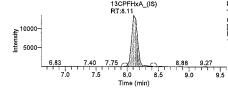




Component Name:

PFHxA



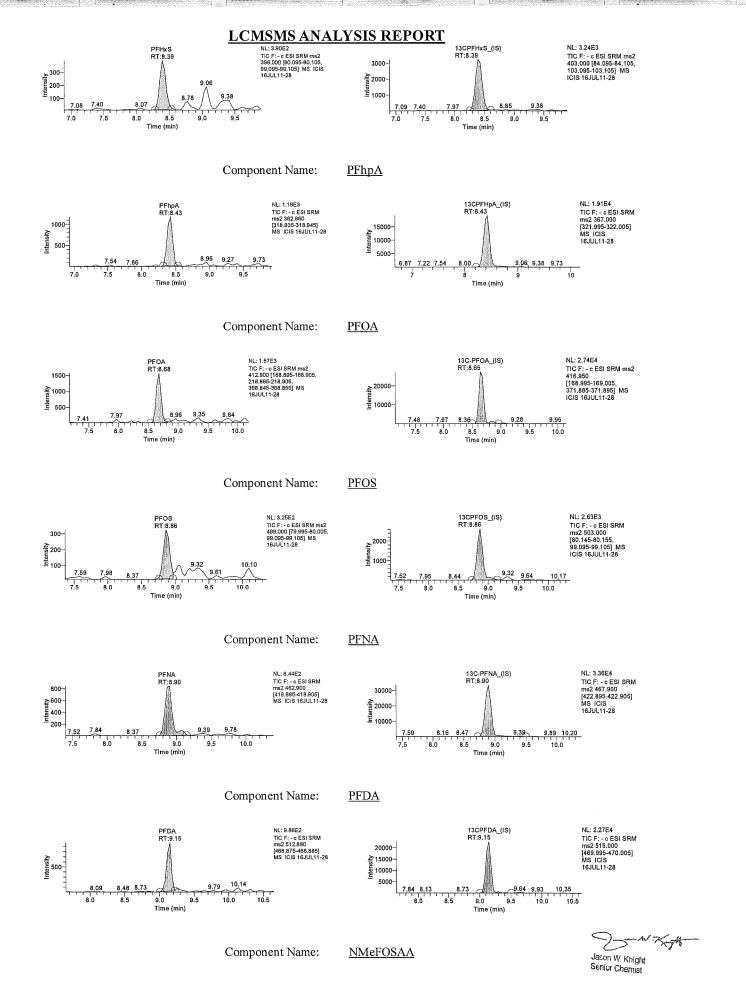


NL: 1,36E4 TIC F: - c ESI SRM ms2 314,900 [269,895-269,905] MS ICIS 16JUL11-28

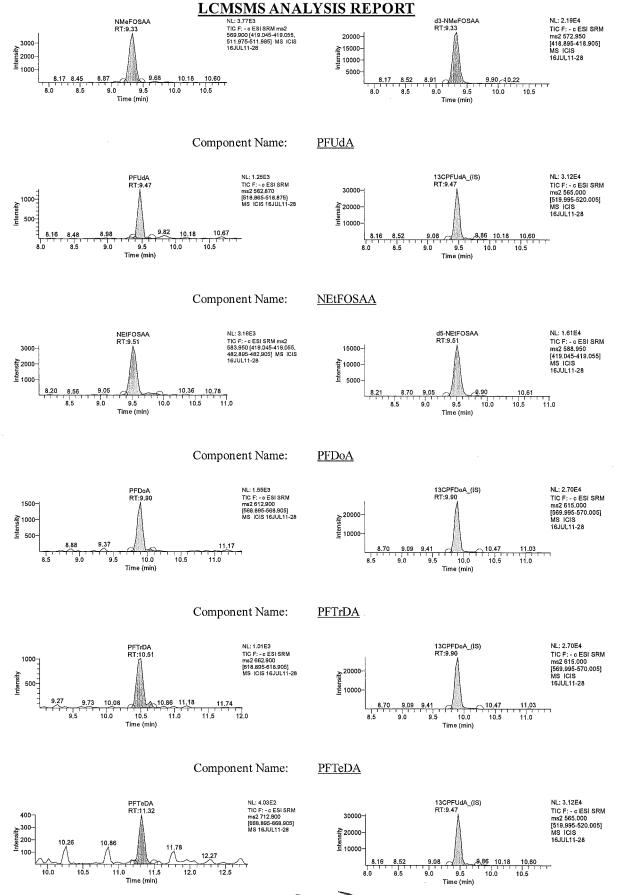
Component Name:

PFHxS

Jason W. Knight Seniur Chemist



Page 2 of 3
SSX50 Page 114 of 242esday, July 13, 2016, 11:13:05



SynwDodd JUL 1 9 2016

Jason W. Knight Senior Chemist

Sample Name: Sample ID: CAL2 CAL2 Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

Method: C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

Data File: Acquisition Date: Sample Type: 16JUL11**-**29

07/11/16 02:32:42 PM Dilution Factor: Std Bracket Instrument Model:

TSQ Quantum Access

Vial: Run Time(min): c:4 16.51 Instrument Software Version:
Instrument Serial Number:

2.5.0.1311 TQU01408

Injection Volume(µl): 10.00 Operator:

US19_USR_INS00022

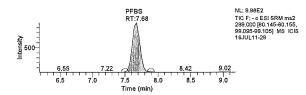
Extracted Ion Chromatogram

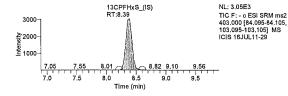
Quan Peak Table

Units	Dagnanga	ISTD Response	Pagnanga	RT	Calculated	Common on t Nome
Units	Response Ratio		Response	K1	Amount	Component Name
N/A	N/A	N/A	220149.98	8.86	N/A	13C-PFNA (IS)
N/A	N/A	N/A	146625.80	8.65	N/A	13C-PFOA (IS)
N/A	N/A	N/A	146615.11	9.12	N/A	13CPFDA (IS)
N/A	N/A	N/A	147502.82	9.83	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	145114.23	8.39	N/A	13CPFHpA (IS)
N/A	N/A	N/A	84822.85	8.07	N/A	13CPFHxA (IS)
N/A	N/A	N/A	22610.12	8.39	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	16046.37	8.83	N/A	13CPFOS (IS)
N/A	N/A	N/A	149321.21	9.44	N/A	13CPFUdA_(IS)
ng/g	0.705	99930.70	70489.05	9.48	4.654	NEtFOSAA
ng/g	0.421	155569.08	65502.35	9.30	3.827	NMeFOSAA
ng/g	0.347	22610.12	7851.95	7.68	3.362	PFBS
ng/g	0.079	146615.11	11538.41	9.11	0.994	PFDA
ng/g	0.157	147502.82	23147.56	9.83	2.072	PFDoA
ng/g	0.069	84822.85	5880.08	8.04	0.711	PFHxA
ng/g	0.291	22610.12	6582.93	8.36	4.120	PFHxS
ng/g	0.046	220149.98	10039.83	8.86	0.799	PFNA
ng/g	0.099	146625.80	14471.68	8.64	0.922	PFOA
ng/g	0.253	16046.37	4053.03	8.83	3.310	PFOS
ng/g	0.131	149321.21	19490.10	11.14	2.435	PFTeDA
ng/g	0.170	147502.82	25136.99	10.36	2.208	PFTrDA
ng/g	0.074	149321.21	11123.41	9.40	0.908	PFUdA
ng/g	0.072	145114.23	10416.35	8.39	0.822	PFhpA
N/A	N/A	N/A	155569.08	9.30	N/A	d3-NMeFOSAA
N/A	N/A	N/A	99930.70	9.44	N/A	d5-NEtFOSAA

Component Name:

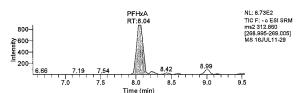
PFBS

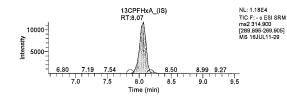




Component Name:

PFHxA



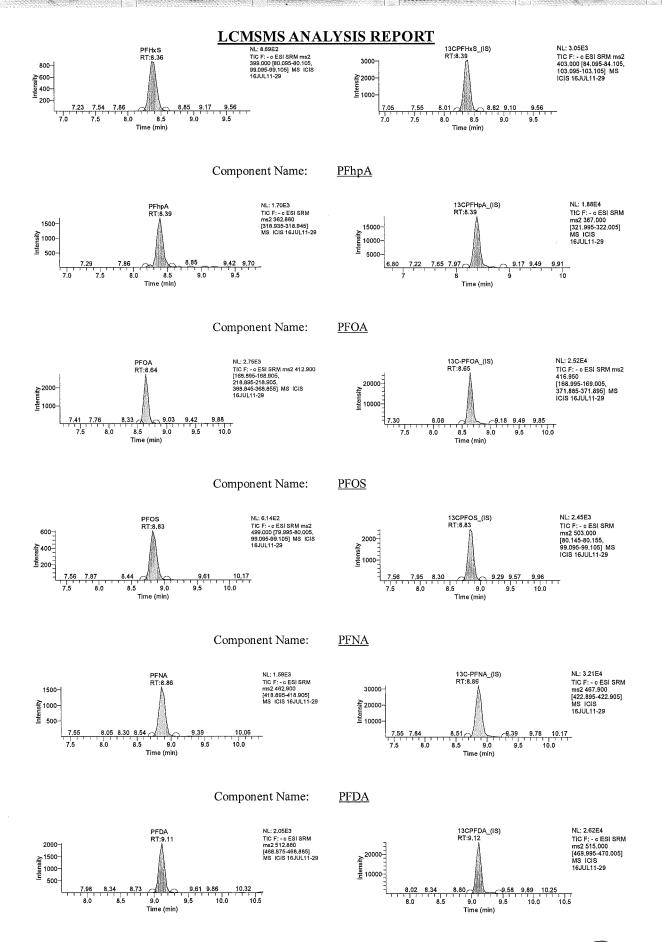


Component Name:

PFHxS

Jason W. Knight Senior Chemist

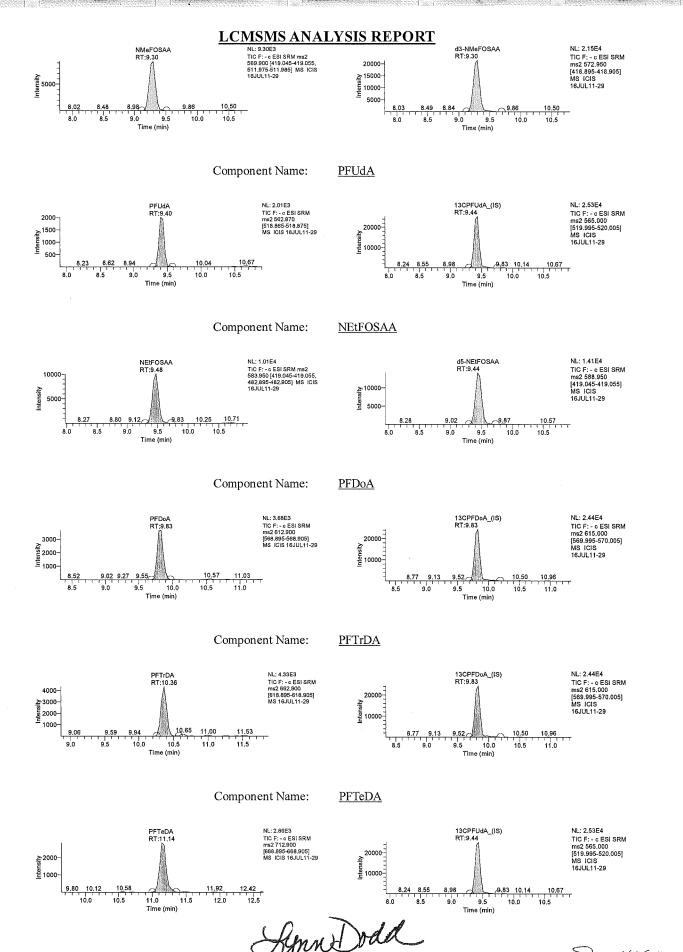
Page 1 of 3
SSX50 Page 116 of 242 esday, July 13, 2016, 11:13:06



Component Name:

NMeFOSAA

Jason W. Knight Seniur Chemist



JUL 1 9 2016

Page 3 of 3

Page 3 of 3

Sample Name: Sample ID:

CAL3 CAL3 Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

C:\Xcalibur\PFC\Acquistion M\HWell_16.5minutes

Acquisition Date: Sample Type:

Data File:

16JUL11-30 07/11/16 02:49:56 PM

Dilution Factor: Std Bracket

TSQ Quantum Access Instrument Model: 2.5.0.1311

Vial: c:5 Run Time(min): 16.51 Injection Volume(µl): 10.00 Instrument Software Version: Instrument Serial Number: TQU01408

Operator: US19_USR_INS00022

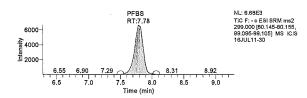
Extracted Ion Chromatogram

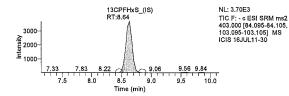
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A		N/A	224479,64	9.04	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	158539.02	8.86	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	148343.49	9.26	N/A	13CPFDA_(IS)
N/A	N/A	N/A	148735.44	9.94	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	145438.91	8.64	N/A	13CPFHpA (IS)
N/A	N/A	N/A	89149.57	8.18	N/A	13CPFHxA (IS)
N/A	N/A	N/A	27541.67	8.64	N/A	13CPFHxS (IS)
N/A	N/A	N/A	16199.31	9.04	N/A	13CPFOS (IS)
N/A	N/A	N/A	171630.19	9.54	N/A	13CPFUdA (IS)
ng/g	2.822	120029.66	338677.79	9.62	18.443	NEtFOSAA
ng/g	2.189	155602.48	340661.33	9.44	17.359	NMeFOSAA
ng/g	2.250	27541.67	61977.26	7.78	17.910	PFBS
ng/g	0.331	148343.49	49124.28	9.26	4.258	PFDA
ng/g	0.794	148735.44	118047.56	9.97	9.230	PFDoA
ng/g	0.372	89149.57	33206.20	8.18	3.816	PFHxA
ng/g	1.347	27541.67	37107.61	8.64	15.376	PFHxS
ng/g	0.306	224479.64	68728.10	9.04	4.674	PFNA
ng/g	0.457	158539.02	72458.15	8.85	3.975	PFOA
ng/g	1.930	16199.31	31268.74	9.04	17.565	PFOS
ng/g	0.492	171630.19	84467.44	11.25	7.608	PFTeDA
ng/g	0.815	148735.44	121247.81	10.50	9.699	PFTrDA
ng/g	0.374	171630.19	64251.34	9.54	4.289	PFUdA
ng/g	0.393	145438.91	57148.99	8.64	4.430	PFhpA
N/A	N/A	N/A	155602.48	9.44	N/A	d3-NMeFOSAA
N/A	N/A	N/A	120029.66	9.58	N/A	d5-NEtFOSAA

Component Name:

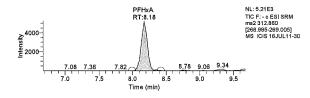
PFBS

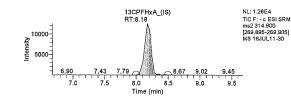




Component Name:

<u>PFHxA</u>

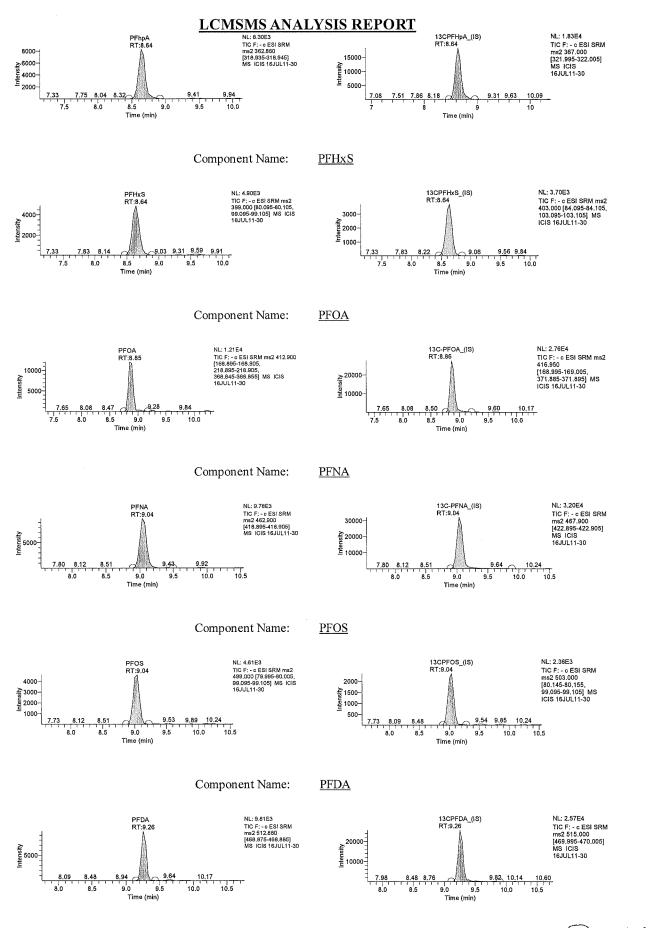




Component Name:

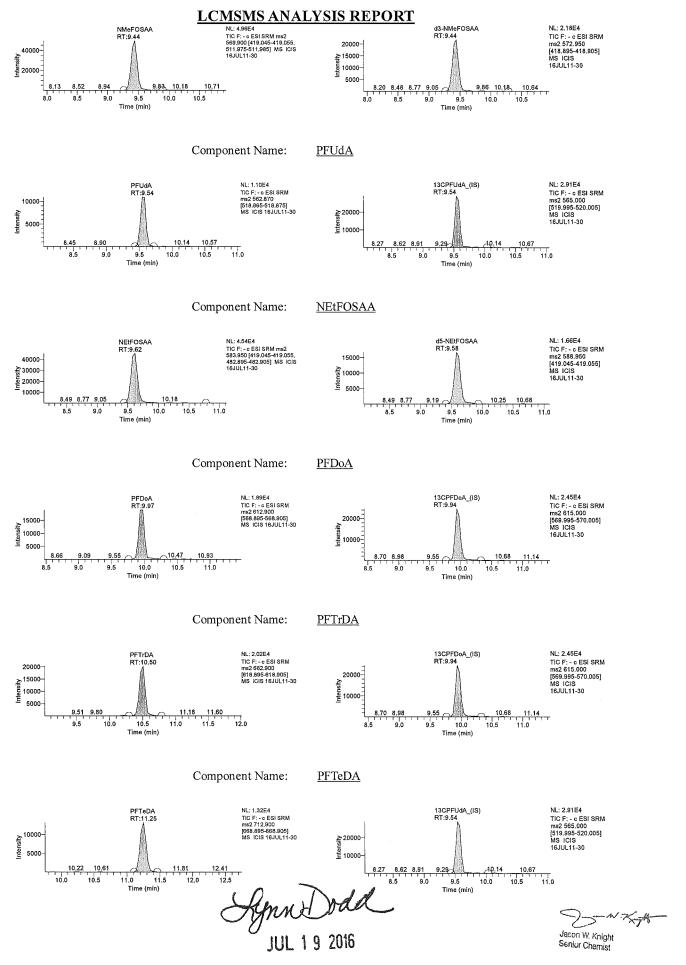
PFhpA

Jason W. Knight Senior Chemist



Component Name: <u>NMeFOSAA</u>

Jason W. Knight Senior Chemist



Lynn Dodd
Page 3 of 3
Principal Specialist 121 of 2242 esday, July 13, 2016, 11:13:08

Sample Name:

CAL4 CAL4 Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

Sample ID: Data File:

16JUL11-31

C:\Xcalibur\PFC\Acquistion M\HWell_16.5minutes

Acquisition Date:

07/11/16 03:07:11 PM

Sample Type:

Std Bracket

Dilution Factor:

1.00 TSQ Quantum Access

Vial:

c:6 16.51 Instrument Model: Instrument Software Version:

2.5.0.1311 TQU01408

Run Time(min): Injection Volume(µl):

10.00

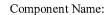
Instrument Serial Number: Operator:

US19_USR_INS00022

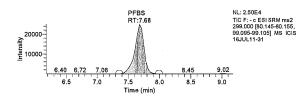
Extracted Ion Chromatogram

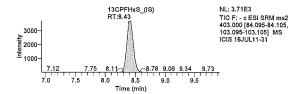
Quan Peak Table

Quan Peak Table											
Unit	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name					
N/A	N/A	N/A	213087.83	8.93	N/A	13C-PFNA_(IS)					
N/A	N/A	N/A	152235.70	8.68	N/A	13C-PFOA_(IS)					
N/A	N/A	N/A	145016.53	9.18	N/A	13CPFDA (IS)					
N/A	N/A	N/A	152358.96	9.94	N/A	13CPFDoA (IS)					
N/A	N/A	N/A	129643.86	8.42	N/A	13CPFHpA_(IS)					
N/A	N/A	N/A	85625.36	8.07	N/A	13CPFHxA_(IS)					
N/A	N/A	N/A	28798.74	8.43	N/A	13CPFHxS (IS)					
N/A	N/A	N/A	16067.21	8.90	N/A	13CPFOS_(IS)					
N/A	N/A	N/A	133871.88	9.50	N/A	13CPFUdA (IS)					
ng/	12.765	92371.16	1179084.40	9.54	83.226	NEtFOSAA					
ng/	11.016	120945.75	1332328.37	9.36	84.907	NMeFOSAA					
ng/	8.811	28798.74	253733.78	7.68	68.062	PFBS					
ng/	1.606	145016.53	232882.64	9.18	20.739	PFDA					
ng/	3.190	152358.96	486074.81	9.93	36.170	PFDoA					
ng/	1.985	85625.36	169938.36	8.07	20.325	PFHxA					
ng/	6.848	28798.74	197205.62	8.42	73.995	PFHxS					
ng/	1.272	213087.83	271106.94	8.93	19.044	PFNA					
ng/	2.140	152235.70	325769.43	8.68	18.313	PFOA					
ng/	7.822	16067.21	125672.26	8.90	67.624	PFOS					
ng/	3.101	133871.88	415089.77	11.39	44.926	PFTeDA					
ng/	3.499	152358.96	533173.39	10.54	40.884	PFTrDA					
ng/	2.100	133871.88	281074.12	9.50	23.743	PFUdA					
ng/	1.889	129643.86	244835.75	8.42	21.231	PFhpA					
N/A	N/A	N/A	120945.75	9.37	N/A	d3-NMeFOSAA					
N/A	N/A	N/A	92371.16	9.54	N/A	d5-NEtFOSAA					



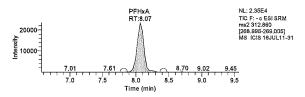
PFBS

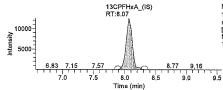




Component Name:

PFHxA





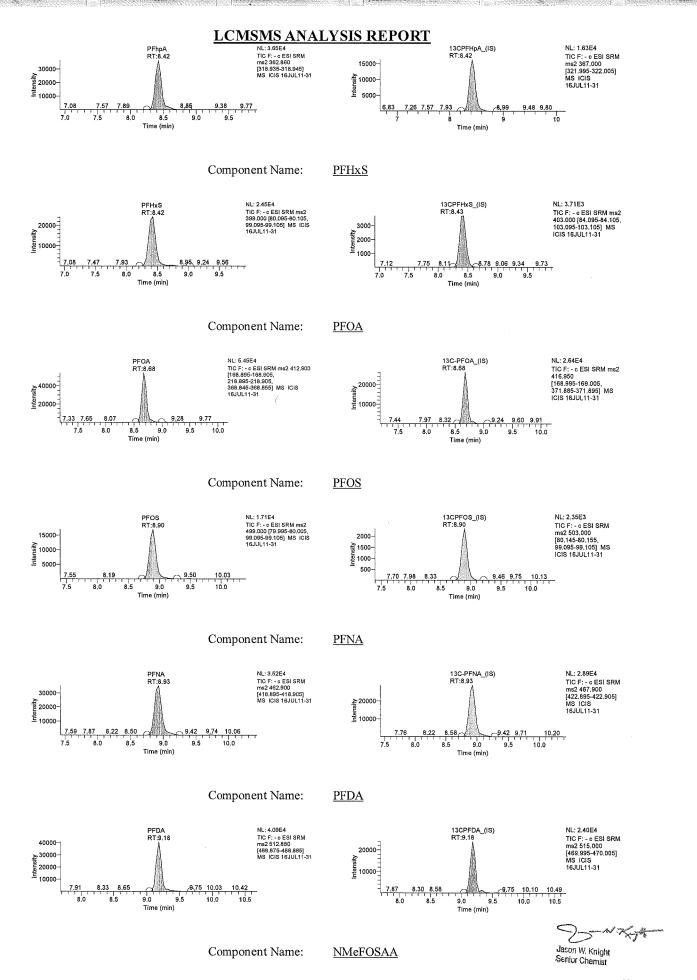
NL: 1.26E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL11-31

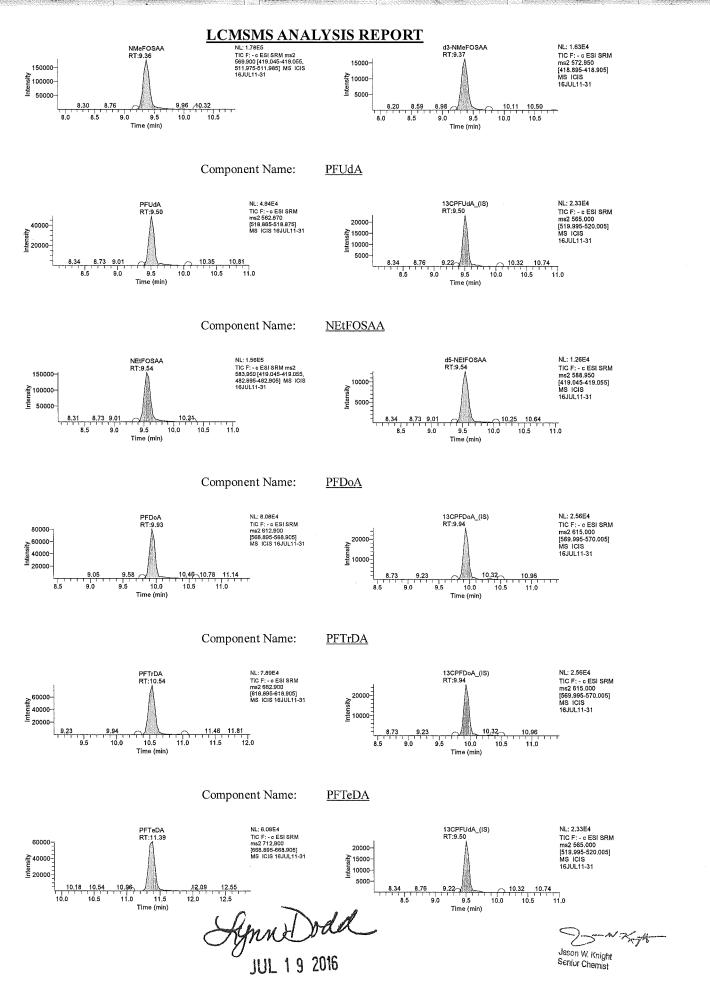
Component Name:

PFhpA

Jason W. Knight Senior Chemist

Page 1 of 3





Lynn Dodd Page 3 of 3
Principal age 124 of 2 desday, July 13, 2016, 11:13:09

Sample Name: Sample ID:

Acquisition Date:

CAL5 CAL5

Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

C:\Xcalibur\PFC\Acquistion M\HWell_16.5minutes

16JUL11-32

07/11/16 03:24:25 PM

Dilution Factor:

Sample Type: Vial:

Data File:

Std Bracket c:7

Instrument Model:

TSQ Quantum Access 2.5.0.1311

Run Time(min): Injection Volume(µ1): 16.51 10.00 Instrument Software Version: Instrument Serial Number:

TQU01408

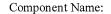
Operator:

US19_USR_INS00022

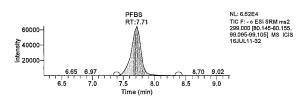
Extracted Ion Chromatogram

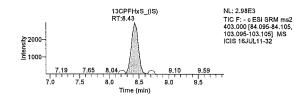
Ouan Peak Table

Units	Response	ISTD Response	Response	RT	Calculated	Component Name
	Ratio	1	1		Amount	
N/A	N/A	N/A	166706.63	8.90	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	138662.31	8.71	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	146127.04	9.11	N/A	13CPFDA_(IS)
N/A	N/A	N/A	165645.81	9.87	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	115333.66	8.46	N/A	13CPFHpA (IS)
N/A	N/A	N/A	80808.09	8.07	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	24493.26	8.43	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	10137.51	8.86	N/A	13CPFOS (IS)
N/A	N/A	N/A	146832.92	9.44	N/A	13CPFUdA (IS)
ng/g	35.857	82909.30	2972839.32	9.51	233.680	NEtFOSAA
ng/g	31.075	107442.70	3338774.93	9.29	238.413	NMeFOSAA
ng/g	28.511	24493.26	698333.65	7.71	218.669	PFBS
ng/g	4.639	146127.04	677880.81	9.11	59.952	PFDA
ng/g	9.583	165645.81	1587433.29	9.87	108.034	PFDoA
ng/g	5.862	80808.09	473692.16	8.10	60.028	PFHxA
ng/g	20.258	24493.26	496183.71	8.43	216.911	PFHxS
ng/g	4.225	166706.63	704320.58	8.90	62.961	PFNA
ng/g	7.218	138662.31	1000850.22	8.71	61.578	PFOA
ng/g	34.565	10137.51	350399.84	8.90	294.860	PFOS
ng/g	8.157	146832.92	1197761.82	11.28	117.267	PFTeDA
ng/g	8.994	165645.81	1489808.51	10.43	104.718	PFTrDA
ng/g	5.363	146832.92	787392.18	9.47	60.535	PFUdA
ng/g	5.206	115333.66	600475.65	8.46	58.504	PFhpA
N/A	N/A	N/A	107442.70	9.30	N/A	d3-NMeFOSAA
N/A	N/A	N/A	82909.30	9.51	N/A	d5-NEtFOSAA



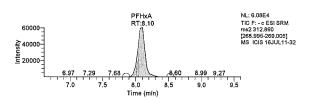
PFBS

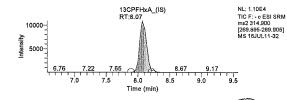




Component Name:

PFHxA



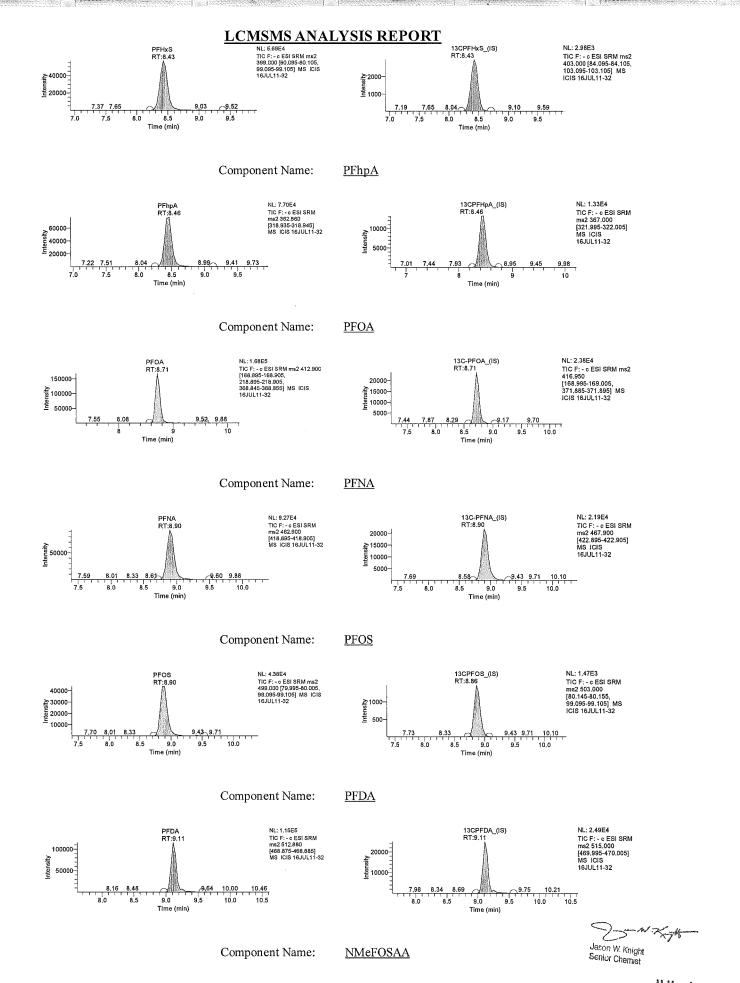


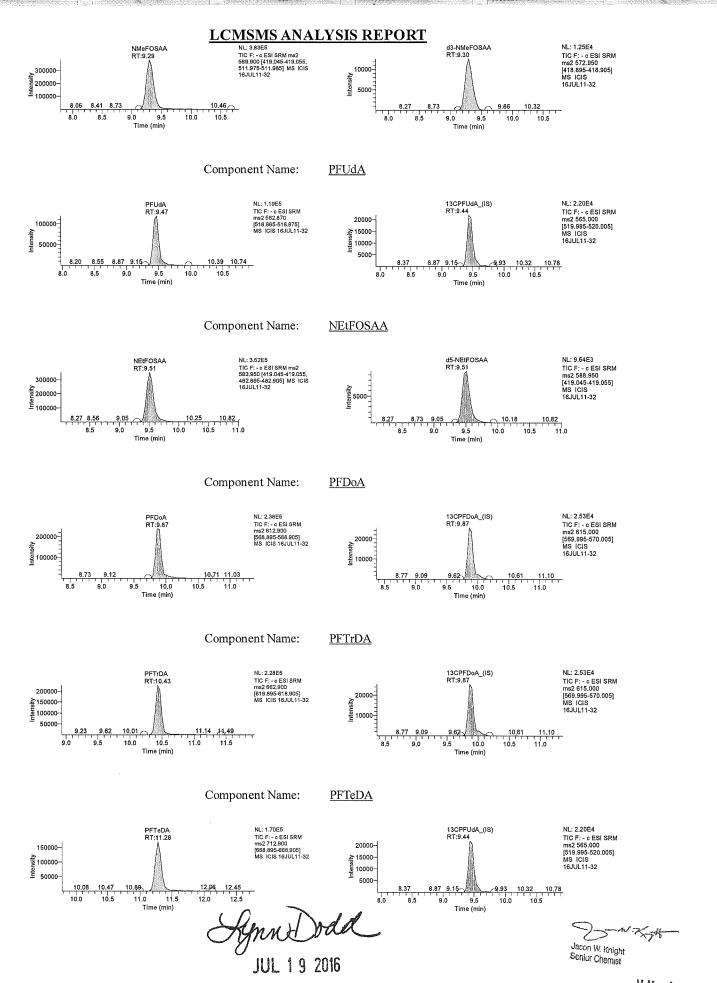
Component Name:

PFHxS

Jason W. Knight Senior Chemist

Page 1 of 3





Lynn Dodd Page 3 of 3
Principal stage 127 of 20d2esday, July 13, 2016, 11:13:10

Sample Name: Sample ID:

CAL6 CAL₆

Original Data Path:

C:\XCALIBUR\PFC\2016\16JUL11

Instrument Method:

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

1.00

Acquisition Date: Sample Type:

Data File:

16JUL11-33 07/11/16 03:41:39 PM Std Bracket

Dilution Factor: Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: Run Time(min): Injection Volume(µ1):

c:8 16.51 10.00 Instrument Software Version: Instrument Serial Number:

TQU01408

Operator:

US19_USR_INS00022

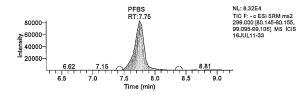
Extracted Ion Chromatogram

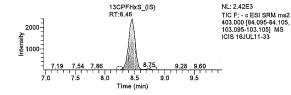
Quan Peak Table

Component Name Calculated RT Response ISTD Response Response Units											
Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name						
N/A	N/A	159333.50	9.00	N/A	13C-PFNA (IS)						
N/A	N/A	134323.18	8.79	N/A	13C-PFOA (IS)						
N/A	N/A	146587.01	9.22	N/A	13CPFDA (IS)						
N/A	N/A	132446.54	9.97	N/A	13CPFDoA (IS)						
N/A	N/A	95177.62	8.46	N/A	13CPFHpA (IS)						
N/A	N/A	83651.12	8.14	N/A	13CPFHxA (IS)						
N/A	N/A	18938.68	8.46	N/A	13CPFHxS (IS)						
N/A	N/A	12119.31	8.97	N/A	13CPFOS_(IS)						
N/A	N/A	143529.28	9.51	N/A	13CPFUdA_(IS)						
49.746	67059.18	3335927.89	9.58	324.177	NEtFOSAA						
41.644	88015.63	3665352.86	9.37	319.298	NMeFOSAA						
46.393	18938.68	878620.58	7.75	355.371	PFBS						
6.190	146587.01	907420.73	9.22	80.009	PFDA						
15.664	132446.54	2074627.79	9.97	176.386	PFDoA						
7.902	83651.12	661040.61	8.14	80.922	PFHxA						
33.043	18938.68	625799.09	8.46	353.168	PFHxS						
5.263	159333.50	838633.06	9.00	78.407	PFNA						
9.507	134323.18	1276993.98	8.78	81.081	PFOA						
32.826	12119.31	397833.14	8.97	280.089	PFOS						
11.132	143529.28	1597802.28	11.32	159.826	PFTeDA						
15.004	132446.54	1987184.16	10.54	174.539	PFTrDA						
6.778	143529.28	972777.32	9.51	76.492	PFUdA						
7.201	95177.62	685412.09	8.46	80.915	PFhpA						
N/A	N/A	88015.63	9.37	N/A	d3-NMeFOSAA						
N/A	N/A	67059.18	9.55	N/A	d5-NEtFOSAA						
	Ratio N/A N/A N/A N/A N/A N/A N/A N/	N/A	Ratio 159333.50 N/A N/A 134323.18 N/A N/A 146587.01 N/A N/A 132446.54 N/A N/A 95177.62 N/A N/A 83651.12 N/A N/A 18938.68 N/A N/A 12119.31 N/A N/A 143529.28 N/A N/A 3665352.86 88015.63 41.644 878620.58 18938.68 46.393 907420.73 146587.01 6.190 2074627.79 132446.54 15.664 661040.61 83651.12 7.902 625799.09 18938.68 33.043 838633.06 159333.50 5.263 1276993.98 134323.18 9.507 397833.14 12119.31 32.826 1597802.28 143529.28 11.132 1987184.16 132446.54 15.004 972777.32 143529.28 6.778 685412.09 95177.6	9.00 159333.50 N/A N/A 8.79 134323.18 N/A N/A 9.22 146587.01 N/A N/A 9.97 132446.54 N/A N/A 8.46 95177.62 N/A N/A 8.46 18938.68 N/A N/A 8.97 12119.31 N/A N/A 9.51 143529.28 N/A N/A 9.58 3335927.89 67059.18 49.746 9.37 3665352.86 88015.63 41.644 7.75 878620.58 18938.68 46.393 9.22 907420.73 146587.01 6.190 9.97 2074627.79 132446.54 15.664 8.14 661040.61 83651.12 7.902 8.46 625799.09 18938.68 33.043 9.00 838633.06 159333.50 5.263 8.78 1276993.98 134323.18 9.507 8.97 397833.14 12119.31 32.826 11.32 1597802.28 143529.28 11.132 10.54 1987184.16 132446.54 15.004 9.51 972777.32 143529.28 6.778 8.46 685412.09 95177.62 7.201 9.37 88015.63 N/A N/A	Amount Ratio N/A 9.00 159333.50 N/A N/A N/A 8.79 134323.18 N/A N/A N/A 9.22 146587.01 N/A N/A N/A 9.97 132446.54 N/A N/A N/A 8.46 95177.62 N/A N/A N/A 8.14 83651.12 N/A N/A N/A 8.46 18938.68 N/A N/A N/A 8.97 12119.31 N/A N/A N/A 9.51 143529.28 N/A N/A 319.298 9.37 3665352.86 88015.63 41.644 355.371 7.75 878620.58 18938.68 46.393 80.009 9.22 907420.73 146587.01 6.190 176.386 9.97 2074627.79 132446.54 15.664 80.922 8.14 661040.61 83651.12 7.902 353.168 8.46 625799.09						

Component Name:

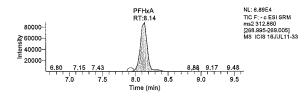
PFBS

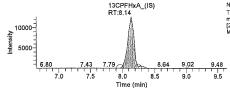




Component Name:

PFHxA





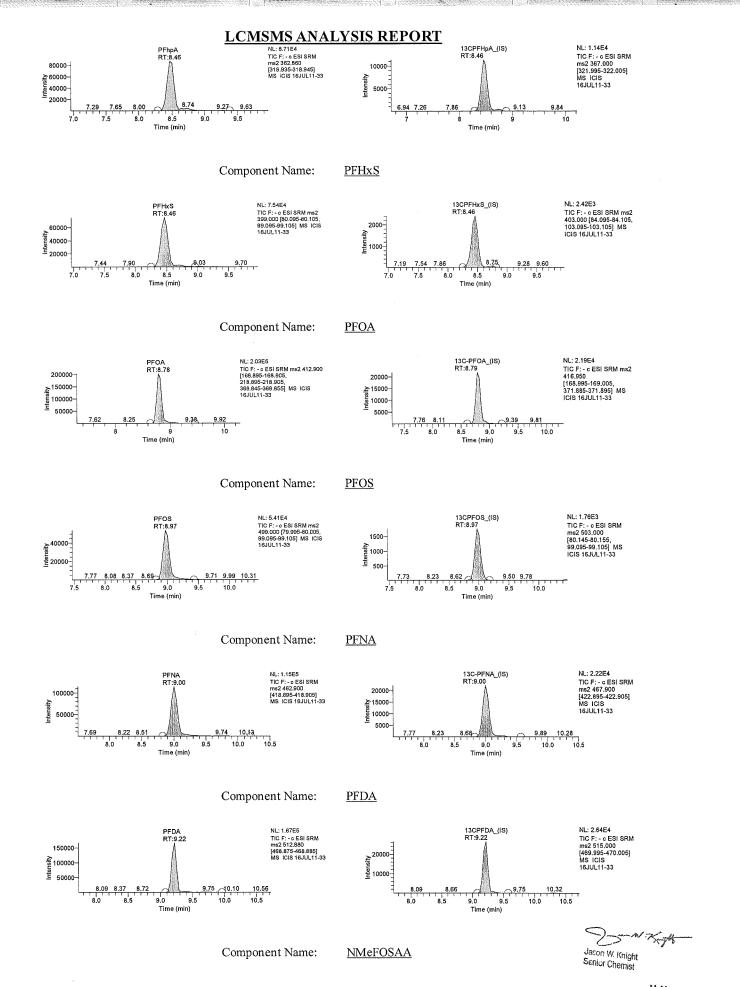
NL: 1.26E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS 16JUL11-33

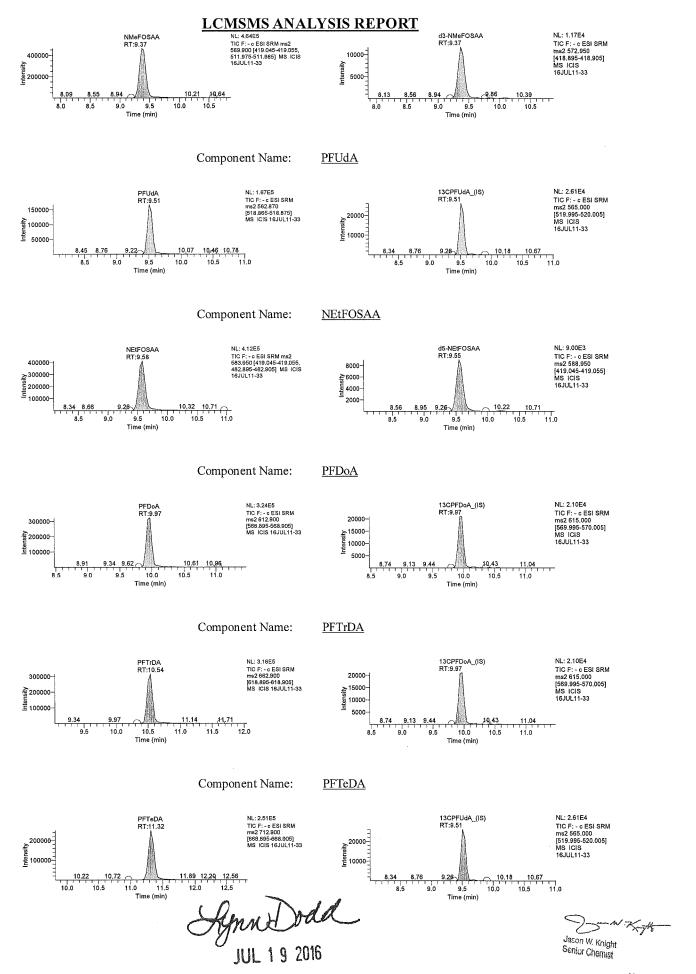
Component Name:

PFhpA

Jason W. Knight Senior Chemist

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Lynn Dodd Page 3 of 3
Principal Special Page 130 of 2/ddesday, July 13, 2016, 11:13:12

Sample Name: Sample ID:

ICV1 ICV1

Original Data Path: Instrument Method: C:\XCALIBUR\PFC\2016\16JUL11

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Data File: Acquisition Date:

Sample Type:

16JUL11-35

07/11/16 04:16:08 PM Dilution Factor:

TSQ Quantum Access Instrument Model: 2.5.0.1311

Vial: Run Time(min): QC c:9 16.51

Instrument Software Version: Instrument Serial Number:

TQU01408

Operator: Injection Volume(µl): 10.00

US19_USR_INS00022

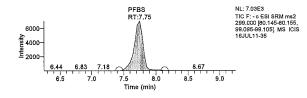
Extracted Ion Chromatogram

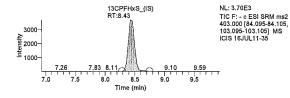
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A		N/A	218387.94	8.97	N/A	13C-PFNA (IS)
N/A	N/A	N/A	141454.31	8.72	N/A	13C-PFOA (IS)
N/A	N/A	N/A	158167.36	9.22	N/A	13CPFDA (IS)
N/A	N/A	N/A	148071.32	10.22	N/A	13CPFDoA (IS)
N/A	N/A	N/A	144444.64	8.46	N/A	13CPFHpA (IS)
N/A	N/A	N/A	88446.85	8.14	N/A	13CPFHxA (IS)
N/A	N/A	N/A	26942.94	8.43	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	14111.16	8.93	N/A	13CPFOS (IS)
N/A	N/A	N/A	153984.90	9.58	N/A	13CPFUdA (IS)
ng/g	3.040	107330.77	326326.89	9.65	19.868	NEtFOSAÁ
ng/g	3.980	127401.73	507101.72	9.44	31.065	NMeFOSAA
ng/g	2.459	26942.94	66252.15	7.75	19.505	PFBS
ng/g	2.011	158167.36	318060.27	9.22	25.975	PFDA
ng/g	2.036	148071.32	301430.37	10.22	23.191	PFDoA
ng/g	2.263	88446.85	200150.42	8.14	23.174	PFHxA
ng/g	1.990	26942.94	53626.56	8.46	22.229	PFHxS
ng/g	1.457	218387.94	318145.47	8.97	21.789	PFNA
ng/g	2.782	141454.31	393585.15	8.71	23.787	PFOA
ng/g	2.054	14111.16	28987.73	8.93	18.619	PFOS
ng/g	1.464	153984.90	225374.43	11.67	21.506	PFTeDA
ng/g	1.690	148071.32	250213.33	10.82	19.860	PFTrDA
ng/g	2,226	153984.90	342735.51	9.58	25.166	PFUdA
ng/g	2.099	144444.64	303185.66	8.46	23.595	PFhpA
N/A	N/A	N/A	127401.73	9.44	N/A	d3-NMeFOSAA
N/A	N/A	N/A	107330.77	9.62	N/A	d5-NEtFOSAA

Component Name:

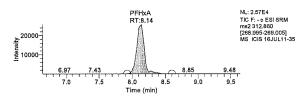
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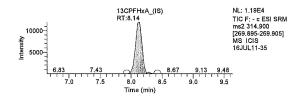




Component Name:

PFHxA

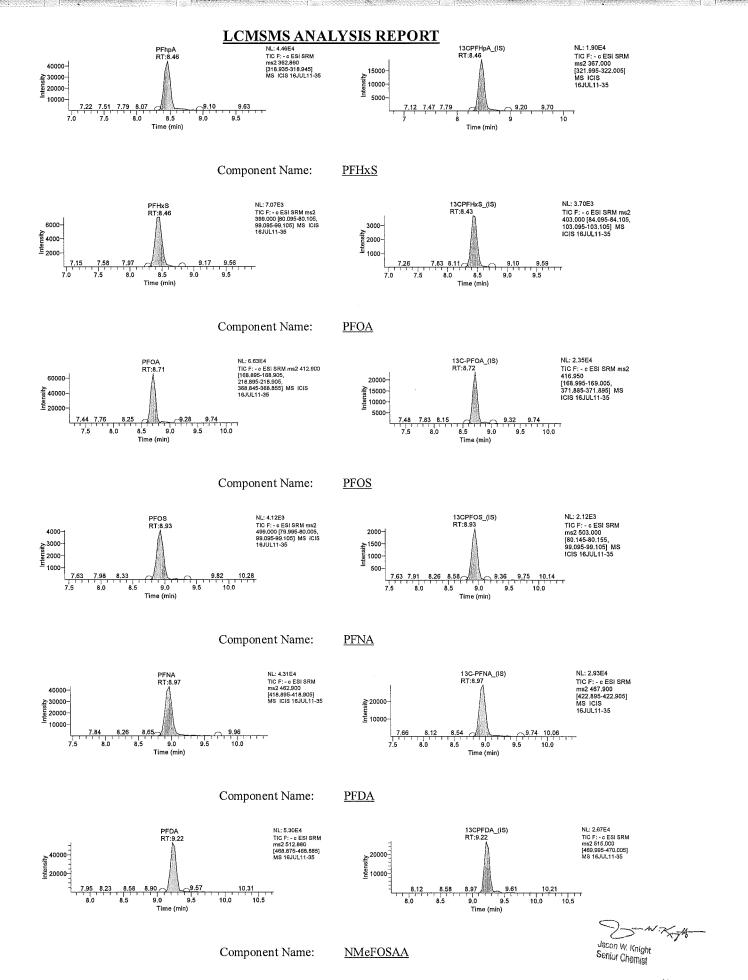


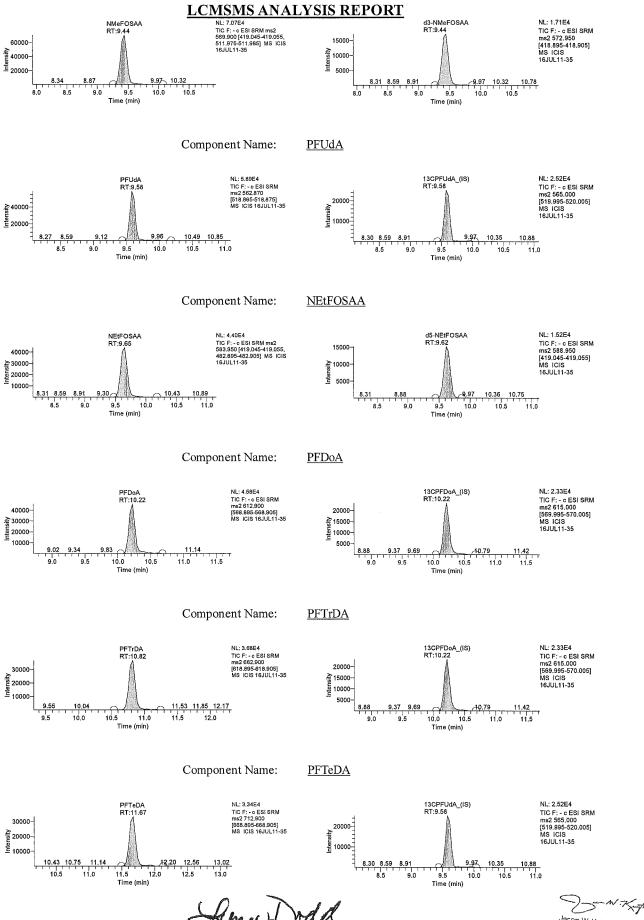


Component Name:

PFhpA

Jason W. Knight Senior Chemist





JUL 1 9 2016

Jason W. Knight Seniur Chemist

Sample Name: Sample ID:

CCV3 CCV3

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\16JUL12 C:\Xcalibur\PFC\Acquistion

Data File:

16JUL12-25

Dilution Factor:

M\HWell_16.5minutes 1.00

Acquisition Date: Sample Type:

QC

07/12/16 04:24:18 PM Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: Run Time(min): Injection Volume(µ1): c:7 16.51 10.00 Instrument Software Version: Instrument Serial Number:

TQU01408

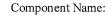
Operator:

US19_USR_INS00022

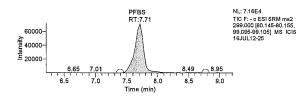
Extracted Ion Chromatogram

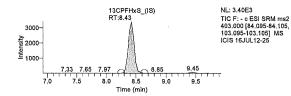
Quan Peak Table

Component Name	Calculated Amount	RT	Response	ISTD Response	Response Ratio	Units
 13C-PFNA (IS)		8.93	176740.06	N/A	N/A	N/A
13C-PFOA_(IS)	N/A	8.68	158048.11	N/A	N/A	N/A
13CPFDA (IS)	N/A	9.22	143500.33	N/A	N/A	N/A
13CPFDoA_(IS)	N/A	9.97	157730.77	N/A	N/A	N/A
13CPFHpA_(IS)	N/A	8.42	107524.09	N/A	N/A	N/A
13CPFHxA (IS)	N/A	8.10	85737.57	N/A	N/A	N/A
13CPFHxS (IS)	N/A	8.43	23177.27	N/A	N/A	N/A
13CPFOS (IS)	N/A	8.90	14871.22	N/A	N/A	N/A
13CPFUdA_(IS)	N/A	9.54	136100.45	N/A	N/A	N/A
NEtFOSAÁ	224.533	9.58	3129090.90	90823.06	34.453	ng/g
NMeFOSAA	228.833	9.40	3397227.70	113912.57	29.823	ng/g
PFBS	235.479	7.71	711777.15	23177.27	30.710	ng/g
PFDA	68.139	9.22	756565.96	143500.33	5.272	ng/g
PFDoA	112.937	9.97	1580373.22	157730.77	10.019	ng/g
PFHxA	60.808	8.10	509121.54	85737.57	5.938	ng/g
PFHxS	237.266	8.42	513793.84	23177.27	22.168	ng/g
PFNA	61.448	8.93	728726.53	176740.06	4.123	ng/g
PFOA	55.422	8.68	1026579.00	158048.11	6.495	ng/g
PFOS	196.700	8.90	342223.54	14871.22	23.012	ng/g
PFTeDA	134.494	11.46	1274103.38	136100.45	9.361	ng/g
PFTrDA	115.775	10.57	1568731.60	157730.77	9.946	ng/g
PFUdA	64.472	9.54	777354.85	136100.45	5.712	ng/g
PFhpA	58.495	8.42	559732.78	107524.09	5.206	ng/g
d3-NMeFOSAA	N/A	9.37	113912.57	N/A	N/A	N/A
d5-NEtFOSAA	N/A	9.58	90823.06	N/A	N/A	N/A



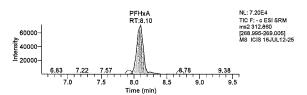
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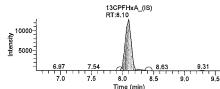




Component Name:

PFHxA



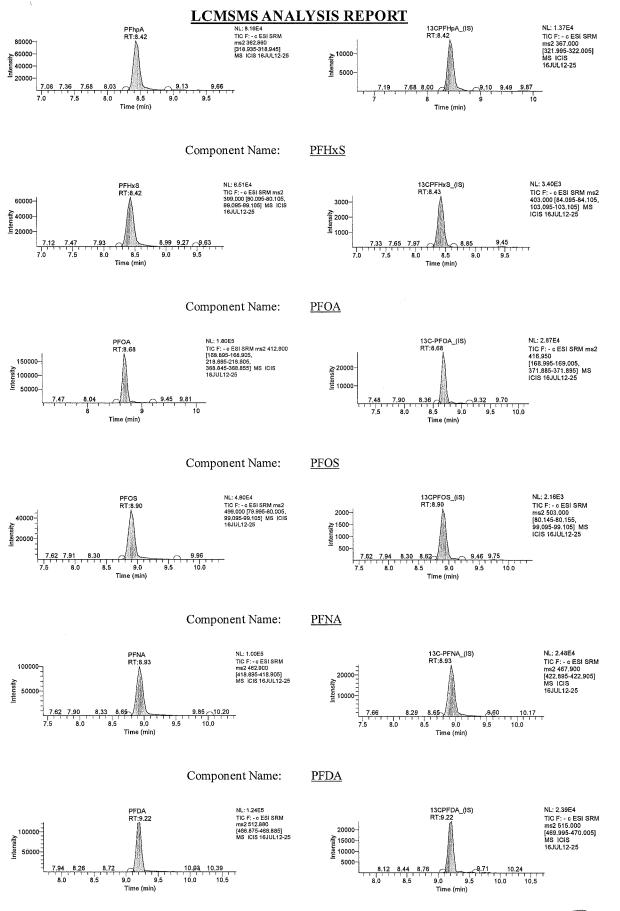


NL: 1.29E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL12-25

Component Name:

PFhpA

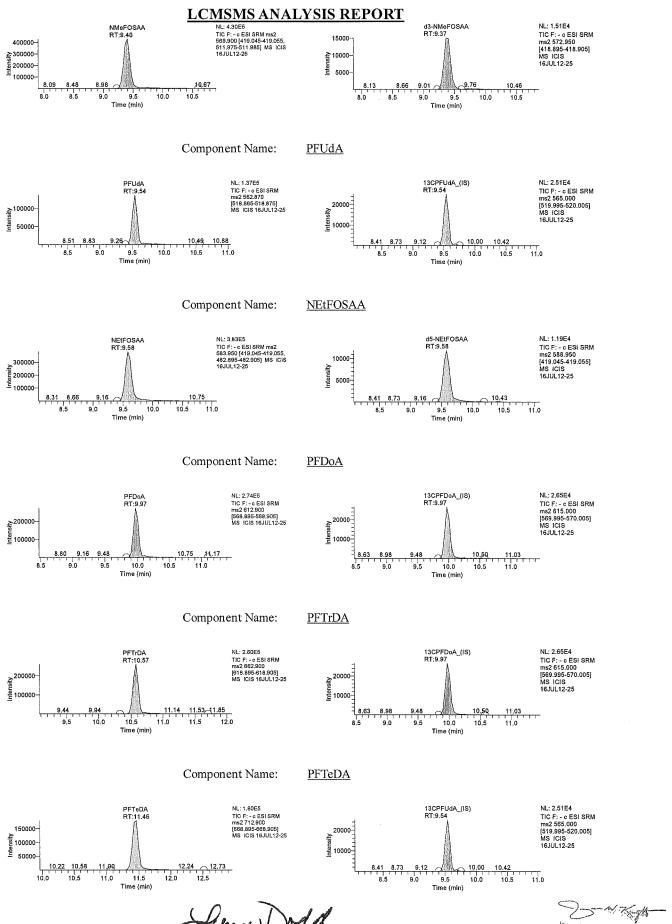
Jason W. Knight Seniur Chemist



Component Name:

NMeFOSAA

Jacon W Knight Seniur Ghemist



JUL 1 9 2018

Jason W. Knight Seniur Chemiet

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JUL 1 8 2016

Sample Name: Sample ID:

Sample Type:

CCV1 CCV1 Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\16JUL12

C:\Xcalibur\PFC\Acquistion M\HWell_16.5minutes

1.00

Data File: Acquisition Date:

16JUL12-34

07/12/16 06:59:27 PM QC

M Dilution Factor: Instrument Model:

TSQ Quantum Access

Vial: c:5 Run Time(min): 16.51

Instrument Model: Instrument Software Version:

2.5.0.1311 TQU01408

Injection Volume(µl): 10.00

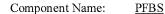
Instrument Serial Number:
Operator:

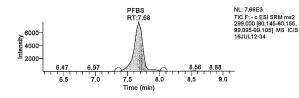
US19_USR_INS00022

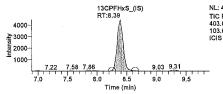
Extracted Ion Chromatogram

Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A	N/A	238760.18	8.89	N/A	13C-PFNA (IS)
N/A	N/A	N/A	165480.68	8.68	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	180510.88	9.11	N/A	13CPFDA (IS)
N/A	N/A	N/A	157615.57	9.76	N/A	13CPFDoA (IS)
N/A	N/A	N/A	152813.56	8.39	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	97819.69	8.07	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	31737.06	8.39	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	20258.13	8.86	N/A	13CPFOS (IS)
N/A	N/A	N/A	182457.23	9.40	N/A	13CPFUdA_(IS)
ng/g	2.542	132187.02	335965.72	9.44	16.618	NEtFOSAA
ng/g	2.261	167128.76	377944.98	9.29	17.910	NMeFOSAA
ng/g	2.238	31737.06	71015.77	7.68	17.813	PFBS
ng/g	0.337	180510.88	60865.14	9.11	4.336	PFDA
ng/g	0.822	157615.57	129485.96	9.76	9.543	PFDoA
ng/g	0.482	97819.69	47177.56	8.07	4.940	PFHxA
ng/g	1.371	31737.06	43516.83	8.39	15.630	PFHxS
ng/g	0.320	238760.18	76498.57	8.89	4.886	PFNA
ng/g	0.505	165480.68	83550.57	8.68	4.383	PFOA
ng/g	1.617	20258.13	32758.94	8.86	14.904	PFOS
ng/g	0.540	182457.23	98592.89	10.96	8.298	PFTeDA
ng/g	0.807	157615.57	127221.61	10.25	9.605	PFTrDA
ng/g	0.381	182457.23	69574.88	9.40	4.368	PFUdA
ng/g	0.404	152813.56	61672.85	8.39	4.550	PFhpA
N/A	N/A	N/A	167128.76	9.29	N/A	d3-NMeFOSAA
N/A	N/A	N/A	132187.02	9.44	N/A	d5-NEtFOSAA



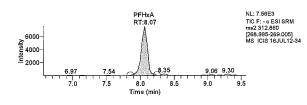


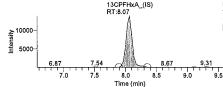


NL: 4.47E3 TIC F: - c ESI SRM ms2 403.000 [84.095-84.105, 103.095-103.105] MS ICIS 16JUL12-34

Component Name:

<u>PFHxA</u>



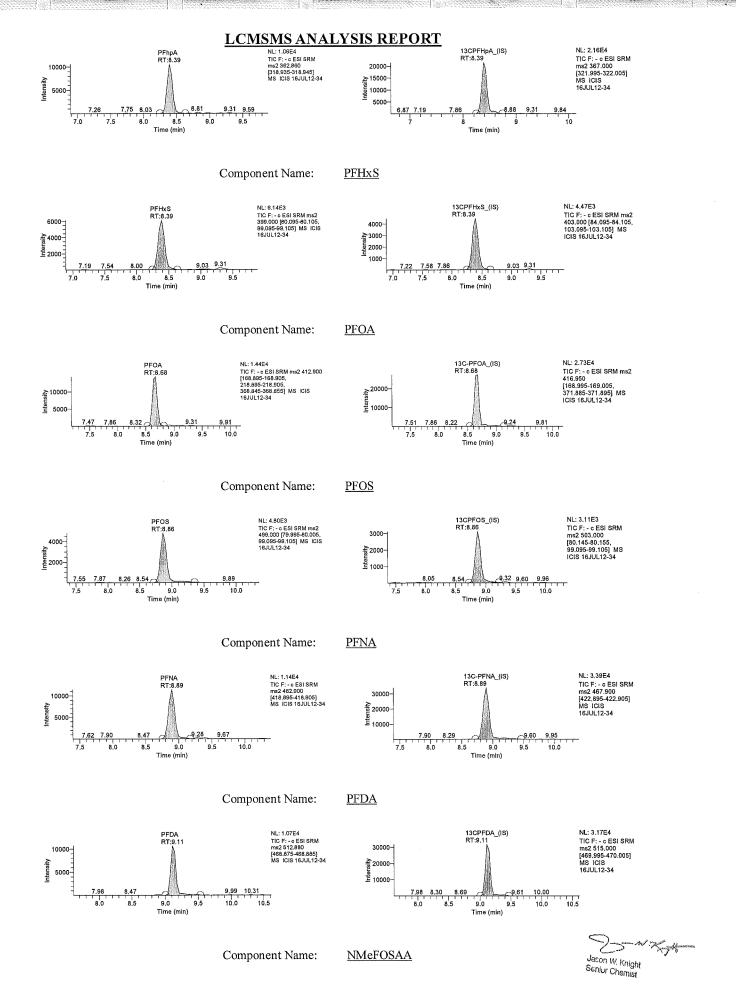


NL: 1.39E4 TIC F: - c ESI SRM ms2 314,900 [269.895-269,905] MS ICIS 16JUL12-34

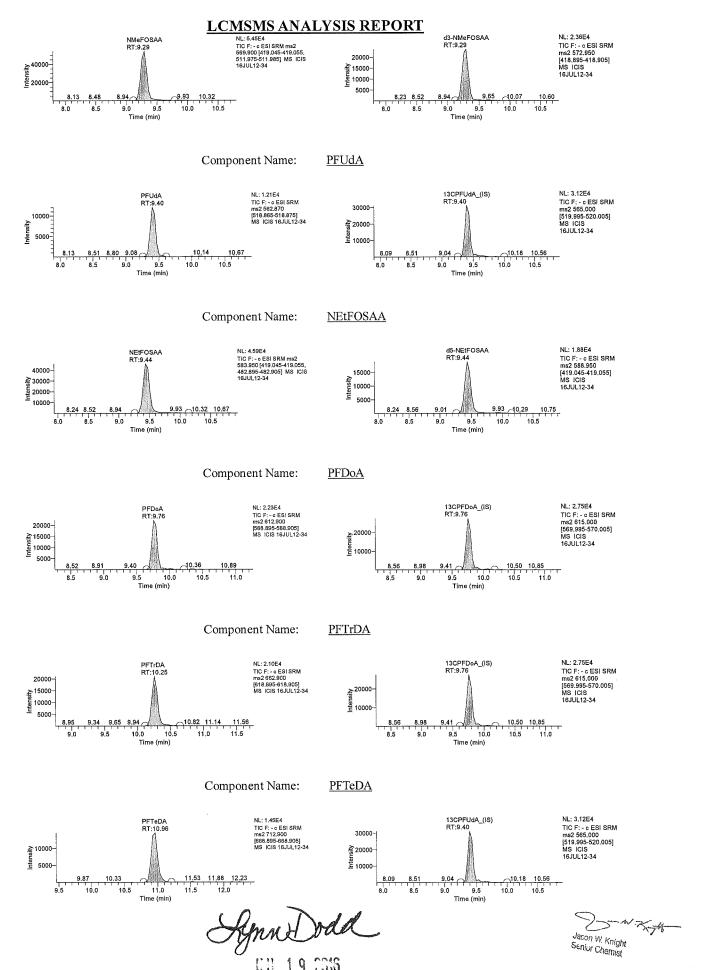
Component Name:

PFhpA

Jason W. Knight Seniur Chemist



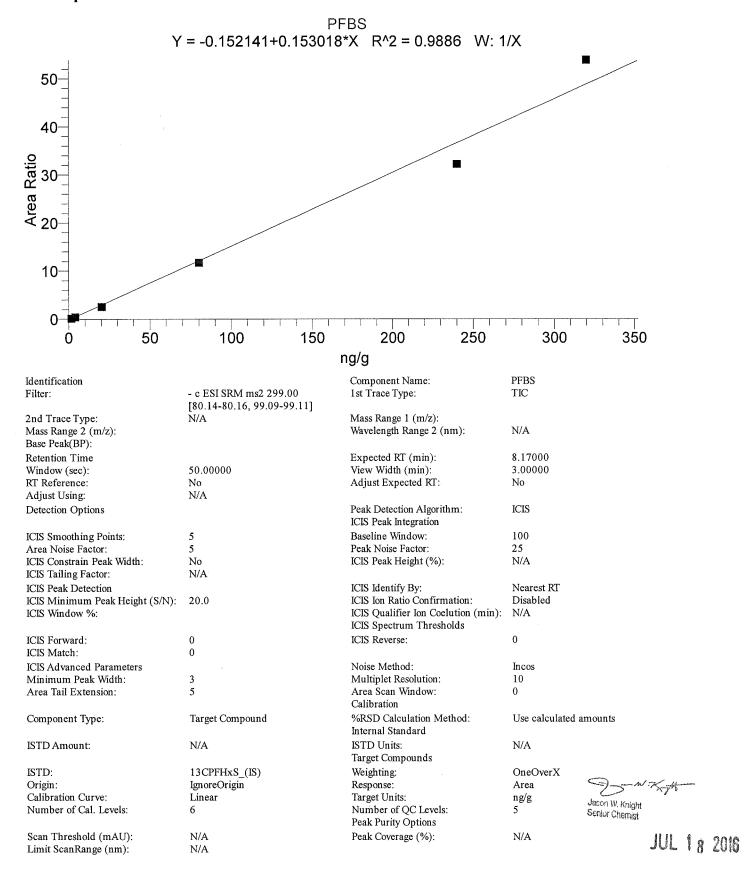
SSX50 Page 138 of 212 of 3 212 escap, July 13, 2016, 11:13:16



Lynn Dods X50 Page 139 of 2/12 Page 3 of 3 Principal Specialist Page 3 of 3

Component Name:

PFBS



Component Cal Level Table

Component Car Bever Table					
Cal Level	Amount				
1	1.600				
2	4.000				
3	20.000				
4	80.000				
5	240.000				
6	320.000				

Component QC Level Table

Component Q C Bever Rubie				
QC Level	Amount			
ICV1	20.000			
ICV2	40.000			
1	20.000			
2	80.000			
3	240.000			

ICV & CCV Result Table

10 / W CC / Result Lusio							
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff	
CAL1	16JUL14-04	1.888	4811.12	35181.64	0.137	18.00	
CAL2	16JUL14-05	3.894	13077.91	29478.97	0.444	-2.66	
CAL3	16JUL14-09	17.860	85851.64	33266.54	2.581	-10.70	
CAL6	16JUL14-11	353.084	993059.71	18432.30	53.876	10.34	
CAL5	16JUL14-12	211.279	842877.85	26194.70	32.177	-11.97	
CAL4	16JUL14-14	77.596	342502.32	29220.27	11.721	-3.01	
CCV1	16JUL14-17	18.403	88554.67	33243.42	2.664	-7.99	
ICV1	16JUL14-19	14.904	62137.85	29194.99	2.128	-25.48	
CCV3	16JUL14-38	190.823	752809.62	25916.79	29.047	-20.49	
CCV2	16JUL14-44	68.250	289300.24	28110.98	10.291	-14.69	

Jason W. Knight Senior Chemist

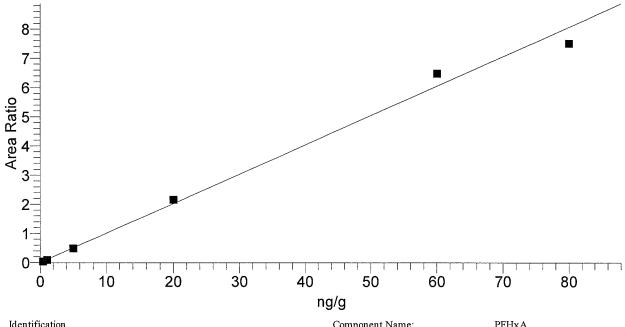
Component Name:

Limit ScanRange (nm):

N/A

PFHxA

PFHxA Y = 0.000663541+0.100733*X R^2 = 0.9949 W: 1/X



Identification		Component Name:	PFHxA	
Filter:	- c ESI SRM ms2 312.86	1st Trace Type:	TIC	
	[269.00-269.01]			
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A	
Base Peak(BP):				
Retention Time		Expected RT (min):	8.49000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm:	ICIS	
- K		ICIS Peak Integration		
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	1020 1 VIII 114 Igni (70)		
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:	50.0	ICIS Qualifier Ion Coelution (min):	N/A	
1010 11111011 701		ICIS Spectrum Thresholds	17/11	
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0	TOIS TOTOTOO.	O .	
ICIS Advanced Parameters	ů	Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
Tired Tail Extension.	3	Calibration	V	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated am	
Component Type.	rarget Compound	Internal Standard	Ose carculated am	ounts
ISTD Amount:	N/A		NT/A	
ISTD Amount:	N/A	ISTD Units:	N/A	
7000		Target Compounds		
ISTD:	13CPFHxA_(IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	75-W:
		Peak Purity Options		Jason W. Knight
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	Senior Chemist
Limit ScanRange (nm)	NI/A			

Component Cal Level Table

Component Car Level Table				
Cal Level	Amount			
1	0.400			
2	1.000			
3	5.000			
4	20.000			
5	60.000			
6	80.000			

Component QC Level Table

Component QC Ecter Table				
QC Level	Amount			
ICV2	40.000			
ICV1	20.000			
1	5.000			
2	20.000			
3	60.000			

ICV & CCV Result Table

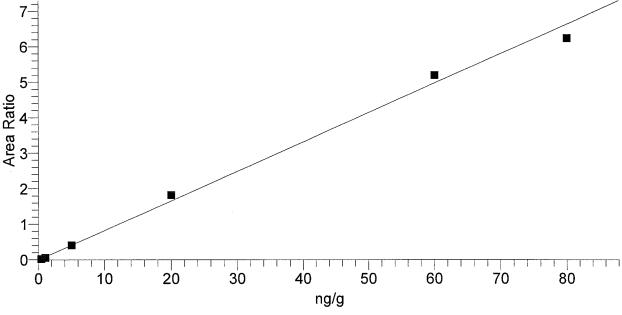
	10 / CC / Mesalt Tuble						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff	
CAL1	16JUL14-04	0.412	5395.91	128045.65	0.042	2.94	
CAL2	16JUL14-05	0.930	12246.97	129869.42	0.094	-7.04	
CAL3	16JUL14-09	4.836	62484.48	128080.33	0.488	-3.27	
CAL6	16JUL14-11	74.504	937317.86	124880.60	7.506	-6.87	
CAL5	16JUL14-12	64.303	778440.85	120164.14	6.478	7.17	
CAL4	16JUL14-14	21.415	250180.20	115938.91	2.158	7.07	
CCV1	16JUL14-17	5.227	62542.00	118636.57	0.527	4.54	
ICV1	16JUL14-19	15.851	220022.81	137739.29	1.597	-20.75	
CCV3	16JUL14-38	61.127	601441.87	97664.82	6.158	1.88	
CCV2	16JUL14-44	20.780	198473.48	94786.91	2.094	3.90	

Jason W. Knight Senior Chemist

Component Name:

PFhpA

PFhpA Y = -0.00987437 + 0.0829456*X R² = 0.9959 W: 1/X



		• •		
Identification		Component Name:	PFhpA	
Filter:	- c ESI SRM ms2 362.86 [318.94-318.94]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	8.50000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amour	nts
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFHpA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g)-5-W.
Number of Cal. Levels:	6	Number of QC Levels:	5	Jason W. Knight
		Peak Purity Options		Senior Chemist
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
x: '. a ' ' '	27/4	~ ` <i>,</i>		

N/A

Limit ScanRange (nm):

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Component Cal Level Table

Component Cai Level Table	
Cal Level	Amount
1	0.400
2	1.000
3	5.000
4	20.000
5	60.000
6	80.000

Component QC Level Table

Component QC Level 1a	.DIC
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	5.000
2	20.000
3	60,000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	0.434	5886.08	224985.66	0.026	8.61
CAL2	16JUL14-05	0.812	14035.60	244065.90	0.058	-18.76
CAL3	16JUL14-09	5.059	89271.98	217862.12	0.410	1.18
CAL6	16JUL14-11	75.320	909338.98	145784.54	6.238	-5.85
CAL5	16JUL14-12	62.717	848418.54	163402.26	5.192	4.53
CAL4	16JUL14-14	22.058	366994.77	201678.93	1.820	10.29
CCV1	16JUL14-17	5.430	89019.76	202060.69	0.441	8.61
ICV1	16JUL14-19	21.118	292126.93	167721.46	1.742	5.59
CCV3	16JUL14-38	59.153	690762.92	141068.72	4.897	-1.41
CCV2	16JUL14-44	19.058	264471.36	168360.10	1.571	-4.71

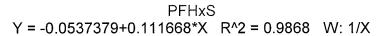
Jason W. Knight Senior Chemist

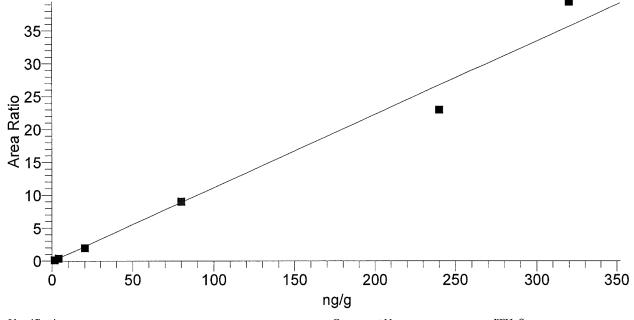
Component Name:

Limit ScanRange (nm):

N/A

PFHxS





Identification Filter:	- c ESI SRM ms2 399.00	Component Name: 1st Trace Type:	PFHxS TIC
2nd Trace Type: Mass Range 2 (m/z):	[80.09-80.11, 99.09-99.11] N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A
Base Peak(BP): Retention Time		Expected RT (min):	8.54000
Window (sec):	50.00000	View Width (min):	3.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS
ICIS Smoothing Points:	5	Baseline Window:	100
Area Noise Factor:	5	Peak Noise Factor:	25
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A	5 ()	
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	20.0	ICIS Ion Ratio Confirmation:	Disabled
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A
ICIS Forward:	0	ICIS Reverse:	0
ICIS Match:	0		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window: Calibration	0
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A
ISTD:	13CPFHxS (IS)	Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ng/g
Number of Cal. Levels:	6	Number of QC Levels:	5 Jason W. Knight
		Peak Purity Options	Senior Chemist
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A .
Limit Company (mm)	>Y/A	2017220+ (/0/1	

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	1.600				
2	4.000				
3	20.000				
4	80.000				
5	240.000				
6	320.000				

Component QC Level Table

DIO	Component Q C 224, 61 12	
Amount	QC Level	
40.000	ICV2	
20.000	ICV1	
20.000	1	
80.000	2	
240.000	3	

ICV & CCV Result Table

	10	1 44 0 0 1 11051	are repre			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	1.756	5008.18	35181.64	0.142	9.75
CAL2	16JUL14-05	4.029	11679.06	29478.97	0.396	0.73
CAL3	16JUL14-09	18.257	66033.88	33266.54	1.985	-8.71
CAL6	16JUL14-11	353.625	726872.68	18432.30	39.435	10.51
CAL5	16JUL14-12	206.626	602992.76	26194.70	23.020	-13.91
CAL4	16JUL14-14	81.307	263731.55	29220.27	9.026	1.63
CCV1	16JUL14-17	18.762	67861.99	33243.42	2.041	-6.19
ICV1	16JUL14-19	16.305	51588.70	29194.99	1.767	-18.47
CCV3	16JUL14-38	205.693	593895.88	25916.79	22.915	-14.29
CCV2	16JUL14-44	77.479	241701.81	28110.98	8.598	-3.15

Jason W. Knight Senior Chemist

Component Name:

Scan Threshold (mAU):

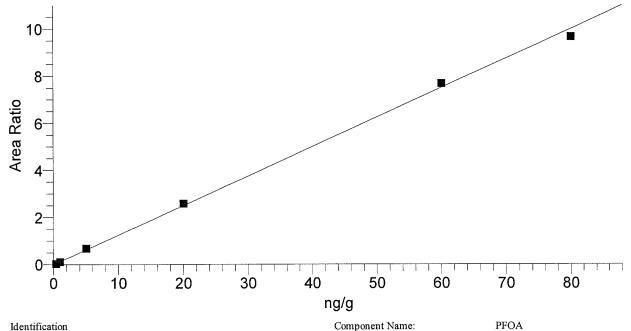
Limit ScanRange (nm):

N/A

N/A

PFOA





identification		Component Name:	rrua
Filter:	- c ESI SRM ms2 412.90 [168.90-168.91, 218.90-218.91, 368.85-368.86]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):			
Retention Time		Expected RT (min):	9.13000
Window (sec):	50.00000	View Width (min):	3.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	15
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A
ICIS Forward:	0	ICIS Reverse:	0
ICIS Match:	0		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A
ISTD:	13C-PFOA (IS)	Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ng/g Jason W. Kni
Number of Cal. Levels:	6	Number of QC Levels:	5 Senior Chemi
		Peak Purity Options	5/16/1/1

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N/A

Peak Coverage (%):

Component Cal Level Table

Component Car Level Tabl	ie
Cal Level	Amount
1	0.400
2	1.000
3	5.000
4	20.000
5	60.000
6	80.000

Component QC Level Table

Component QC Level Table	
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	5.000
2	20.000
3	60.000

ICV & CCV Result Table

	IC V & CC V Result Table					
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	0.344	7362.76	212107.95	0.035	-14.04
CAL2	16JUL14-05	1.003	25335.43	216400.46	0.117	0.25
CAL3	16JUL14-09	5.553	142098.19	207129.54	0.686	11.06
CAL6	16JUL14-11	77.315	1646342.31	170447.97	9.659	-3.36
CAL5	16JUL14-12	61.452	1406717.27	183273.16	7.676	2.42
CAL4	16JUL14-14	20.733	476231.27	184289.30	2.584	3.67
CCV1	16JUL14-17	4.768	112463.33	191315.95	0.588	-4.65
ICV1	16JUL14-19	16.286	372446.05	183650.31	2.028	-18.57
CCV3	16JUL14-38	61.580	1121017.61	145747.48	7.692	2.63
CCV2	16JUL14-44	21.010	382335.11	145998.42	2.619	5.05

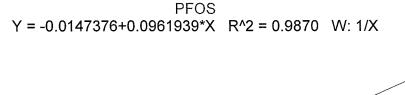
Jason W. Knight Seniur Chemist

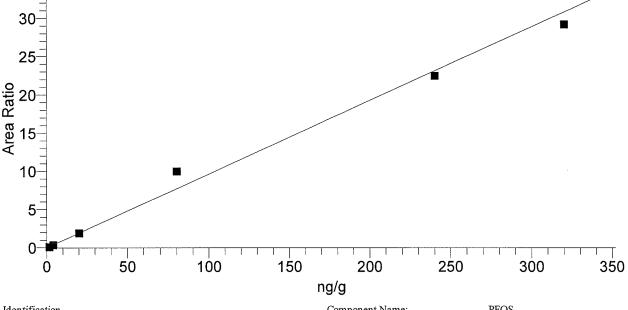
Component Name:

Limit ScanRange (nm):

N/A

PFOS





Identification	PGI GDM 2 400 00	Component Name:	PFOS	
Filter:	- c ESI SRM ms2 499.00 [80.00-80.00, 99.09-99.11]	1st Trace Type:	TIC	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	9.46000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS	
ICIS Smoothing Points:	5	Baseline Window:	100	
Area Noise Factor:	5	Peak Noise Factor:	25	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	(, .),		
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	20.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amoun	ts
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFOS_(IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	15 W.
Number of Cal. Levels:	6	Number of QC Levels:	5	Jason W. Knight
		Peak Purity Options		Senior Chemist
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	
T' '(C D ()	3.7/4			

JUL 18 2016

Component Cal Level Table

10	Component Car Level 1a	
Amount	Cal Level	
1.600	1	
4.000	2	
20.000	3	
80.000	4	
240.000	5	
320.000	6	

Component OC Level Table

Component QC Level lable				
QC	Level	Amount		
	ICV2	40.000		
	ICV1	20.000		
	1	20.000		
	2	80.000		
	3	240.000		

ICV & CCV Result Table

10 / CC / INDUIT TUBIC						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	1.375	1990.29	16931.36	0.118	-14.05
CAL2	16JUL14-05	3.703	6517.52	19088.34	0.341	-7.43
CAL3	16JUL14-09	19.914	35475.09	18662.80	1.901	-0.43
CAL6	16JUL14-11	303.267	466067.44	15984.37	29.158	-5.23
CAL5	16JUL14-12	233.443	405197.77	18056.10	22.441	-2.73
CAL4	16JUL14-14	103.899	153587.30	15390.01	9.980	29.87
CCV1	16JUL14-17	22.814	42292.50	19401.47	2.180	14.07
ICV1	16JUL14-19	15.982	26915.23	17676.24	1.523	-20.09
CCV3	16JUL14-38	297.065	381207.61	13347.10	28.561	23.78
CCV2	16JUL14-44	86.341	139169.81	16786.21	8.291	7.93

Jacon W. Knight Seniur Chemist

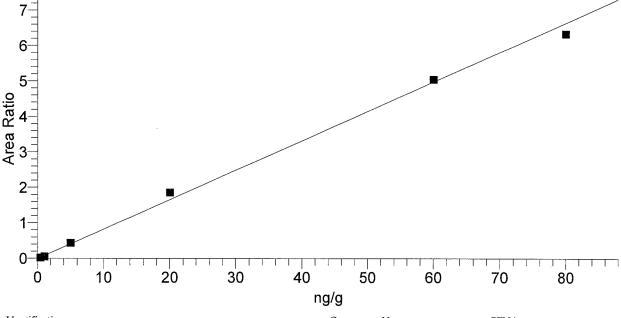
Component Name:

Limit ScanRange (nm):

N/A

PFNA

PFNA Y = -0.0102701 + 0.0830979*X R^2 = 0.9963 W: 1/X



		ng/g	
Identification	- ESI SDM2 462 00	Component Name:	PFNA
Filter:	- c ESI SRM ms2 462.90 [418.89-418.90]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A
Retention Time		Expected RT (min):	9.15000
Window (sec):	50.00000	View Width (min):	3.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS
ICIS Smoothing Points:	5	Baseline Window:	100
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A	• , ,	
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A
ICIS Forward:	0	ICIS Reverse:	0
ICIS Match:	0		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:	13C-PFNA_(IS)	Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ng/g
Number of Cal. Levels:	6	Number of QC Levels:	5
	•	Peak Purity Options	Jason W. Knight Seniur Chemist
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Time is Come Dance (come).	NT/A		

JUL 18 2016

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	0.400				
2	1.000				
3	5.000				
4	20.000				
5	60.000				
6	80.000				

Component QC Level Table

<u> </u>	
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	5.000
2	20.000
3	60.000

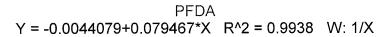
ICV & CCV Result Table

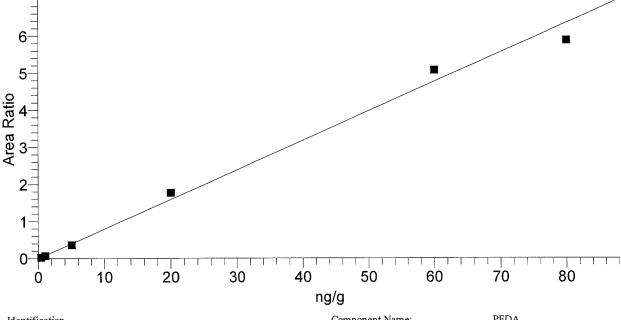
	<u> </u>					
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	0.418	7378.66	301477.26	0.024	4.53
CAL2	16JUL14-05	0.778	14811.13	272353.68	0.054	-22.20
CAL3	16JUL14-09	5.398	98398.97	224484.36	0.438	7.97
CAL6	16JUL14-11	76.389	1047617.14	165305.61	6.337	-4.51
CAL5	16JUL14-12	60.862	923857.07	183043.00	5.047	1.44
CAL4	16JUL14-14	22.555	371926.95	199529.94	1.864	12.78
CCV1	16JUL14-17	4.730	89845.28	234740.48	0.383	-5.41
ICV1	16JUL14-19	14.038	278471.93	240846.38	1.156	-29.81
CCV3	16JUL14-38	53.474	812873.01	183356.14	4.433	-10.88
CCV2	16JUL14-44	19.813	282334.71	172557.51	1.636	-0.93

Jason W. Knight Senior Chemist

Component Name:

PFDA





		119/9		
Identification Filter:	- c ESI SRM ms2 512.88	Component Name: 1st Trace Type:	PFDA TIC	·
2nd Trace Type: Mass Range 2 (m/z): Base Peak(BP):	N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A	
Retention Time Window (sec): RT Reference: Adjust Using:	50.00000 No N/A	Expected RT (min): View Width (min): Adjust Expected RT:	9.41000 3.00000 No	
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points: Area Noise Factor: ICIS Constrain Peak Width: ICIS Tailing Factor:	3 5 No N/A	Baseline Window: Peak Noise Factor: ICIS Peak Height (%):	75 10 N/A	
ICIS Peak Detection ICIS Minimum Peak Height (S/N): ICIS Window %:	50.0	ICIS Identify By: ICIS Ion Ratio Confirmation: ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	Nearest RT Disabled N/A	
ICIS Forward: ICIS Match:	0	ICIS Reverse:	0	
ICIS Advanced Parameters Minimum Peak Width: Area Tail Extension:	3 5	Noise Method: Multiplet Resolution: Area Scan Window: Calibration	Incos 10 0	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amo	ounts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD: Origin: Calibration Curve: Number of Cal. Levels:	13CPFDA_(IS) IgnoreOrigin Linear 6	Weighting: Response: Target Units: Number of QC Levels: Peak Purity Options	OneOverX Area ng/g 5	Jason W. Knight Seniur Chemist
Coon Throshold (mAII)	NT/A	Pank Coverage (%).	NI/A	

N/A

N/A

Scan Threshold (mAU):

Limit ScanRange (nm):

JUL 1 8 2016

N/A

Peak Coverage (%):

Component Cal Level Table

Component Car Level Tal	Jie -
Cal Level	Amount
1	0.400
2	1.000
3	5.000
4	20.000
5	60.000
6	80.000

Component QC Level Table

Component QC Level 12	IDIC
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	5.000
2	20.000
3	60.000

ICV & CCV Result Table

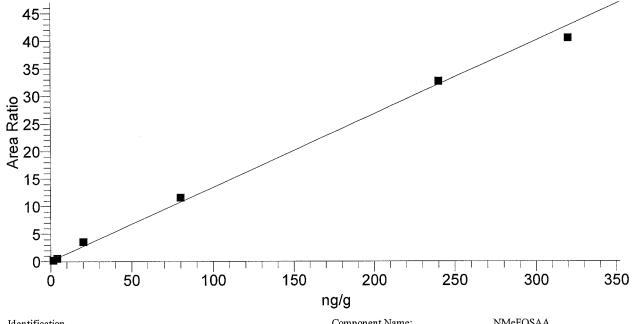
	ic v & cc v result lable						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff	
CAL1	16JUL14-04	0.389	5294.71	199769.15	0.027	-2.75	
CAL2	16JUL14-05	0.985	12796.59	173265.95	0.074	-1.52	
CAL3	16JUL14-09	4.670	72159.56	196784.77	0.367	-6.60	
CAL6	16JUL14-11	74.108	1093889.96	185886.07	5.885	-7.37	
CAL5	16JUL14-12	63.902	810987.67	159841.42	5.074	6.50	
CAL4	16JUL14-14	22.346	307618.00	173660.00	1.771	11.73	
CCV1	16JUL14-17	5.533	74646.93	171483.72	0.435	10.66	
ICV1	16JUL14-19	21.030	275605.63	165351.18	1.667	5.15	
CCV3	16JUL14-38	56.767	754487.79	167414.00	4.507	-5.39	
CCV2	16JUL14-44	21.195	269296.06	160307.61	1.680	5.97	

Jason W. Knight Seniur Chemist

Component Name:

NMeFOSAA

NMeFOSAA Y = 0.067754+0.133291*X R^2 = 0.9943 W: 1/X



		.9.9		
Identification		Component Name:	NMeFOSAA	
Filter:	- c ESI SRM ms2 569.90	1st Trace Type:	TIC	
2 1 T T	[419.05-419.06, 511.98-511.99]	Mass Range 1 (m/z):		
2nd Trace Type: Mass Range 2 (m/z):	N/A	Wavelength Range 2 (nm):	N/A	
Base Peak(BP):		wavelength range 2 (mm).	11/11	
Retention Time		Expected RT (min):	9.37000	
Window (sec):	60.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm:	ICIS	
		ICIS Peak Integration		
ICIS Smoothing Points:	5	Baseline Window:	100	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Highest Peak	
ICIS Minimum Peak Height (S/N):	100.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A	
		ICIS Spectrum Thresholds		
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amour	ıts
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	d3-NMeFOSAA	Weighting:	OneOverX	
Origin;	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	S) 4/-
Number of Cal. Levels:	6	Number of QC Levels:	5	25
		Peak Purity Options		Jason W. Knight
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	Senior Chemist
Limit ScanRange (nm):	N/A			

Component Cal Level Table

Component Car Level Table					
Amount					
1.600					
4.000					
20.000					
80.000					
240.000					
320.000					

Component OC Level Table

Component QC Level Table				
QC Level	Amount			
ICV1	20.000			
ICV2	40.000			
1	20.000			
2	80.000			
3	240.000			

ICV & CCV Result Table

	10	V CC V ICES	uit iabic			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	1.226	16956.74	73350.36	0.231	-23.37
CAL2	16JUL14-05	3.474	37362.33	70387.08	0.531	-13.15
CAL3	16JUL14-09	26.310	172322.54	48206.52	3.575	31.55
CAL6	16JUL14-11	303.504	2321257.18	57283.57	40.522	-5.15
CAL5	16JUL14-12	244.478	1785516.75	54679.03	32.655	1.87
CAL4	16JUL14-14	86.608	633286.78	54537.96	11.612	8.26
CCV1	16JUL14-17	21.289	173375.28	59673.55	2.905	6.45
ICV1	16JUL14-19	15.580	131626.30	61381.75	2.144	-22.10
CCV3	16JUL14-38	223.829	1803368.08	60308.85	29.902	-6.74
CCV2	16ЛЛ 14-44	98.942	672162.55	50706.60	13.256	23.68

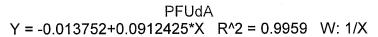
Jacon W. Knight Seniur Chemist

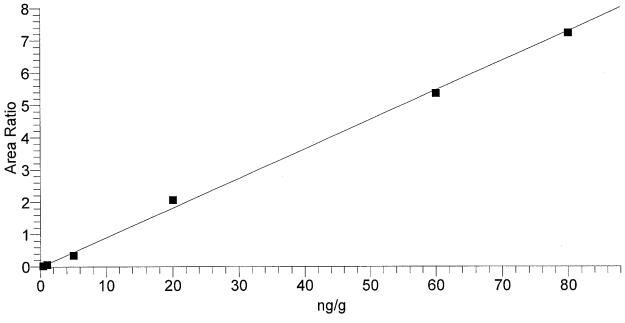
Component Name:

Limit ScanRange (nm):

N/A

PFUdA





		rig/g		
Identification Filter:	- c ESI SRM ms2 562.87 [518.87-518.88]	Component Name: 1st Trace Type:	PFUdA TIC	
2nd Trace Type: Mass Range 2 (m/z): Base Peak(BP):	N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A	
Retention Time Window (sec): RT Reference: Adjust Using:	50.00000 No N/A	Expected RT (min): View Width (min): Adjust Expected RT:	9.95000 3.00000 No	
Detection Options	IVA	Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points: Area Noise Factor: ICIS Constrain Peak Width: ICIS Tailing Factor:	3 5 No N/A	Baseline Window: Peak Noise Factor: ICIS Peak Height (%):	75 10 N/A	
ICIS Peak Detection ICIS Minimum Peak Height (S/N): ICIS Window %:	50.0	ICIS Identify By: ICIS Ion Ratio Confirmation: ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	Nearest RT Disabled N/A	
ICIS Forward: ICIS Match:	0	ICIS Reverse:	0	
ICIS Advanced Parameters Minimum Peak Width: Area Tail Extension:	3 5	Noise Method: Multiplet Resolution: Area Scan Window: Calibration	Incos 10 0	
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts	
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A	
ISTD: Origin: Calibration Curve: Number of Cal. Levels:	13CPFUdA_(IS) IgnoreOrigin Linear 6	Weighting: Response: Target Units: Number of QC Levels: Peak Purity Options	OneOverX Area ng/g Jacon Seniur	W. Knigi
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	

Component Cal Level Table

Component Car Level Table					
Cal Level	Amount				
1	0.400				
2	1.000				
3	5.000				
4	20.000				
5	60.000				
6	80.000				

Component OC Level Table

Component QC Bever lan	<u>/10</u>
QC Level	Amount
ICV2	40.000
ICV1	20.000
1	5.000
2	20.000
3	60.000

ICV & CCV Result Table

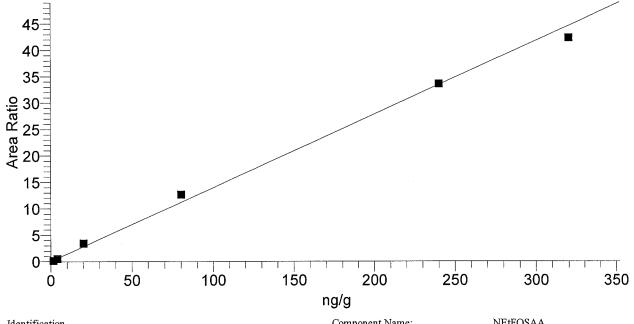
IC V & CC V RESult Table								
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff		
CAL1	16JUL14-04	0.469	5633.99	193956.02	0.029	17.27		
CAL2	16JUL14-05	0.919	13433.33	191684.67	0.070	-8.12		
CAL3	16JUL14-09	3.976	56961.38	163204.64	0.349	-20.48		
CAL6	16JUL14-11	79.369	1170914.82	161994.79	7.228	-0.79		
CAL5	16JUL14-12	58.864	901719.17	168321.86	5.357	-1.89		
CAL4	16JUL14-14	22.803	329955.16	159639.75	2.067	14.02		
CCV1	16JUL14-17	5.927	88145.30	167243.01	0.527	18.54		
ICV1	16JUL14-19	18.245	318172.34	192714.36	1.651	-8.77		
CCV3	16JUL14-38	65.416	861320.99	144638.61	5.955	9.03		
CCV2	16JUL14-44	23.101	347065.79	165741.93	2.094	15.50		

Jason W. Knight Senior Chemist

Component Name:

NEtFOSAA

NEtFOSAA Y = 0.0198294+0.139197*X R^2 = 0.9945 W: 1/X



	•	' ' '' '' '' '	
Identification		Component Name:	NEtFOSAA
Filter:	- c ESI SRM ms2 583.95 [419.00-5419.06, 482.89-482.90]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z): Base Peak(BP):		Wavelength Range 2 (nm):	N/A
Retention Time		Expected RT (min):	9.58000
Window (sec):	60.00000	View Width (min):	3.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	ICIS
ICIS Smoothing Points:	5	Baseline Window:	100
Area Noise Factor:	5	Peak Noise Factor:	25
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Highest Peak
ICIS Minimum Peak Height (S/N):	100.0	ICIS Ion Ratio Confirmation:	Disabled
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A
ICIS Forward:	0	ICIS Reverse:	0
ICIS Match:	0		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window: Calibration	0
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated amounts
ISTD Amount:	N/A	ISTD Units: Target Compounds	N/A
ISTD:	d5-NEtFOSAA	Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ng/g
Number of Cal. Levels:	6	Number of QC Levels: Peak Purity Options	5 Jason W. Knight
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A Senior Chemist
Limit ScanRange (nm):	N/A	<i>U</i> ()	····

Component Cal Level Table

Component Cai Level Table				
Amount	Cal Level			
1.600	1			
4.000	2			
20.000	3			
80.000	4			
240.000	5			
320.000	6			

Component OC Level Table

Component QC Level Table				
 QC Level	Amount			
 ICV1	20.000			
ICV2	40.000			
1	20.000			
2	80.000			
3	240.000			

ICV & CCV Result Table

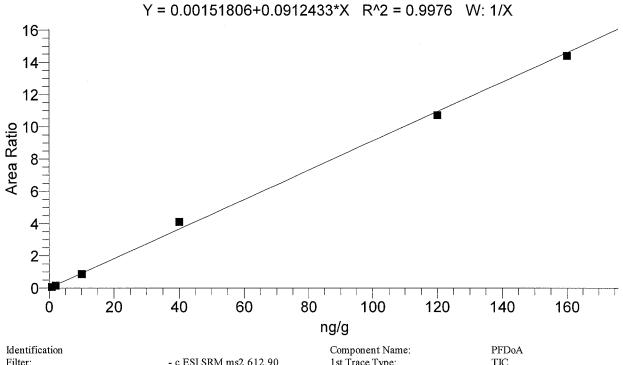
IC V & CC V Result Table						
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	1.225	13465.80	70767.63	0.190	-23.47
CAL2	16ЈUL14-05	3.654	36203.50	68499.78	0.529	-8.64
CAL3	16ЛUL14-09	24.583	138555.76	40257.41	3.442	22.92
CAL6	16ЈUL14-11	303.950	2151526.34	50828.90	42.329	-5.02
CAL5	16JUL14-12	241.237	1686227.60	50186.50	33.599	0.52
CAL4	16JUL14-14	90.951	610090.72	48114.77	12.680	13.69
CCV1	16JUL14-17	22.181	172184.71	55411.76	3.107	10.91
ICV1	16JUL14-19	25.012	154020.46	43988.58	3.501	25.06
CCV3	16JUL14-38	236.133	1684413.38	51215.32	32.889	-1.61
CCV2	16JUL14-44	99.249	711789.08	51448.25	13.835	24.06

Jason W. Knight Senior Chemist

PFDoA

Component Name:

PFDoA



Identification		Component Name:	PFD ₀ A	
Filter:	- c ESI SRM ms2 612.90	1st Trace Type:	TIC	
Titter.	[568.89-568.90]	ist frace Type.	110	
2nd Trace Type:	N/A	Mass Range 1 (m/z):		
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A	
Base Peak(BP):				
Retention Time		Expected RT (min):	10.60000	
Window (sec):	60.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm:	Unknown	
•		ICIS Peak Integration		
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A	
	/	ICIS Spectrum Thresholds		
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated an	nounts
		Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFDoA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g	
Number of Cal. Levels:	6	Number of QC Levels:	5	N
		Peak Purity Options		loca- III.
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	Seniur Chemist
Limit ScanRange (nm):	N/A			- wor originist

Component Cal Level Table

Component Car Level Table	
Cal Level	Amount
1	0.800
2	2.000
3	10.000
4	40.000
5	120.000
6	160.000

Component QC Level Table

	Component QC Level Lable				
	QC Level	Amount			
***************************************	ICV2	40.000			
	ICV1	20.000			
	1	10.000			
	2	40.000			
	3	120.000			

ICV & CCV Result Table

ICV & CCV Result Table							
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff	
CAL1	16JUL14-04	0.861	14212.75	177574.49	0.080	7.57	
CAL2	16JUL14-05	1.757	29410.24	181760.51	0.162	-12.16	
CAL3	16JUL14-09	9.533	163446.59	187579.05	0.871	-4.67	
CAL6	16JUL14-11	158.151	2166583.63	150125.98	14.432	-1.16	
CAL5	16JUL14-12	117.496	1707046.04	159205.64	10.722	-2.09	
CAL4	16JUL14-14	45.002	676828.02	164773.06	4.108	12.50	
CCV1	16JUL14-17	10.210	168691.46	180776.14	0.933	2.10	
ICV1	16JUL14-19	17.208	271017.08	172447.88	1.572	-13.96	
CCV3	16JUL14-38	119.826	1641537.03	150119.49	10.935	-0.14	
CCV2	16JUL14-44	49.078	695373.30	155233.28	4.480	22.69	

Jason W. Knight Senior Chemist

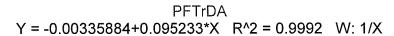
Component Name:

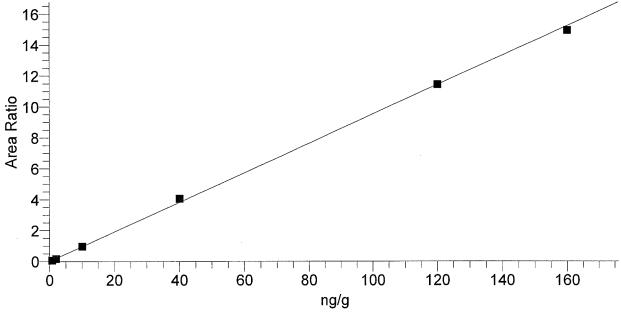
Scan Threshold (mAU):

Limit ScanRange (nm):

N/A

PFTrDA





Identification		Component Name:	PFTrDA	
Filter:	- c ESI SRM ms2 662.90 [618.89-618.90]	1st Trace Type:	TIC	
2nd Trace Type: Mass Range 2 (m/z): Base Peak(BP):	N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	11.46000	
Window (sec):	60.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A			
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A			
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min):	N/A	
		ICIS Spectrum Thresholds		
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
Tired Tall Enterior		Calibration		
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts	
F		Internal Standard		
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds		
ISTD:	13CPFDoA (IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area	
Calibration Curve:	Linear	Target Units:	ng/g)-5-W:
Number of Cal. Levels:	6	Number of QC Levels:	5	Jason W. Knight
		Peak Purity Options		Seniur Chemist
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A	-uettilät

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Component Cal Level Table

Component Car Level Table	<u> </u>
Cal Level	Amount
1	0.800
2	2.000
3	10.000
4	40.000
5	120.000
6	160.000

Component QC Level Table

DIU	Component Q C LLC CL 1	
Amount	QC Level	
40.000	ICV2	
20.000	ICV1	
10.000	1	
40.000	2	
120.000	3	

ICV & CCV Result Table

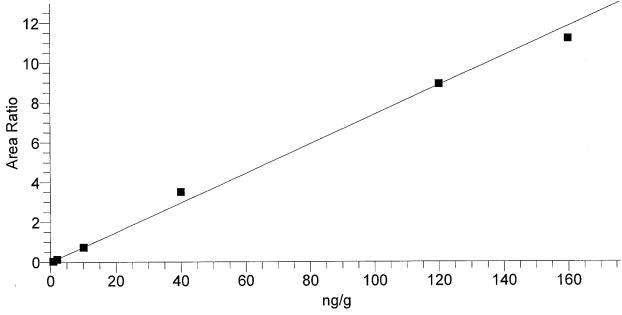
	<u>_1</u>	CV & CCV Res	ult Table				
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff	
CAL1	16JUL14-04	0.807	13042.65	177574.49	0.073	0.82	
CAL2	16JUL14-05	1.842	31265.50	181760.51	0.172	-7.92	
CAL3	16JUL14-09	10.206	181692.65	187579.05	0.969	2.06	
CAL6	16JUL14-11	157.090	2245401.34	150125.98	14.957	-1.82	
CAL5	16JUL14-12	120.165	1821366.99	159205.64	11.440	0.14	*
CAL4	16JUL14-14	9.74 42.691 9.74 -N/A	669340.58	164773.06	3 4.062	6.73	③
CCV1	16JUL14-17	9.79 -N/A	Ø ₩A¸	180776.14	AW DP. 6		-2.60
ICV1	16JUL14-19	12.985	212668.63	172447.88	1.233	-35.08	•
CCV3	16JUL14-38	121.007	1729458.84	150119.49	11.521	0.84	
CCV2	16JUL14-44	42.503	627811.01	155233.28	4.044	6.26	
		3) w=2) +1/2 8/10/16	160985	5,75		

Jason W. Knight Senior Chemist

Component Name:

PFTeDA





Identification	TGT GD1 (A #10 00	Component Name:	PFTeDA	
Filter:	- c ESI SRM ms2 712.90 [668.89-668.90]	1st Trace Type:	TIC	
2nd Trace Type: Mass Range 2 (m/z): Base Peak(BP):	N/A	Mass Range 1 (m/z): Wavelength Range 2 (nm):	N/A	
Retention Time		Expected RT (min):	12.63000	
Window (sec):	50.00000	View Width (min):	3.00000	
RT Reference:	No	Adjust Expected RT:	No	
Adjust Using:	N/A	, .		
Detection Options		Peak Detection Algorithm: ICIS Peak Integration	Unknown	
ICIS Smoothing Points:	3	Baseline Window:	75	
Area Noise Factor:	5	Peak Noise Factor:	10	
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A	
ICIS Tailing Factor:	N/A	5 , ,		
ICIS Peak Detection		ICIS Identify By:	Nearest RT	
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	Disabled	
ICIS Window %:		ICIS Qualifier Ion Coelution (min): ICIS Spectrum Thresholds	N/A	
ICIS Forward:	0	ICIS Reverse:	0	
ICIS Match:	0			
ICIS Advanced Parameters		Noise Method:	Incos	
Minimum Peak Width:	3	Multiplet Resolution:	10	
Area Tail Extension:	5	Area Scan Window:	0	
	-	Calibration		
Component Type:	Target Compound	%RSD Calculation Method: Internal Standard	Use calculated an	nounts
ISTD Amount:	N/A	ISTD Units:	N/A	
		Target Compounds	0 0 7	
ISTD:	13CPFUdA_(IS)	Weighting:	OneOverX	
Origin:	IgnoreOrigin	Response:	Area)-5-N
Calibration Curve:	Linear	Target Units:	ng/g	Jason W. Knight
Number of Cal. Levels:	6	Number of QC Levels: Peak Purity Options	5	Senior Chemist
		- 4 - 40.0	2711	

N/A

N/A

Scan Threshold (mAU):

Limit ScanRange (nm):

JUL 18 2016

N/A

Peak Coverage (%):

Component Cal Level Table

Component Cai Level Table	
Cal Level	Amount
1	0.800
2	2.000
3	10.000
4	40.000
5	120.000
6	160.000

Component QC Level Table

COMPONENT Q 220, 01 20020					
QC Level	Amount				
ICV2	40.000				
ICV1	20.000				
1	10.000				
2	40.000				
3	120.000				

ICV & CCV Result Table

		ic, ccc, itcs	MIC ICOLO			
Sample ID	Data File Name	Calculated Amount	Area	ISTD Area	Area Ratio	% Diff
CAL1	16JUL14-04	0.715	8801.85	193956.02	0.045	-10.67
CAL2	16JUL14-05	1.910	25629.65	191684.67	0.134	-4.50
CAL3	16JUL14-09	10.048	119963.28	163204.64	0.735	0.48
CAL6	16JUL14-11	151.612	1813529.58	161994.79	11.195	-5.24
CAL5	16JUL14-12	120.815	1501337.03	168321.86	8.919	0.68
CAL4	16JUL14-14	47.700	561470.75	159639.75	3.517	19.25
CCV1	16JUL14-17	11.072	135573.96	167243.01	0.811	10.72
ICV1	16JUL14-19	15.500	219277.84	192714.36	1.138	-22.50
CCV3	16JUL14-38	122.608	1309259.85	144638.61	9.052	2.17
CCV2	16JUL14-44	42.322	517070.09	165741.93	3.120	5.81

JUL 1 9 2016

Lynn Dodd Principal Specialist Jacon W. Knight Senior Chemist

Sample Name: Sample ID:

Acquisition Date:

Data File:

MDL MDL

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

Dilution Factor: 07/14/16 09:06:39 AM

1.00

Instrument Model: Unknown

TSQ Quantum Access 2.5.0.1311

Sample Type: Vial: c:2 Run Time(min): 16.51

Instrument Software Version: Instrument Serial Number:

TQU01408

10.00 Injection Volume(µ1): Operator:

16JUL14-03

US19_USR_INS00022

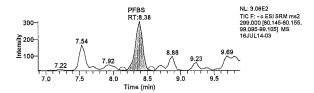
Extracted Ion Chromatogram

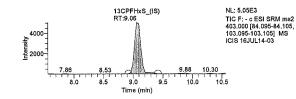
Ouan Peak Table

Component Name	Calculated Amount	RT	Response	ISTD Response	Response Ratio	Units
13C-PFNA (IS)	N/A	9.71	270826.13	N/A		N/A
13C-PFOA (IS)	N/A	9.35	226101.69	N/A	N/A	N/A
13CPFDA (IS)	N/A	10.17	211895.24	N/A	N/A	N/A
13CPFDoA_(IS)	N/A	11.63	193240.88	N/A	N/A	N/A
13CPFHpA_(IS)	N/A	9.10	229709.18	N/A	N/A	N/A
13CPFHxA_(IS)	N/A	8.78	122333.50	N/A	N/A	N/A
13CPFHxS_(IS)	N/A	9.06	38029.96	N/A	N/A	N/A
13CPFOS (IS)	N/A	9.68	16763.22	N/A	N/A	N/A
13CPFUdA (IS)	N/A	10.96	188369.48	N/A	N/A	N/A
NEtFOSAA	0.448	11.03	6561.63	79872.17	0.082	ng/g
NMeFOSAA	0.687	10.50	10784.51	67660.76	0.159	ng/g
PFBS	1.379	8.38	2241.10	38029.96	0.059	ng/g
PFDA	0.322	10.21	4483.71	211895.24	0.021	ng/g
PFDoA	0.386	11.63	7100.83	193240.88	0.037	ng/g
PFHxA	0.208	8.77	2641.02	122333.50	0.022	ng/g
PFHxS	1.091	9.10	2589.83	38029.96	0.068	ng/g
PFNA	0.281	9.71	3545.20	270826.13	0.013	ng/g
PFOA	0.251	9.35	5232.81	226101.69	0.023	ng/g
PFOS	1.138	9.71	1588.41	16763.22	0.095	ng/g
PFTeDA	0.444	13.65	4777.37	188369.48	0.025	ng/g
PFTrDA	0.370	12.52	6166.64	193240.88	0.032	ng/g
PFUdA	0.252	10.95	1738.74	188369.48	0.009	ng/g
PFhpA	0.294	9.09	3324.23	229709.18	0.014	ng/g
d3-NMeFOSAA	N/A	10.50	67660.76	N/A	N/A	N/A
d5-NEtFOSAA	N/A	11.00	79872.17	N/A	N/A	N/A

Component Name:

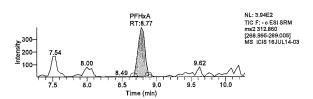
PFBS

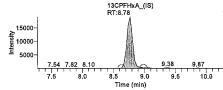




Component Name:

PFHxA





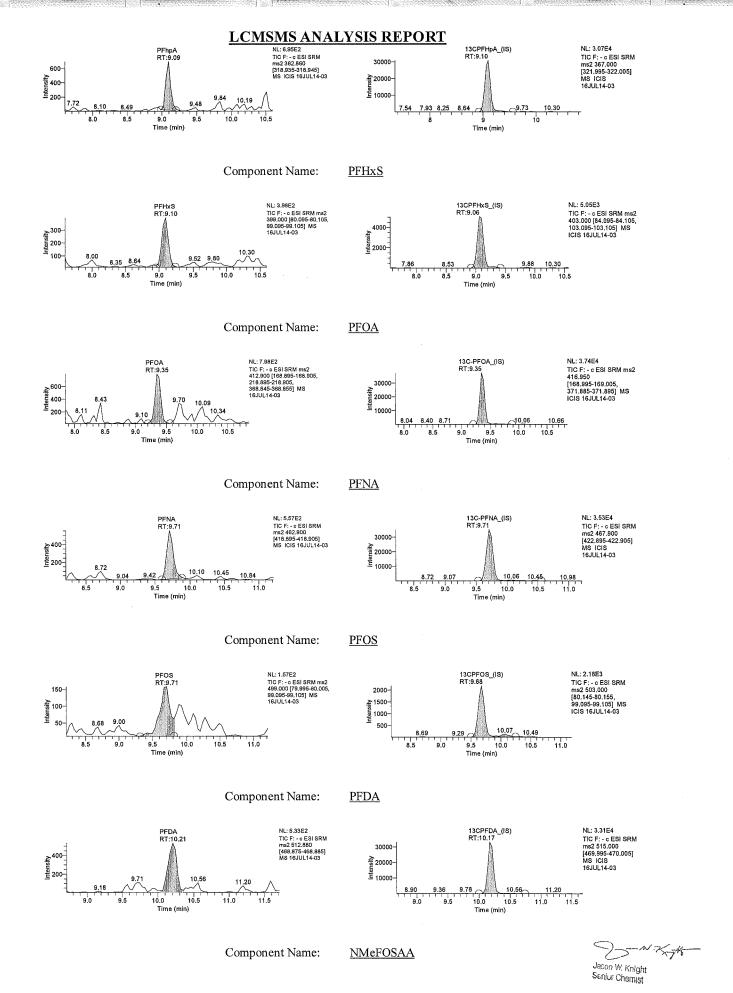
NL: 1.90E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-03

Component Name:

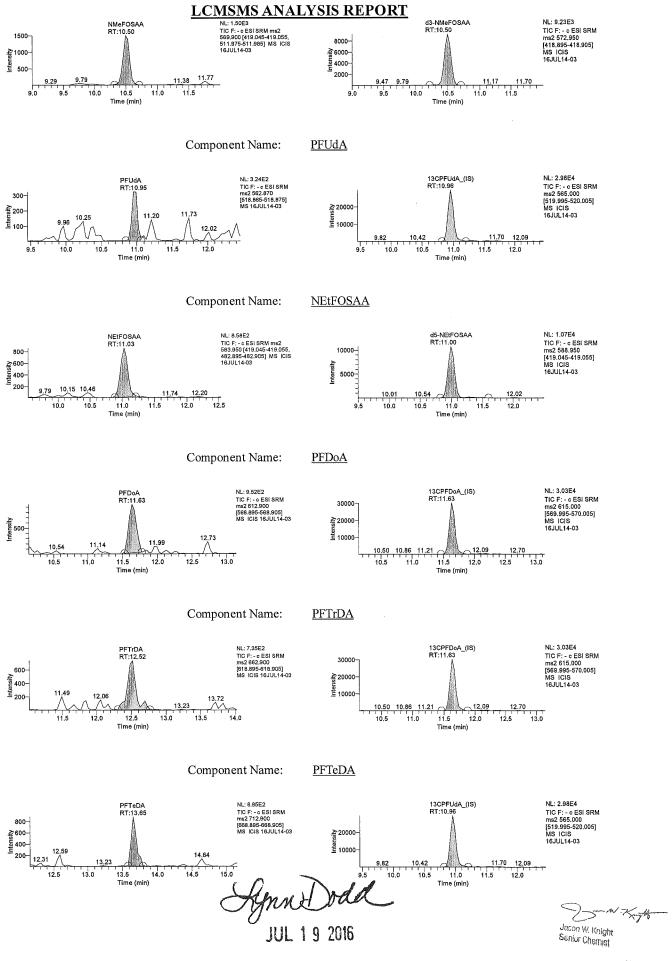
PFhpA

Jason W. Knight

Senior Chemist



Page 2 of 3
SSX50 Page 169 of 2.16.2day, July 18, 2016, 07:24:40



Lynn Dodd Page 3 of 3
Principal Specialist 70 of 2/162day, July 18, 2016, 07:24:40

Sample Name: Sample ID:

Data File: Acquisition Date:

Vial:

Sample Type:

CAL1 CAL1

16JUL14-04

Original Data Path:

C:\Xcalibur\PFC\2016\Raw PFC DATA

Instrument Method: C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

1.00

07/14/16 09:23:53 AM Dilution Factor: Std Bracket

Instrument Model:

TSQ Quantum Access

c:3 16.51 Instrument Software Version: Instrument Serial Number:

2.5.0.1311 TQU01408

Run Time(min): Injection Volume(μ1):

10.00

Operator:

US19_USR_INS00022

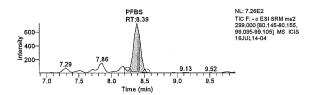
Extracted Ion Chromatogram

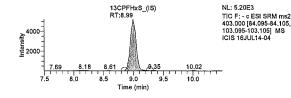
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A		N/A	301477.26	9.57		13C-PFNA_(IS)
N/A	N/A	N/A	212107.95	9.28	N/A	13C-PFOA (IS)
N/A	N/A	N/A	199769.15	9.96	N/A	13CPFDA (IS)
N/A	N/A	N/A	177574.49	11.32	N/A	13CPFDoA (IS)
N/A	N/A	N/A	224985.66	8.99	N/A	13CPFHpA (IS)
N/A	N/A	N/A	128045.65	8.71	N/A	13CPFHxA (IS)
N/A	N/A	N/A	35181.64	8.99	N/A	13CPFHxS (IS)
N/A	N/A	N/A	16931.36	9.54	N/A	13CPFOS (IS)
N/A	N/A	N/A	193956.02	10.53	N/A	13CPFUdA (IS)
ng/g	0.190	70767.63	13465.80	10.61	1.225	NEtFOSAA
ng/g	0.231	73350.36	16956.74	10.25	1.226	NMeFOSAA
ng/g	0.137	35181.64	4811.12	8.39	1.888	PFBS
ng/g	0.027	199769.15	5294.71	9.96	0.389	PFDA
ng/g	0.080	177574.49	14212.75	11.32	0.861	PFDoA
ng/g	0.042	128045.65	5395.91	8.74	0.412	PFHxA
ng/g	0.142	35181.64	5008.18	8.99	1.756	PFHxS
ng/g	0.024	301477.26	7378.66	9.57	0.418	PFNA
ng/g	0.035	212107.95	7362.76	9.24	0.344	PFOA
ng/g	0.118	16931.36	1990.29	9.53	1.375	PFOS
ng/g	0.045	193956.02	8801.85	13.23	0.715	PFTeDA
ng/g	0.073	177574.49	13042.65	12.27	0.807	PFTrDA
ng/g	0.029	193956.02	5633.99	10.53	0.469	PFUdA
ng/g	0.026	224985.66	5886.08	8.99	0.434	PFhpA
N/A	N/A	N/A	73350.36	10.25	N/A	d3-NMeFOSAA
N/A	N/A	N/A	70767.63	10.61	N/A	d5-NEtFOSAA

Component Name:

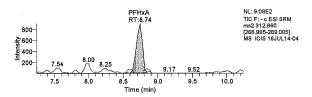
PFBS

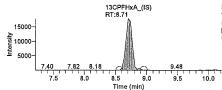




Component Name:

PFHxA



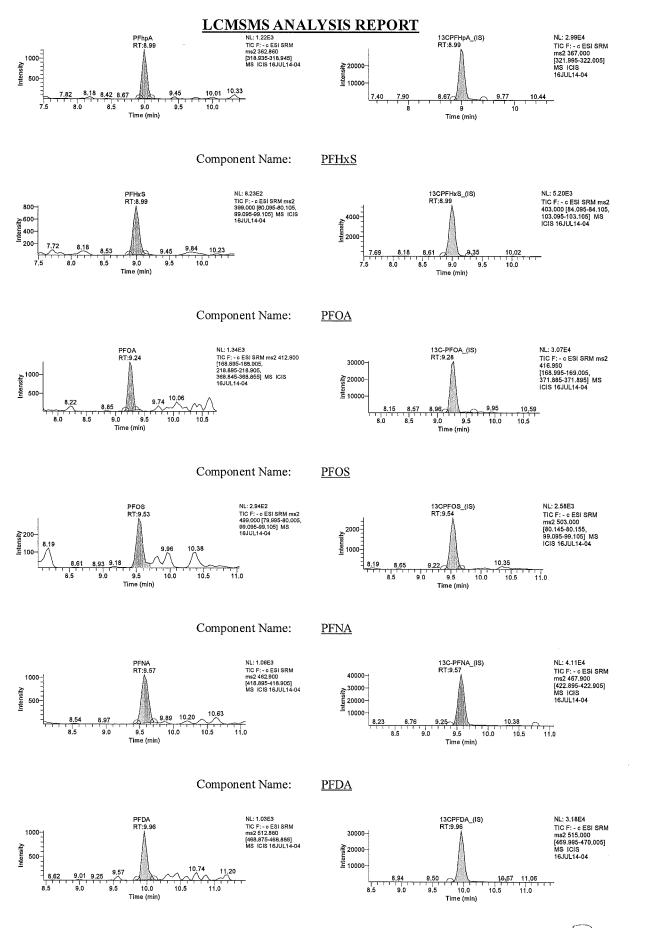


NL: 1.78E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-04

Component Name:

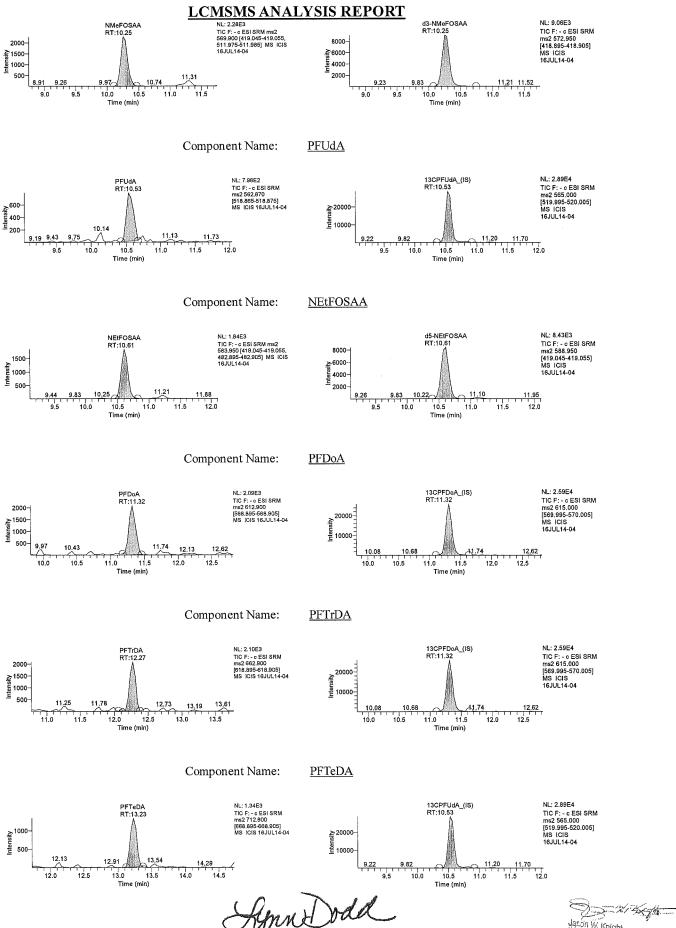
PFhpA

Jacon W. Knight Seniur Chemist



Component Name: NMeFOSAA

Jacon W. Knight
Seniur Chemist



Page 3 of 3
SSIX Brodd Page 173 of 2162day, July 18, 2016, 07:24:26
Principal Specialist

geuint guerniet Haebu W. renight

Sample Name:

CAL₂

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

Sample ID:

CAL₂

Dilution Factor:

C:\Xcalibur\PFC\Acquistion

16JUL14-05 Data File: Acquisition Date:

07/14/16 09:41:08 AM Instrument Model: M\HWell 16.5minutes TSQ Quantum Access

Sample Type: Vial:

Std Bracket c:4

Instrument Software Version:

2.5.0.1311

Run Time(min): Injection Volume(µl):

16.51 10.00 Instrument Serial Number:

TQU01408

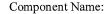
Operator:

US19_USR_INS00022

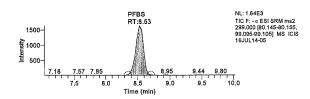
Extracted Ion Chromatogram

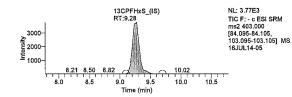
Quan Peak Table

Unit	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A	N/A	272353.68	9.78	N/A	13C-PFNA (IS)
N/A	N/A	N/A	216400.46	9.49	N/A	13C-PFOA (IS)
N/A	N/A	N/A	173265.95	10.21	N/A	13CPFDA_(IS)
N/A	N/A	N/A	181760.51	11.60	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	244065.90	9.27	N/A	13CPFHpA (IS)
N/A	N/A	N/A	129869.42	8.88	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	29478.97	9.28	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	19088.34	9.75	N/A	13CPFOS_(IS)
N/A	N/A	N/A	191684.67	10.81	N/A	13CPFUdA (IS)
ng/	0.529	68499.78	36203.50	10.89	3.654	NEtFOSAA
ng/	0.531	70387.08	37362.33	10.53	3.474	NMeFOSAA
ng/	0.444	29478.97	13077.91	8.53	3.894	PFBS
ng/	0.074	173265.95	12796.59	10.21	0.985	PFDA
ng/	0.162	181760.51	29410.24	11.60	1.757	PFDoA
ng/	0.094	129869.42	12246.97	8.88	0.930	PFHxA
ng/	0.396	29478.97	11679.06	9.24	4.029	PFHxS
ng/	0.054	272353.68	14811.13	9.78	0.778	PFNA
ng/	0.117	216400.46	25335.43	9.49	1.003	PFOA
ng/	0.341	19088.34	6517.52	9.71	3.703	PFOS
ng/	0.134	191684.67	25629.65	13.69	1.910	PFTeDA
ng/	0.172	181760.51	31265.50	12.48	1.842	PFTrDA
ng/	0.070	191684.67	13433.33	10.81	0.919	PFUdA
ng/	0.058	244065.90	14035.60	9.27	0.812	PFhpA
N/A	N/A	N/A	70387.08	10.53	N/A	d3-NMeFOSAA
N/A	N/A	N/A	68499.78	10.85	N/A	d5-NEtFOSAA



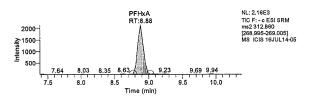
PFBS

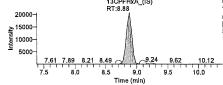




Component Name:

PFHxA



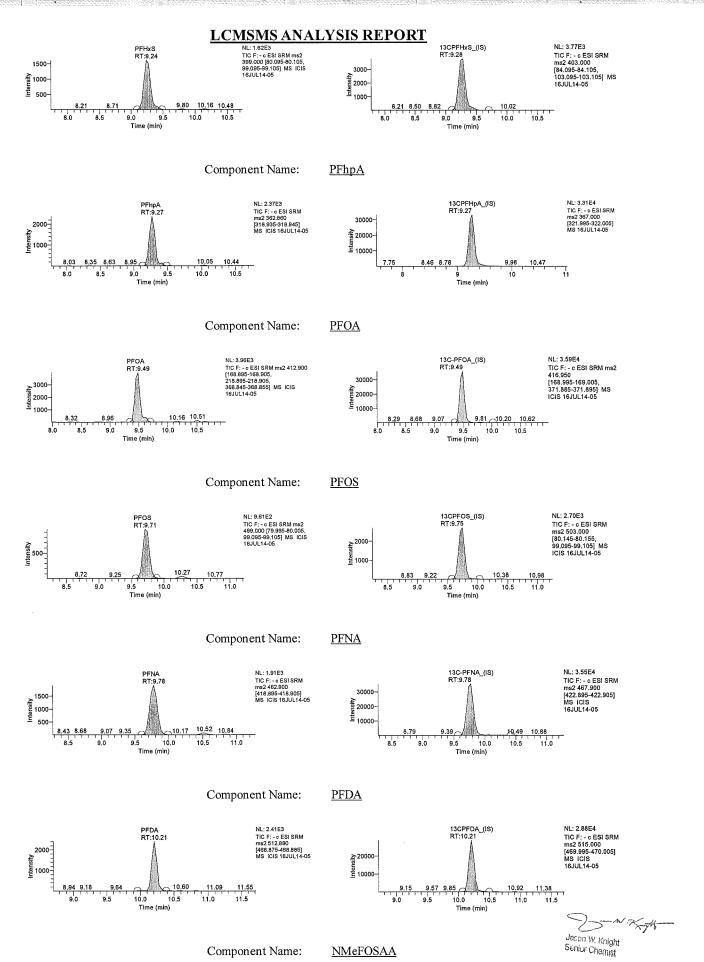


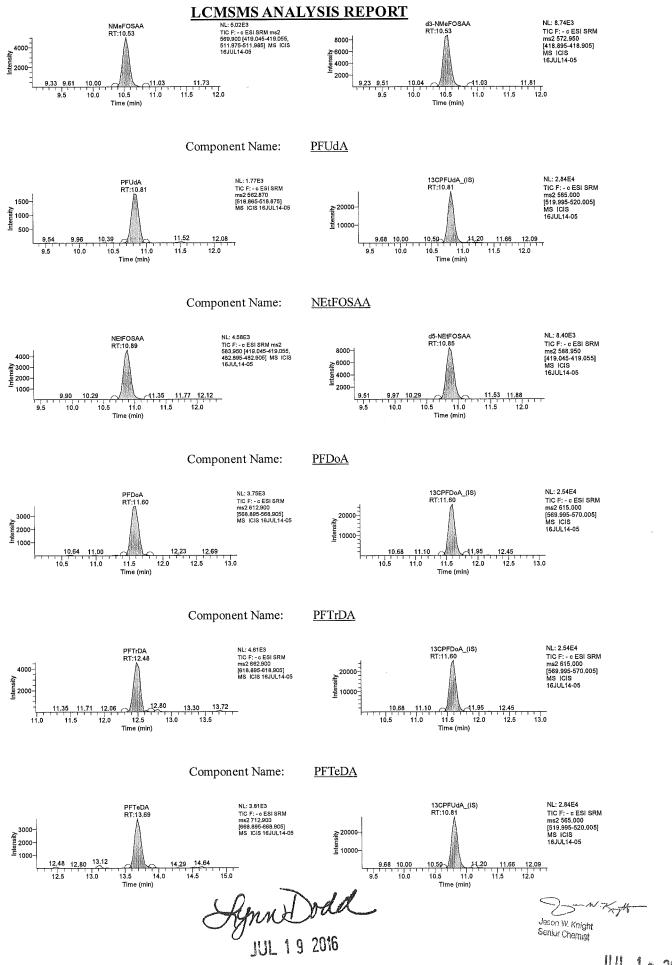
NL: 2.07E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-05

Jason W. Knight Seniur Chemist

Component Name:

PFHxS





Page 3 of 3
Principal Specialise 176 of 21,2day, July 18, 2016, 07:24:28

Sample Name:

Sample ID:

Data File:

CAL3 CAL3

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

16JUL14-09

07/14/16 10:50:05 AM

Dilution Factor:

1.00 TSQ Quantum Access

Sample Type: Vial:

Std Bracket

Instrument Model:

2.5.0.1311

Run Time(min):

Acquisition Date:

c:5 16.51 Instrument Software Version: Instrument Serial Number:

TQU01408

Injection Volume(µl):

10.00

Operator:

US19_USR_INS00022

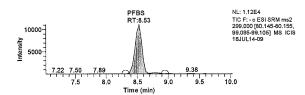
Extracted Ion Chromatogram

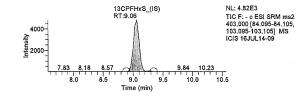
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A	N/A	224484.36	9.67	N/A	13C-PFNA (IS)
N/A	N/A	N/A	207129.54	9.32	N/A	13C-PFOA (IS)
N/A	N/A	N/A	196784.77	10.10	N/A	13CPFDA (IS)
N/A	N/A	N/A	187579.05	11.49	N/A	13CPFDoA (IS)
N/A	N/A	N/A	217862.12	9.06	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	128080.33	8.81	N/A	13CPFHxA (IS)
N/A	N/A	N/A	33266.54	9.06	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	18662.80	9.61	N/A	13CPFOS (IS)
N/A	N/A	N/A	163204.64	10.74	N/A	13CPFUdA_(IS)
ng/g	3.442	40257.41	138555.76	10.89	24.583	NEtFOSAA
ng/g	3.575	48206.52	172322.54	10.43	26.310	NMeFOSAA
ng/g	2.581	33266.54	85851.64	8.53	17.860	PFBS
ng/g	0.367	196784.77	72159.56	10.10	4.670	PFDA
ng/g	0.871	187579.05	163446.59	11.49	9.533	PFDoA
ng/g	0.488	128080.33	62484.48	8.81	4.836	PFHxA
ng/g	1.985	33266.54	66033.88	9.06	18.257	PFHxS
ng/g	0.438	224484.36	98398.97	9.67	5.398	PFNA
ng/g	0.686	207129.54	142098.19	9.31	5.553	PFOA
ng/g	1.901	18662.80	35475.09	9.60	19.914	PFOS
ng/g	0.735	163204.64	119963.28	13.44	10.048	PFTeDA
ng/g	0.969	187579.05	181692.65	12.31	10.206	PFTrDA
ng/g	0.349	163204.64	56961.38	10.74	3.976	PFUdA
ng/g	0.410	217862.12	89271.98	9.06	5.059	PFhpA
N/A	N/A	N/A	48206.52	10.39	N/A	d3-NMeFOSAA
N/A	N/A	N/A	40257.41	10.86	N/A	d5-NEtFOSAA



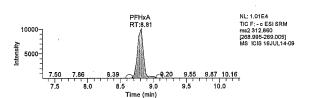
PFBS

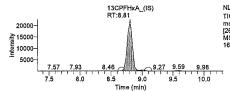




Component Name:

PFHxA



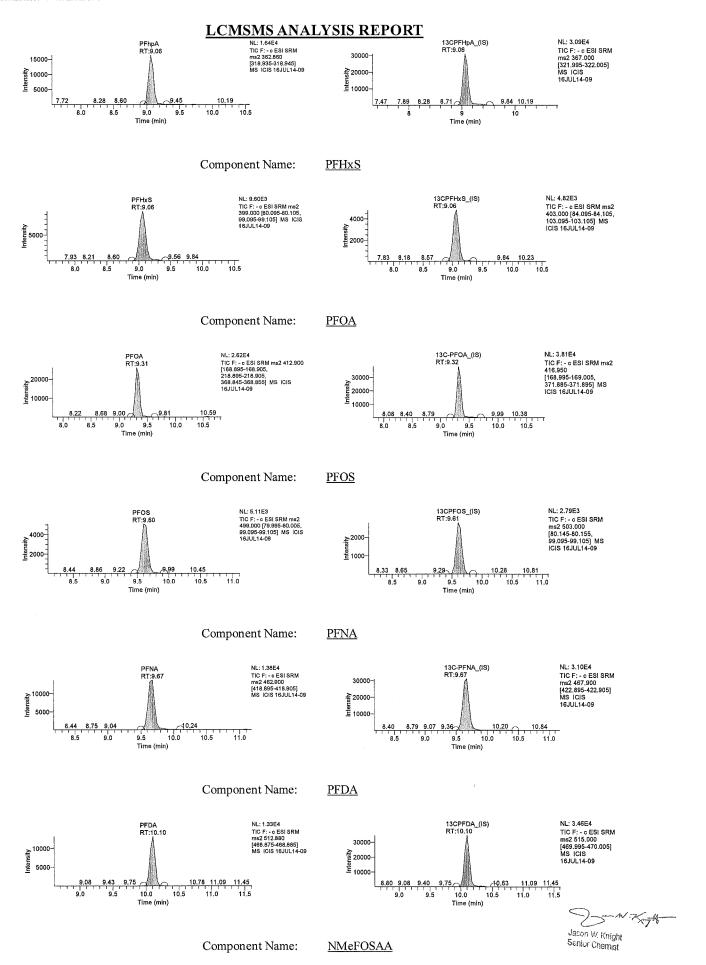


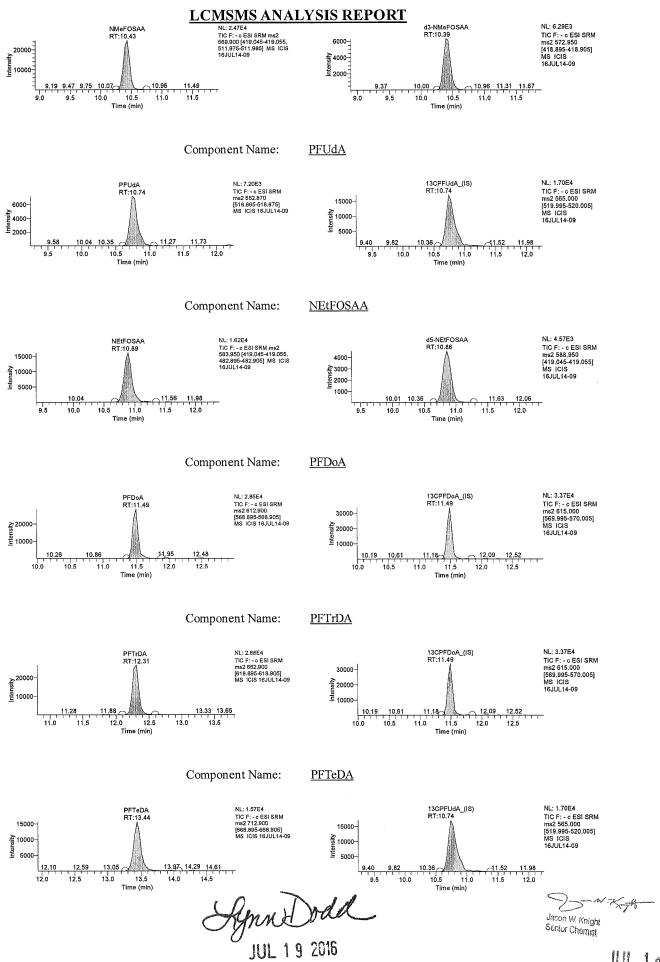
NL: 2.27E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-09

Component Name:

PFhpA

Jason W. Knight Seniur Chemist





Lynn Dodd Principal Specialise 179 of 242day, July 18, 2016, 07:24:29

Sample Name: Sample ID:

Acquisition Date:

Sample Type:

Data File:

CAL6

16JUL14-11

Original Data Path:
Instrument Method:

C:\Xcalibur\PFC\2016\Raw PFC DATA

C:\Xcalibur\PFC\Acquistion

N

M\HWell_16.5minutes

07/14/16 11:24:34 AM Dilution Factor:
Std Bracket Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: c:8 Run Time(min): 16.51 Instrument Model: Instrument Software Version: Instrument Serial Number:

TQU01408

Injection Volume(µl): 10.00

Operator:

US19_USR_INS00022

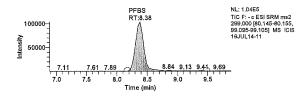
Extracted Ion Chromatogram

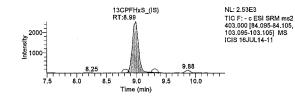
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A			165305.61	9.60	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	170447.97	9.28	N/A	13C-PFOA (IS)
N/A	N/A	N/A	185886.07	10.07	N/A	13CPFDA_(IS)
N/A	N/A	N/A	150125.98	11.32	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	145784.54	8.99	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	124880.60	8.67	N/A	13CPFHxA (IS)
N/A	N/A	N/A	18432.30	8.99	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	15984.37	9.57	N/A	13CPFOS (IS)
N/A	N/A	N/A	161994.79	10.64	N/A	13CPFUdA (IS)
ng/g	42.329	50828.90	2151526.34	10.71	303.950	NEtFOSAA
ng/g	40.522	57283.57	2321257.18	10.35	303.504	NMeFOSAA
ng/g	53.876	18432.30	993059.71	8.38	353.084	PFBS
ng/g	5.885	185886.07	1093889.96	10.07	74.108	PFDA
ng/g	14.432	150125.98	2166583.63	11.35	158.151	PFDoA
ng/g	7.506	124880.60	937317.86	8.67	74.504	PFHxA
ng/g	39.435	18432.30	726872.68	8.99	353.625	PFHxS
ng/g	6.337	165305.61	1047617.14	9.60	76.388	PFNA
ng/g	9.659	170447.97	1646342.31	9.28	77.315	PFOA
ng/g	29.158	15984.37	466067.44	9.57	303.267	PFOS
ng/g	11.195	161994.79	1813529.58	13.33	151.612	PFTeDA
ng/g	14.957	150125.98	2245401.34	12.16	157.090	PFTrDA
ng/g	7.228	161994.79	1170914.82	10.64	79.369	PFUdA
ng/g	6.238	145784.54	909338.98	8.99	75.320	PFhpA
N/A	N/A	N/A	57283.57	10.36	N/A	d3-NMeFOSAA
N/A	N/A	N/A	50828.90	10.68	N/A	d5-NEtFOSAA

Component Name:

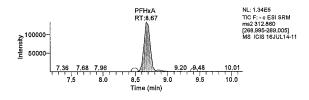
PFBS

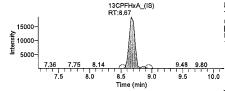




Component Name:

PFHxA



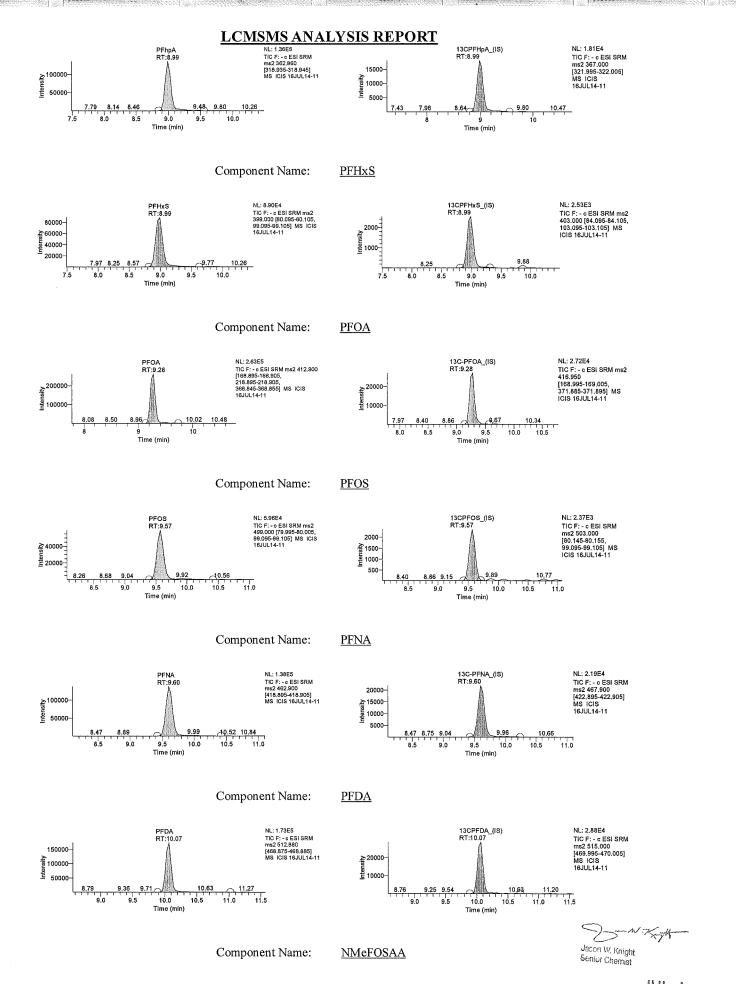


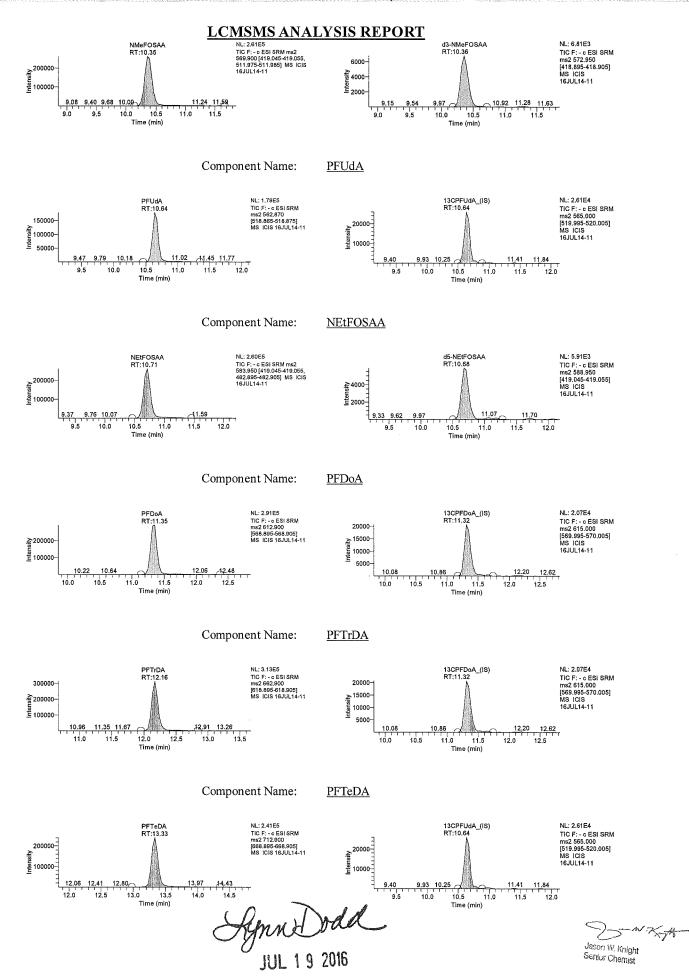
NL: 1.85E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-11

Component Name:

<u>PFhpA</u>

Jason W. Knight Seniur Chemist





Lynn Dodd Page 3 of 3
Principal Type Cipality e 182 of 242 ay, July 18, 2016, 07:24:30

Sample Name: Sample ID: CAL5

Original Data Path:

C:\Xcalibur\PFC\2016\Raw PFC DATA

Instrument Method:

C:\Xcalibur\PFC\Z016\Raw PFC DAT
C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

1.00

Acquisition Date: Sample Type:

Data File:

16JUL14-12 07/14/16 11:41:49 AM

Dilution Factor: Instrument Model:

TSQ Quantum Access

Vial: Run Time(min): Std Bracket c:7 16.51

Instrument Model: Instrument Software Version:

2.5.0.1311 TQU01408

Injection Volume(µ1): 10

10.00

Instrument Software Version: 2.5.4

Instrument Serial Number: TQU
Operator: US1

US19_USR_INS00022

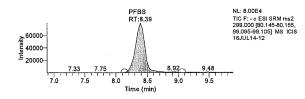
Extracted Ion Chromatogram

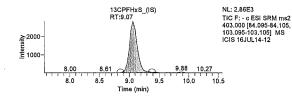
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
					Amount	
N/A	N/A	N/A	183043.00	9.71	N/A	13C-PFNA (IS)
N/A	N/A	N/A	183273.16	9.42	N/A	13C-PFOA (IS)
N/A	N/A	N/A	159841.42	10.11	N/A	13CPFDA (IS)
N/A	N/A	N/A	159205.64	11.46	N/A	13CPFDoA (IS)
N/A	N/A	N/A	163402.26	9.10	N/A	13CPFHpA (IS)
N/A	N/A	N/A	120164.14	8.74	N/A	13CPFHxA (IS)
N/A	N/A	N/A	26194.70	9.07	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	18056.10	9.64	N/A	13CPFOS_(IS)
N/A	N/A	N/A	168321.86	10.74	N/A	13CPFUdA_(IS)
ng/g	33.599	50186.50	1686227.60	10.78	241.237	NEtFOSAA
ng/g	32.655	54679.03	1785516.75	10.43	244.478	NMeFOSAA
ng/g	32.177	26194.70	842877.85	8.39	211.279	PFBS
ng/g	5.074	159841.42	810987.67	10.10	63.902	PFDA
ng/g	10.722	159205.64	1707046.04	11.46	117.496	PFDoA
ng/g	6.478	120164.14	778440.85	8.74	64.303	PFHxA
ng/g	23.020	26194.70	602992.76	9.06	206.626	PFHxS
ng/g	5.047	183043.00	923857.07	9.71	60.862	PFNA
ng/g	7.676	183273.16	1406717.27	9.42	61.452	PFOA
ng/g	22.441	18056.10	405197.77	9.68	233.443	PFOS
ng/g	8.919	168321.86	1501337.03	13.44	120.815	PFTeDA
ng/g	11.440	159205.64	1821366.99	12.34	120.165	PFTrDA
ng/g	5.357	168321.86	901719.17	10.74	58.864	PFUdA
ng/g	5.192	163402.26	848418.54	9.10	62.717	PFhpA
N/A	N/A	N/A	54679.03	10.43	N/A	d3-NMeFOSAA
N/A	N/A	N/A	50186.50	10.79	N/A	d5-NEtFOSAA

Component Name:

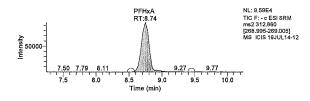
PFBS

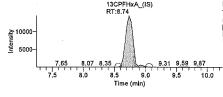




Component Name:

PFHxA



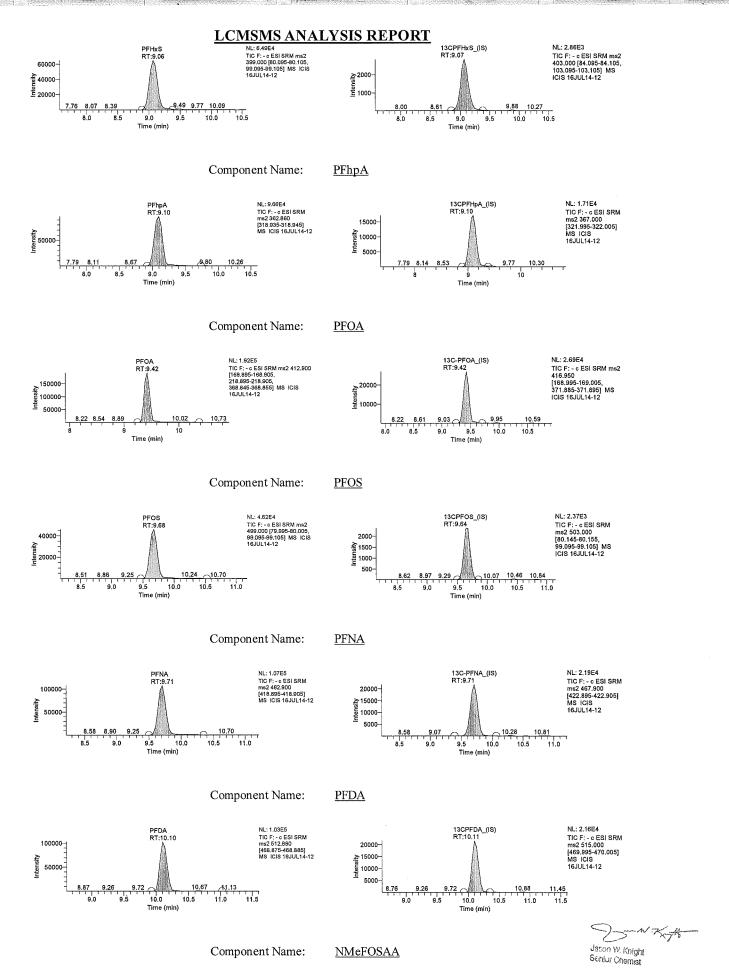


NL: 1.45E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-12

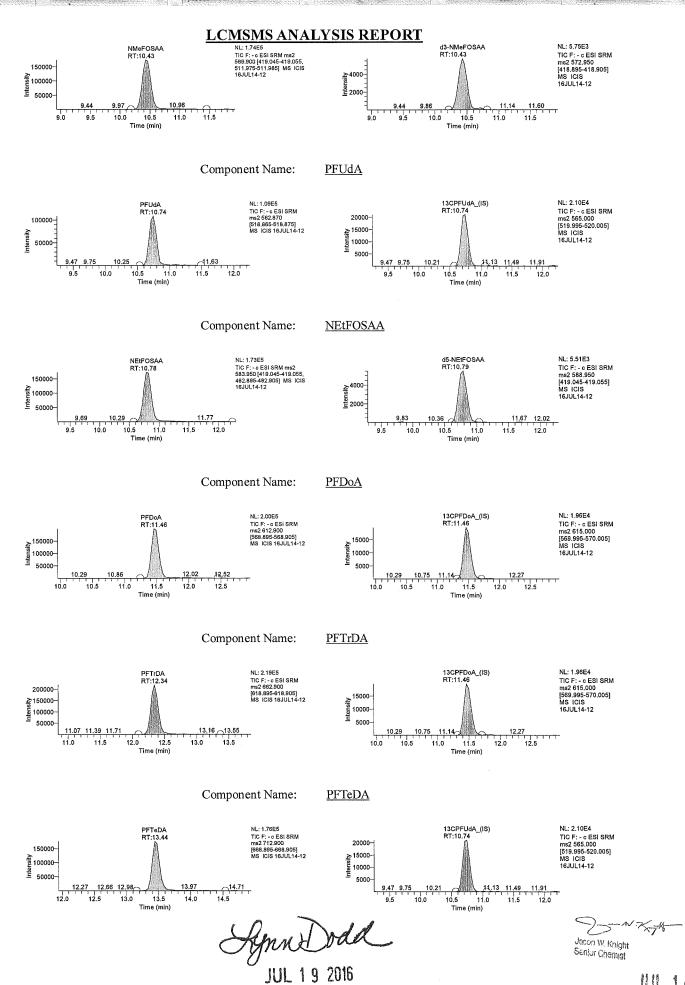
Component Name:

PFHxS

Jason W. Knight Senior Chemiat



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SSX50 Page 184 of 21b2day, July 18, 2016, 07:24:32



Page 3 of 3

Sample Name: Sample ID:

Data File:

CAL4 CAL4 Original Data Path:

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Instrument Method:

C:\Xcalibur\PFC\Acquistion M\HWell 16.5minutes

Acquisition Date: Sample Type:

07/14/16 12:16:18 PM Std Bracket

16JUL14-14

Dilution Factor: Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: Run Time(min): Injection Volume(μl): 10.00

c:6 16.51 Instrument Software Version: Instrument Serial Number:

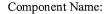
TQU01408 US19_USR_INS00022

Operator:

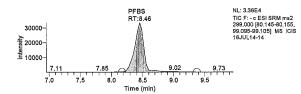
Extracted Ion Chromatogram

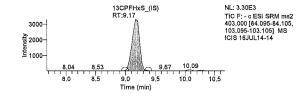
Ouan Peak Table

Unit	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/2	N/A		199529.94	9.67	N/A	13C-PFNA (IS)
N/2	N/A	N/A	184289.30	9.39	N/A	13C-PFOA_(IS)
N/2	N/A	N/A	173660.00	10.10	N/A	13CPFDA_(IS)
N/2	N/A	N/A	164773.06	11.49	N/A	13CPFDoA (IS)
N/.	N/A	N/A	201678.93	9.17	N/A	13CPFHpA (IS)
N/.	N/A	N/A	115938.91	8.85	N/A	13CPFHxA_(IS)
N/.	N/A	N/A	29220.27	9.17	N/A	13CPFHxS_(IS)
N/.	N/A	N/A	15390.01	9.64	N/A	13CPFOS_(IS)
N/.	N/A	N/A	159639.75	10.71	N/A	13CPFUdA_(IS)
	12.680	48114.77	610090.72	10.71	90.951	NEtFOSAA
ng/		54537.96	633286.78	10.78		
ng/	11.612	29220.27	342502.32		86.608	NMeFOSAA
ng/	11.721			8.46	77.596	PFBS
ng/	1.771	173660.00	307618.00	10.10	22.346	PFDA
ng/	4.108	164773.06	676828.02	11.49	45.002	PFDoA
ng/	2.158	115938.91	250180.20	8.85	21.415	PFHxA
ng/	9.026	29220.27	263731.55	9.17	81.307	PFHxS
ng/	1.864	199529.94	371926.95	9.67	22.555	PFNA
ng/	2.584	184289.30	476231.27	9.35	20.733	PFOA
ng/	9.980	15390.01	153587.30	9.64	103.899	PFOS
ng/	3.517	159639.75	561470.75	13.33	47.700	PFTeDA
ng/	4.062	164773.06	669340.58	12.41	42.691	PFTrDA
ng/	2.067	159639.75	329955.16	10.71	22.803	PFUdA
ng/	1.820	201678.93	366994.77	9.17	22.058	PFhpA
N/.	N/A	N/A	54537.96	10.43	N/A	d3-NMeFOSAA
N/	N/A	N/A	48114.77	10.78	N/A	d5-NEtFOSAA



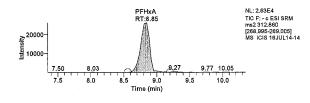
PFBS

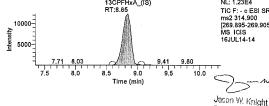




Component Name:

PFHxA



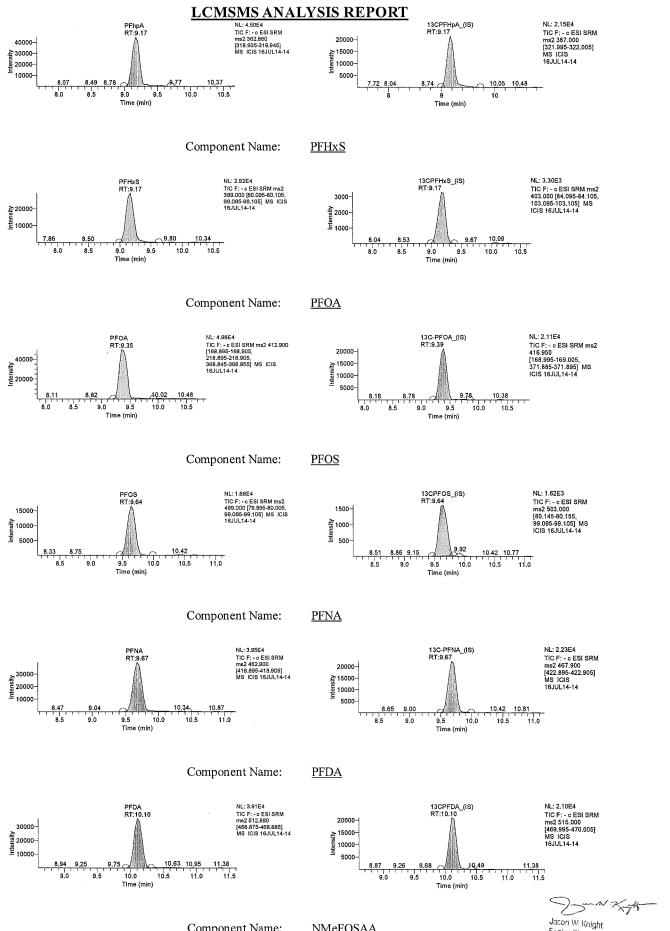


NL: 1.23E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-14

Seniur Chemist

Component Name:

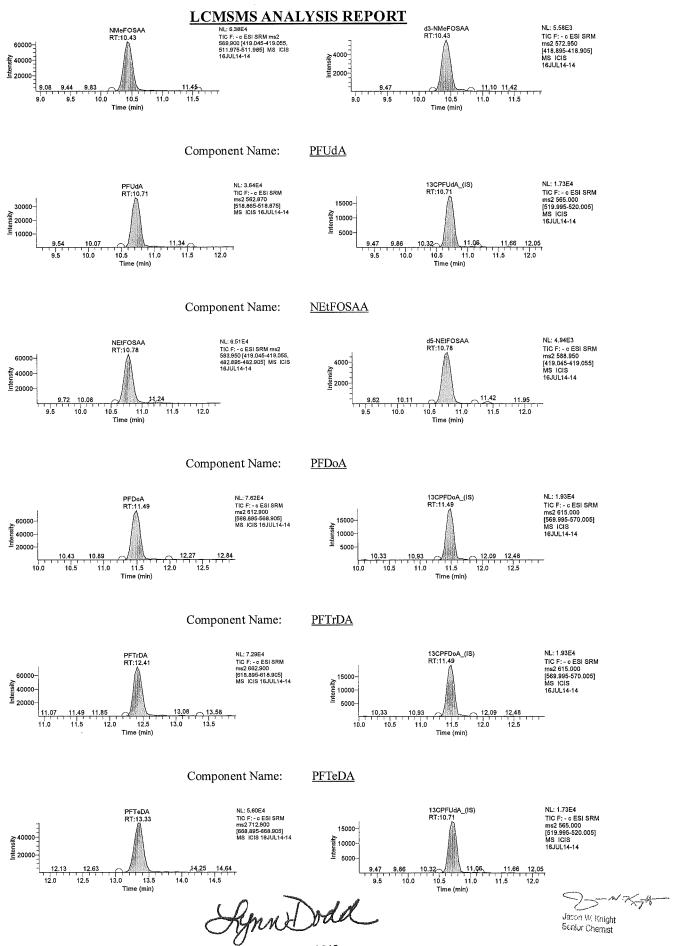
PFhpA



Component Name: **NMeFOSAA**

JUL 18 2016

Senior Chemist



Page 3 of 3
Principal Special Page 188 of 24b2day, July 18, 2016, 07:24:33

sample Name: Sample ID:

CCV1 CCV1

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

Data File: \equisition Date:

16JUL14-17 07/14/16 01:09:33 PM

Dilution Factor:

TSQ Quantum Access

Sample Type: Vial:

QC c:5 16.51 Instrument Model: Instrument Software Version:

2.5.0.1311

Run Time(min): 10.00 Injection Volume(µl):

Instrument Serial Number:

TQU01408

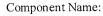
Operator:

US19_USR_INS00022

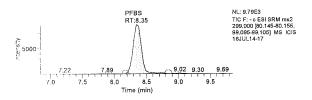
Extracted Ion Chromatogram

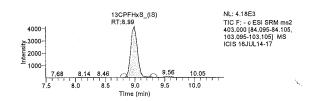
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A	N/A	234740.48	9.60	N/A	13C-PFNA (IS)
N/A	N/A	N/A	191315.95	9.28	N/A	13C-PFOA (IS)
N/A	N/A	N/A	171483.72	10.07	N/A	13CPFDA (IS)
N/A	N/A	N/A	180776.14	11.46	N/A	13CPFDoA (IS)
N/A	N/A	N/A	202060.69	8.99	N/A	13CPFHpA (IS)
N/A	N/A	N/A	118636.57	8.67	N/A	13CPFHxA_(IS)
N/A	N/A	N/A	33243.42	8.99	N/A	13CPFHxS (IS)
N/A	N/A	N/A	19401.47	9.57	N/A	13CPFOS_(IS)
N/A	N/A	N/A	167243.01	10.71	N/A	13CPFUdA (IS)
ng/g	3.107	55411.76	172184.71	10.75	22.181	NEtFOSAA
ng/g	2.905	59673.55	173375.28	10.39	21.289	NMeFOSAA
ng/g	2.664	33243.42	88554.67	8.35	18.403	PFBS
ng/g	0.435	171483.72	74646.93	10.07	5.533	PFDA
ng/g	0.933	180776.14	168691.46	11.42	10.210	PFDoA
ng/g	0.527	118636.57	62542.00	8.67	5.227	PFHxA
ng/g	2.041	33243.42	67861.99	8.99	18.762	PFHxS
ng/g	0.383	234740.48	89845.28	9.64	4.730	PFNA
ng/g	0.588	191315.95	112463.33	9.28	4.768	PFOA
ng/g	2.180	19401.47	42292.50	9.57	22.814	PFOS
ng/	0.811	167243.01	135573.96	13.54	11.072	PFTeDA
ng/g	0.924	180776.14	166985.75	12.27	9.735	PFTrDA
ng/	0.527	167243.01	88145.30	10.71	5.927	PFUdA
ng/	0.441	202060.69	89019.76	8.99	5.430	PFhpA
N/A	N/A	N/A	59673.55	10.39	N/A	d3-NMeFOSAA
N/A	N/A	N/A	55411.76	10.75	N/A	d5-NEtFOSAA



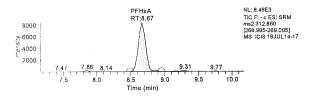
PFBS

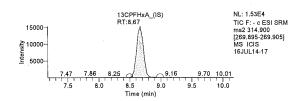




Component Name:

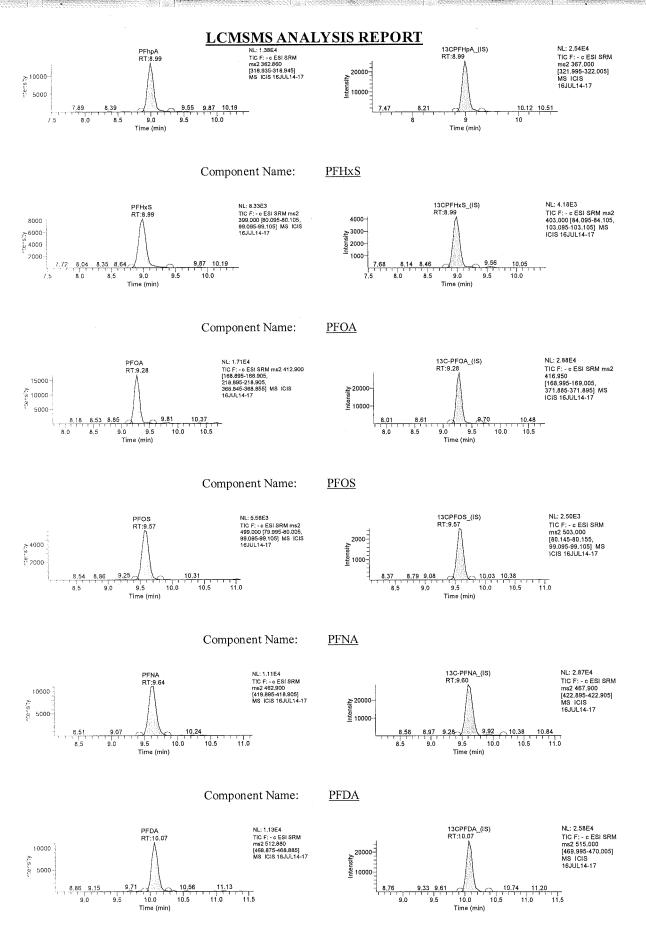
PFHxA



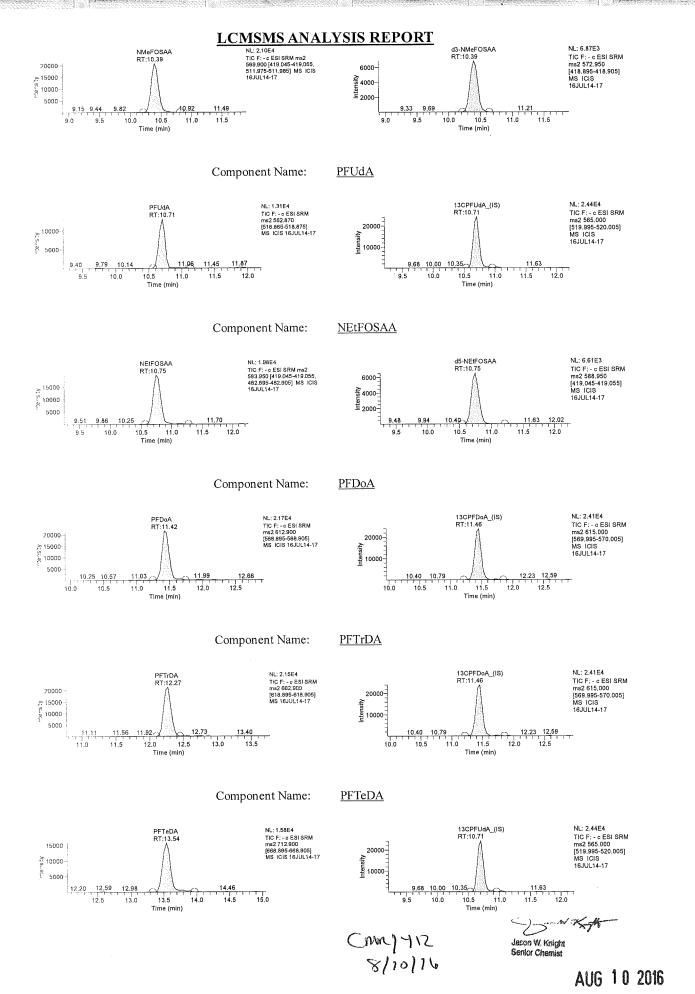


Component Name:

PFhpA



Component Name: <u>NMeFOSAA</u>



Page 3 of 3
SSX50 Page 191 of 242 esday, August 10, 2016, 12:27:03

Sample Name:

ICV1

Original Data Path:

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Sample ID: Data File:

ICV1 16JUL14-19 Instrument Method: C:\Xcalibur\PFC\Acquistion

Acquisition Date:

07/14/16 01:47:08 PM

M Dilution Factor:

M\HWell_16.5minutes 1.00

Sample Type:

QC

Instrument Model:

TSQ Quantum Access 2.5.0.1311

Vial: c:9 Run Time(min): 16.51 Injection Volume(µl): 10.00

c:9 16.51 Instrument Software Version: Instrument Serial Number:

2.5.0.1311 TQU01408

Operator:

US19_USR_INS00022

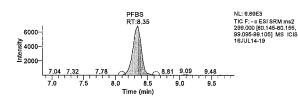
Extracted Ion Chromatogram

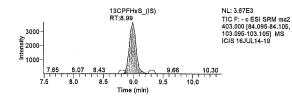
Ouan Peak Table

			Qu.	an i can lavic			
Component N	Vame	Calculated Amount	RT	Response	ISTD Response	Response Ratio	Units
13C-PFNA	_(IS)	N/A	9.60	240846.38	N/A	N/A	N/A
13C-PFOA	(IS)	N/A	9.28	183650.31	N/A	N/A	N/A
13CPFDA	(IS)	N/A	10.10	165351.18	N/A	N/A	N/A
13CPFDoA	_(IS)	N/A	11.42	172447.88	N/A	N/A	N/A
13CPFHpA	_(IS)	N/A	8.99	167721.46	N/A	N/A	N/A
13CPFHxA	(IS)	N/A	8.67	137739.29	N/A	N/A	N/A
13CPFHxS	(IS)	N/A	8.99	29194.99	N/A	N/A	N/A
13CPFOS	(IS)	N/A	9.57	17676.24	N/A	N/A	N/A
13CPFUdA	(IS)	N/A	10.71	192714.36	N/A	N/A	N/A
NEtFC	SAA	25.012	10.75	154020.46	43988.58	3.501	ng/g
NMeFC	SAA	15.580	10.43	131626.30	61381.75	2.144	ng/g
I	PFBS	14.904	8.35	62137.85	29194.99	2.128	ng/g
P	PFDA	21.030	10.10	275605.63	165351.18	1.667	ng/g
PF	FDoA	17.208	11.42	271017.08	172447.88	1.572	ng/g
PF	HxA	15.851	8.67	220022.81	137739.29	1.597	ng/g
PI	FHxS	16.305	8.99	51588.70	29194.99	1.767	ng/g
F	PFNA	14.038	9.60	278471.93	240846.38	1.156	ng/g
F	PFOA	16.286	9.28	372446.05	183650.31	2.028	ng/g
I	PFOS	15.982	9.57	26915.23	17676.24	1.523	ng/g
PFT	ГеDА	15.500	13.30	219277.84	192714.36	1.138	ng/g
PF7	ΓrDA	12.985	12.41	212668.63	172447.88	1.233	ng/g
PF	FUdA	18.245	10.71	318172.34	192714.36	1.651	ng/g
PI	FhpA	21.118	8.99	292126.93	167721.46	1.742	ng/g
d3-NMeFC)SĀA	N/A	10.39	61381.75	N/A	N/A	N/A
d5-NEtFC	SAA	N/A	10.75	43988.58	N/A	N/A	N/A

Component Name:

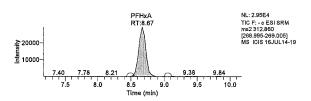
PFBS

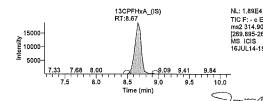




Component Name:

<u>PFHxA</u>





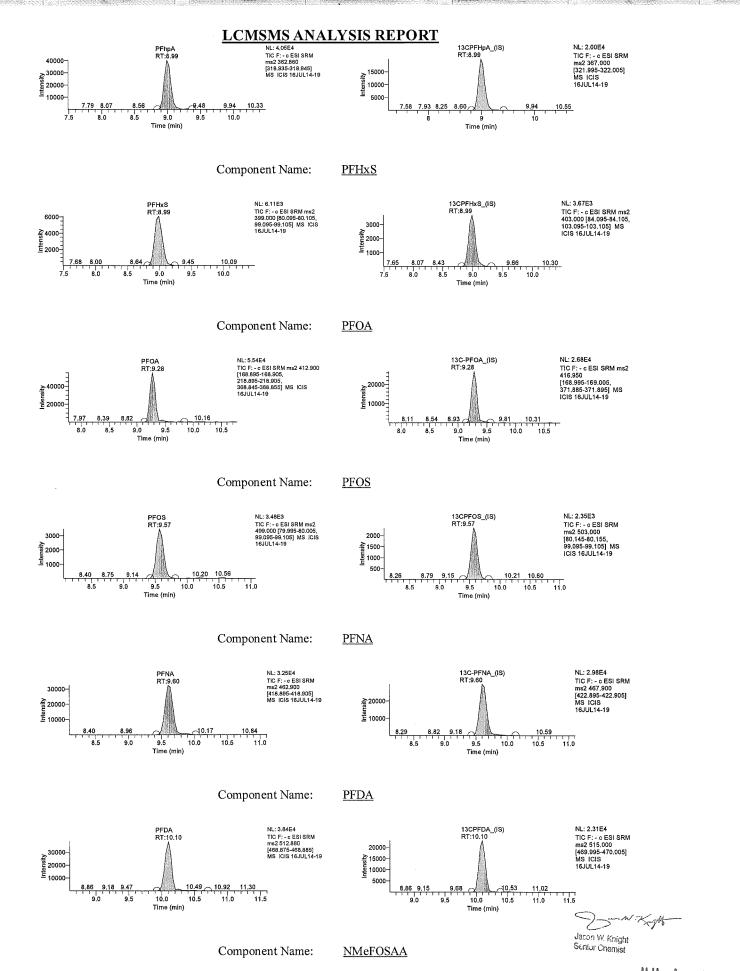
TIC F: - c ESI SRM ms2 314.900 [259.895-269,905] MS ICIS 16JUL14-19

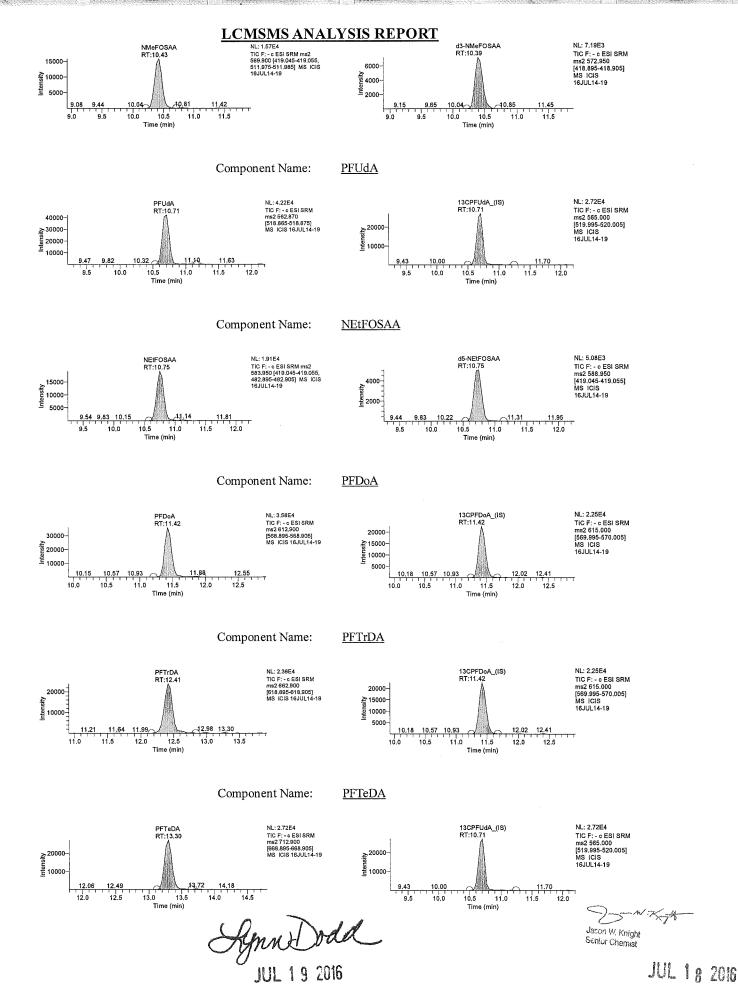
Component Name:

PFhpA

Jason W. Knight Senior Chemist

JUL 18 2016





Page 3 of 3

Sample Name: Sample ID: CCV3 CCV3

Original Data Path:
Instrument Method:

C:\Xcalibur\PFC\2016\Raw PFC DATA

C:\Xcalibur\PFC\Acquistion M\HWell_16.5minutes

1.00

Acquisition Date: Sample Type:

Injection Volume(µl):

Data File:

16JUL14-38 07/14/16 07:19:46 РМ

PM Dilution Factor: Instrument Model:

TSQ Quantum Access

Vial: c:7 Run Time(min): 16.51

QC c:7

10.00

Instrument Software Version: Instrument Serial Number:

2.5.0.1311 TQU01408

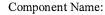
Operator:

US19_USR_INS00022

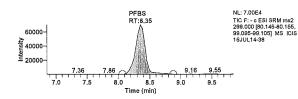
Extracted Ion Chromatogram

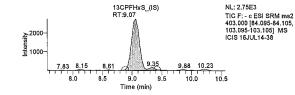
Quan Peak Table

			<u>i Peak Table</u>	Qua		
Uni	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/.	N/A	N/A	183356.14	9.71	N/A	13C-PFNA_(IS)
N/.	N/A	N/A	145747.48	9.35	N/A	13C-PFOA (IS)
N/.	N/A	N/A	167414.00	10.14	N/A	13CPFDA (IS)
N/.	N/A	N/A	150119.49	11.74	N/A	13CPFDoA (IS)
N/	N/A	N/A	141068.72	9.06	N/A	13CPFHpA (IS)
N/.	N/A	N/A	97664.82	8.71	N/A	13CPFHxA_(IS)
N/	N/A	N/A	25916.79	9.07	N/A	13CPFHxS (IS)
N/	N/A	N/A	13347.10	9.64	N/A	13CPFOS_(IS)
N/	N/A	N/A	144638.61	10.78	N/A	13CPFUdA (IS)
ng/	32.889	51215.32	1684413.38	10.85	236.133	NEtFOSAA
ng/	29.902	60308.85	1803368.08	10.50	223.829	NMeFOSAA
ng/	29.047	25916.79	752809.62	8.35	190.823	PFBS
ng	4.507	167414.00	754487.79	10.14	56.767	PFDA
ng	10.935	150119.49	1641537.03	11.74	119.826	PFDoA
ng	6.158	97664.82	601441.87	8.71	61.127	PFHxA
ng	22.915	25916.79	593895.88	9.06	205.693	PFHxS
ng	4.433	183356.14	812873.01	9.71	53.474	PFNA
ng	7.692	145747.48	1121017.61	9.35	61.580	PFOA
ng	28.561	13347.10	381207.61	9.68	297.065	PFOS
ng.	9.052	144638.61	1309259.85	13.40	122.608	PFTeDA
ng	11.521	150119.49	1729458.84	12.41	121.007	PFTrDA
ng	5.955	144638.61	861320.99	10.78	65.416	PFUdA
ng	4.897	141068.72	690762.92	9.06	59.153	PFhpA
Ň/	N/A	N/A	60308.85	10.46	N/A	d3-NMeFOSAA
N/	N/A	N/A	51215.32	10.82	N/A	d5-NEtFOSAA



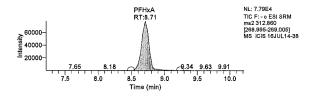
PFBS

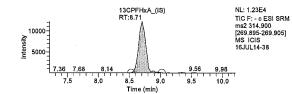




Component Name:

PFHxA



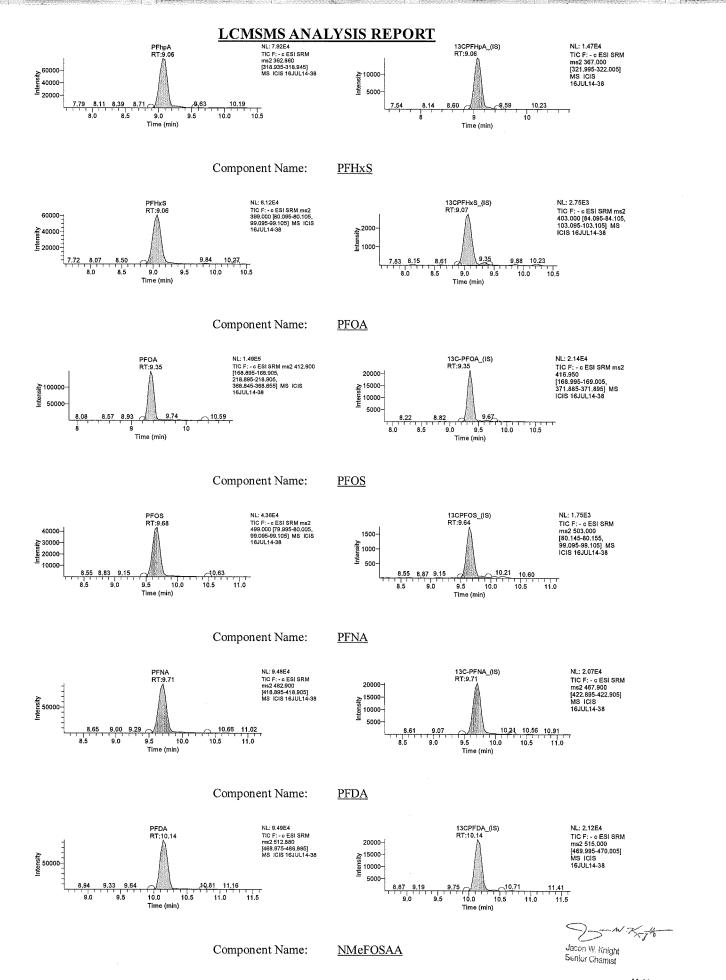


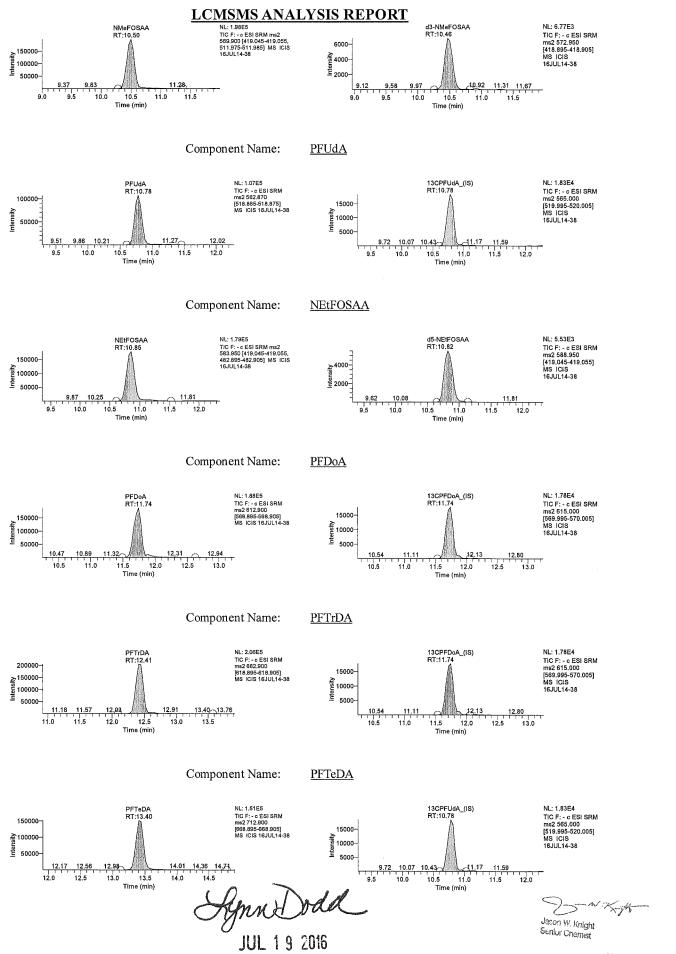
N X

Component Name:

<u>PFhpA</u>

Jason W. Knight Senior Chamist





Lynn Dodd
Page 3 of 3
Principal Specialist age 197 of 2020ay, July 18, 2016, 07:24:37

Sample Name:

CCV2

Original Data Path:

C:\Xcalibur\PFC\2016\Raw PFC DATA

Sample ID: Data File:

CCV2 16JUL14-44 Instrument Method:

C:\Xcalibur\PFC\Acquistion

M\HWell_16.5minutes

07/14/16 09:03:13 PM Dilution Factor:

Acquisition Date: Sample Type:

QC

Instrument Model:

TSQ Quantum Access

Vial: Run Time(min): c:6 16.51 Instrument Software Version:

2.5.0.1311 TQU01408

Injection Volume(µ1):

10.00

Instrument Serial Number:

US19_USR_INS00022

Operator:

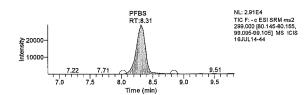
Extracted Ion Chromatogram

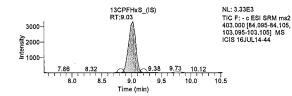
Quan Peak Table

Unit	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A			172557.51	9.71	N/A	13C-PFNA (IS)
N/A	N/A	N/A	145998.42	9.31	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	160307.61	10.24	N/A	13CPFDA (IS)
N/A	N/A	N/A	155233.28	11.63	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	168360.10	9.02	N/A	13CPFHpA (IS)
N/A	N/A	N/A	94786.91	8.67	N/A	13CPFHxA (IS)
N/A	N/A	N/A	28110.98	9.03	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	16786.21	9.67	N/A	13CPFOS (IS)
N/A	N/A	N/A	165741.93	10.88	N/A	13CPFUdA_(IS)
ng/g	13.835	51448.25	711789.08	10.96	99.249	NEtFOSAA
ng/g	13.256	50706.60	672162.55	10.57	98.942	NMeFOSAA
ng/g	10.291	28110.98	289300.24	8.31	68.250	PFBS
ng/g	1.680	160307.61	269296.06	10.24	21.195	PFDA
ng/g	4.480	155233.28	695373.30	11.63	49.078	PFDoA
ng/g	2.094	94786.91	198473.48	8.67	20.780	PFHxA
ng/	8.598	28110.98	241701.81	8.99	77.479	PFHxS
ng/	1.636	172557.51	282334.71	9.71	19.813	PFNA
ng/	2.619	145998.42	382335.11	9.31	21.010	PFOA
ng/	8.291	16786.21	139169.81	9.67	86.341	PFOS
ng/	3.120	165741.93	517070.09	13.54	42.322	PFTeDA
ng/	4.044	155233.28	627811.01	12.41	42.503	PFTrDA
ng/	2.094	165741.93	347065.79	10.88	23.101	PFUdA
ng/	1.571	168360.10	264471.36	9.02	19.058	PFhpA
N/A	N/A	N/A	50706.60	10.57	N/A	d3-NMeFOSAA
N/A	N/A	N/A	51448.25	10.96	N/A	d5-NEtFOSAA

Component Name:

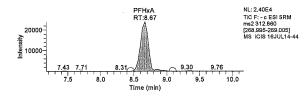
PFBS

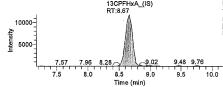




Component Name:

PFHxA



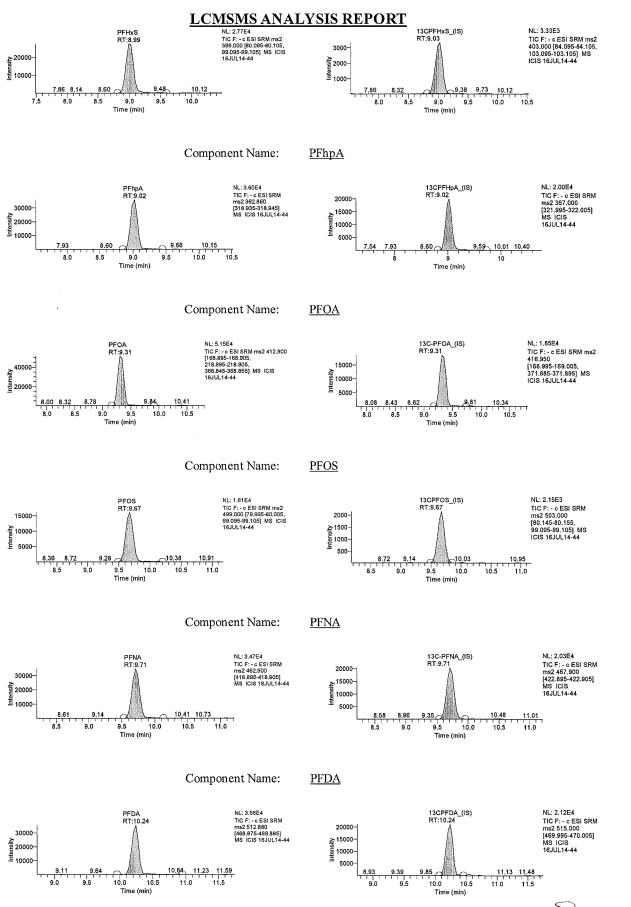


TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-44

Component Name:

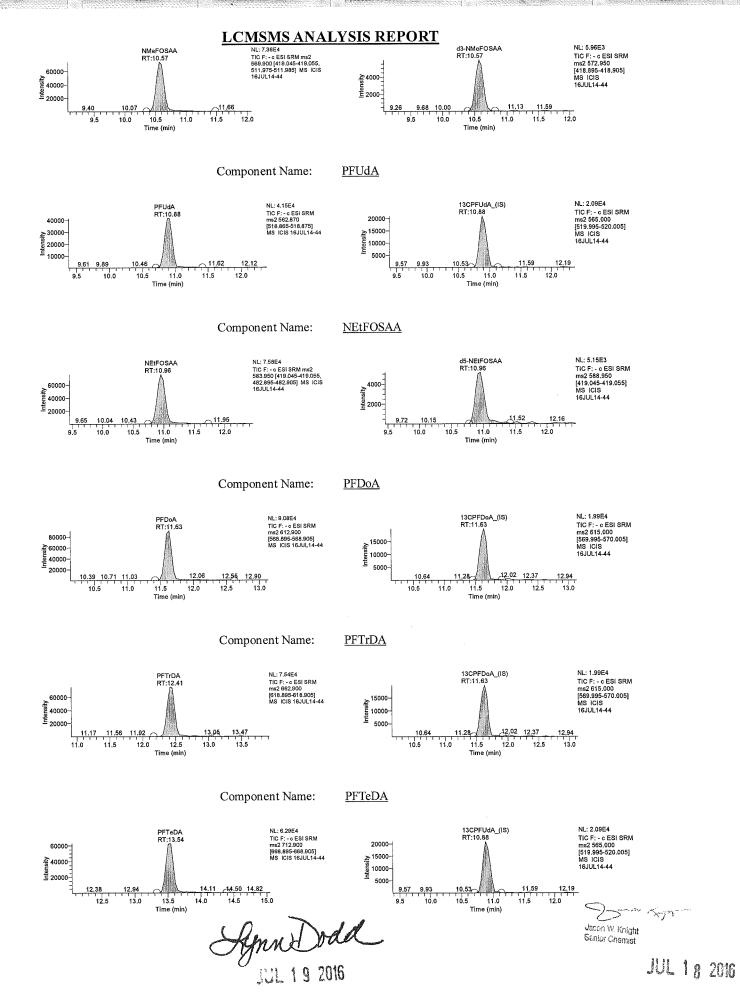
PFHxS

Jacon vy. Knight Seniur Chemist



Component Name: <u>NMeFOSAA</u>

Jason W. Knight Senior Chemist



Lynn Dodd X50 age 200 of 210 day, July 18, 2016, 07:24:39 Principal Specialist age 200 of 210 day, July 18, 2016, 07:24:39

Raw QC Data Miscellaneous LC/MS/MS

Sample Name:

MB 16182005

Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

Sample ID: MB 16182005 Data File: 16JUL14-41

16182005 Instrument Metho

C:\Xcalibur\PFC\Acquistion
M\HWell_16.5minutes

Acquisition Date: Sample Type:

07/14/16 08:11:30 PM

Dilution Factor: Instrument Model: 1.00 TSQ Quantum Access

Vial: Run Time(min): Unknown d:13 16.51 Instrument Model: Instrument Software Version:

2.5.0.1311 TQU01408

Injection Volume(µl): 10.0

10.00

TQU01408 US19_USR_INS00022

Extracted Ion Chromatogram

Operator:

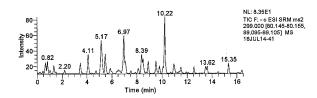
Quan Peak Table

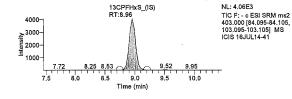
Instrument Serial Number:

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	 N/A		98222.62	9.60	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	111782.01	9.28	N/A	13C-PFOA (IS)
N/A	N/A	N/A	48599.78	10.10	N/A	13CPFDA (IS)
N/A	N/A	N/A	46809.36	11.53	N/A	13CPFDoA_(IS)
N/A	N/A	N/A	127424.36	8.96	N/A	13CPFHpA_(IS)
N/A	N/A	N/A	89493.89	8.60	N/A	13CPFHxA (IS)
N/A	N/A	N/A	30557.75	8.96	N/A	13CPFHxS (IS)
N/A	N/A	N/A	13710.02	9.57	N/A	13CPFOS (IS)
N/A	N/A	N/A	42763.17	10.74	N/A	13CPFUdA_(IS)
ng/g	N/A	N/A	N/A	N/A	N/A	NEtFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	NMeFOSAA
ng/g	N/A	N/A	N/A	N/A	N/A	PFBS
ng/g	N/A	N/A	N/A	N/A	N/A	PFDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFDoA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxA
ng/g	N/A	N/A	N/A	N/A	N/A	PFHxS
ng/g	N/A	N/A	N/A	N/A	N/A	PFNA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOA
ng/g	N/A	N/A	N/A	N/A	N/A	PFOS
ng/g	N/A	N/A	N/A	N/A	N/A	PFTeDA
ng/g	N/A	N/A	N/A	N/A	N/A	PFTrDA
ng/į	N/A	N/A	N/A	N/A	N/A	PFUdA
ng/į	N/A	N/A	N/A	N/A	N/A	PFhpA
N/A	N/A	N/A	23378.93	10.46	N/A	d3-NMeFOSAA
N/A	N/A	N/A	24904.39	10.82	N/A	d5-NEtFOSAA

Component Name:

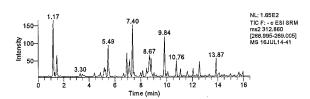
PFBS

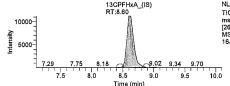




Component Name:

PFHxA



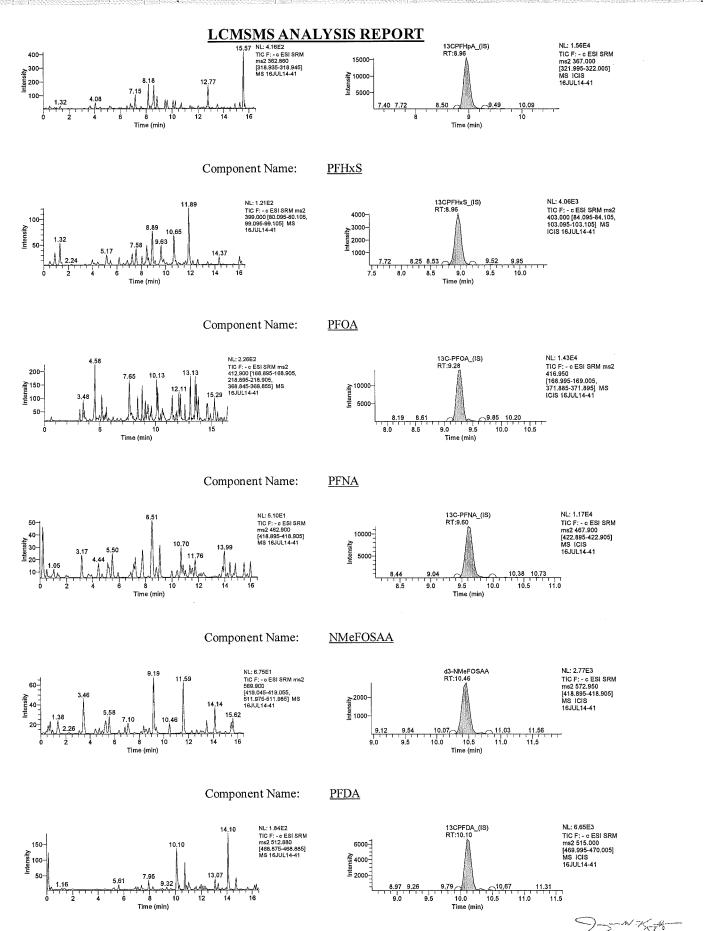


NL: 1.12E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-41

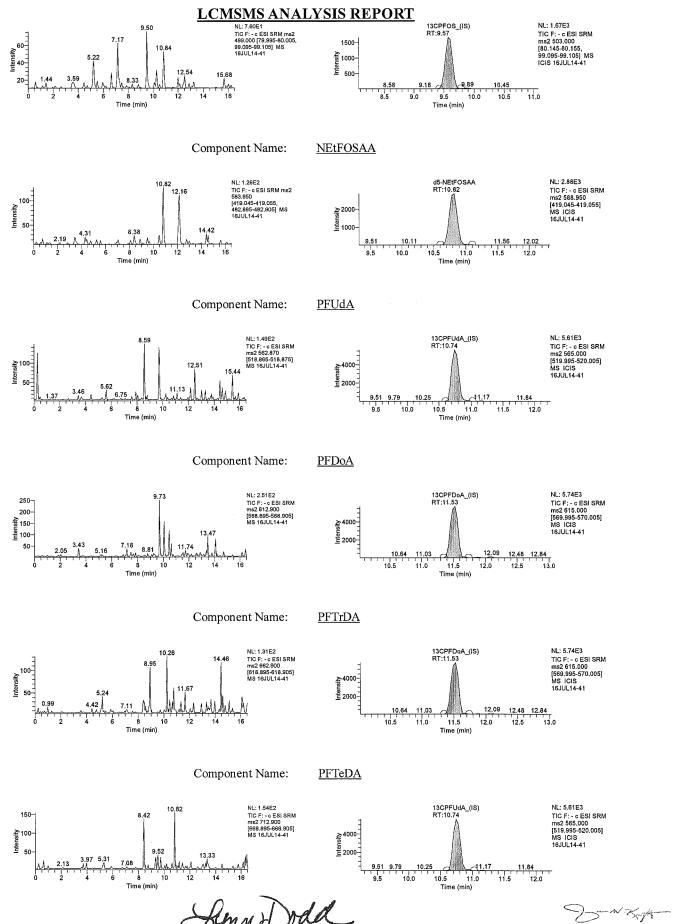
Component Name:

PFhpA

Jason W. Knight Senior Chemist



Component Name: PFOS Jacon W. Knight Seniur Chemist



JUL 1 9 2016

Jason W. Knight Seniur Chemist

Sample Name:

LCS 16182005

Original Data Path:

C:\Xcalibur\PFC\2016\Raw PFC DATA

Sample ID: LCS 16182005 Data File: 16JUL14-42

Instrument Method:

C:\Xcalibur\PFC\Acquistion

Acquisition Date:

07/14/16 08:28:44 PM

Dilution Factor:

1.00 TSQ Quantum Access

M\HWell 16.5minutes

Sample Type: Vial: Run Time(min): Unknown d:14 16.51

Instrument Model: Instrument Software Version: Instrument Serial Number:

2.5.0.1311

10.00

TQU01408

Operator: Injection Volume(µl):

US19_USR_INS00022

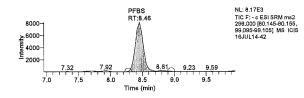
Extracted Ion Chromatogram

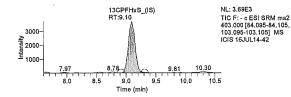
Quan Peak Table

Unit	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/ <i>A</i>		N/A	71247.36	9.71	N/A	13C-PFNA_(IS)
N/A	N/A	N/A	81298.26	9.35	N/A	13C-PFOA_(IS)
N/A	N/A	N/A	35330.05	10.21	N/A	13CPFDA_(IS)
N/A	N/A	N/A	50431.74	11.74	N/A	13CPFDoA (IS)
N/A	N/A	N/A	117887.80	9.10	N/A	13CPFHpA (IS)
N/A	N/A	N/A	106419.15	8.88	N/A	13CPFHxA (IS)
N/A	N/A	N/A	28507.79	9.10	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	18009.91	9.68	N/A	13CPFOS (IS)
N/A	N/A	N/A	33413.61	10.89	N/A	13CPFUdA_(IS)
ng/	3.518	25071.19	88204.74	10.96	25.132	NEtFOSAA
ng/	4.402	28259.91	124408.32	10.57	32.519	NMeFOSAA
ng/	2.492	28507.79	71034.69	8.46	17.278	PFBS
ng/	2.199	35330.05	77690.61	10.21	27.727	PFDA
ng/	2.132	50431.74	107535.44	11.74	23.353	PFDoA
ng/	1.864	106419.15	198368.43	8.88	18.498	PFHxA
ng/	1.964	28507.79	55991.19	9.10	18.070	PFHxS
ng/	1.351	71247.36	96266.54	9.71	16.383	PFNA
ng/	2.534	81298.26	205978.40	9.35	20.329	PFOA
ng/	2.093	18009.91	37692.49	9.64	21.910	PFOS
ng/	3.758	33413.61	125565.12	13.44	50.959	PFTeDA
ng/	2.050	50431.74	103383.99	12.59	21.561	PFTrDA
ng/	2.438	33413.61	81448.72	10.88	26.866	PFUdA
ng/	2.028	117887.80	239095.03	9.10	24.571	PFhpA
N/A	N/A	N/A	28259.91	10.53	N/A	d3-NMeFOSAA
N/A	N/A	N/A	25071.19	10.93	N/A	d5-NEtFOSAA

Component Name:

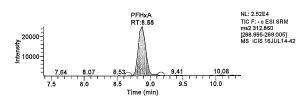
PFBS

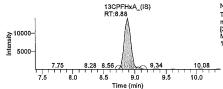




Component Name:

PFHxA



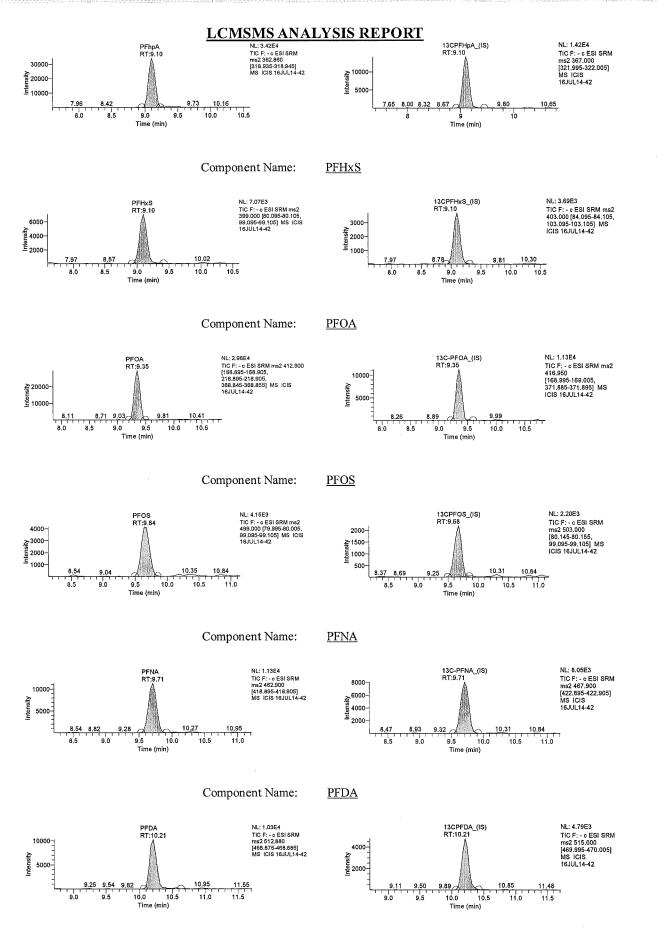


NL: 1.42E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-42

Component Name:

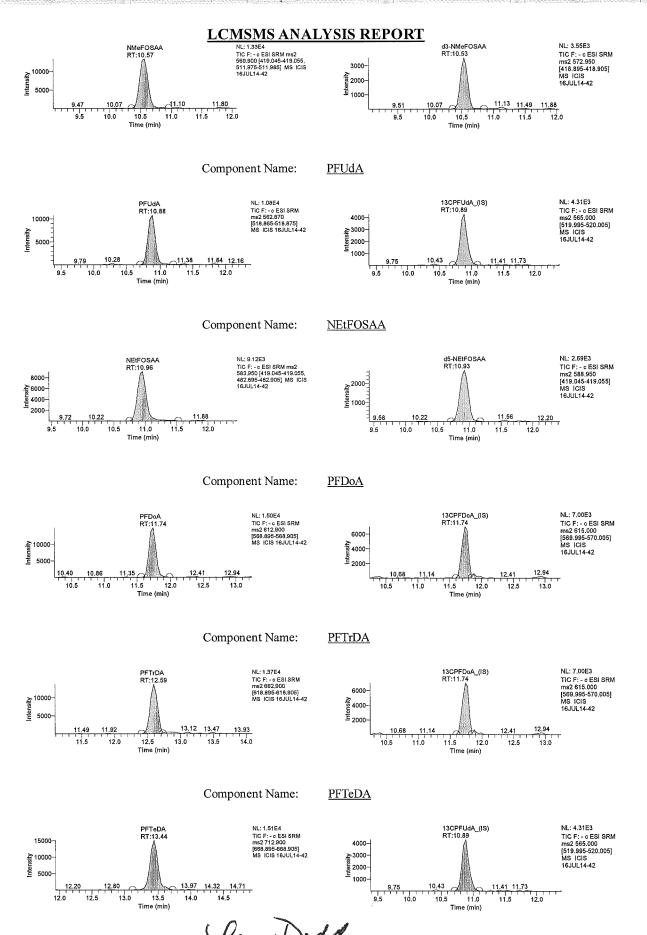
PFhpA

Jason W. Knight Senlur Chemist



Component Name: <u>NMeFOSAA</u>

Jason W. Knight Senior Chemist



Synul Dan

Jacon W. Knight Senlur Chemist

Sample Name:

LCSD 16182005 LCSD 16182005 Original Data Path: Instrument Method: C:\Xcalibur\PFC\2016\Raw PFC DATA

Sample ID: Data File:

16JUL14-43

M\HWell_16.5minutes

Acquisition Date:

07/14/16 08:45:58 PM

Dilution Factor:

1.00 TSQ Quantum Access

C:\Xcalibur\PFC\Acquistion

Sample Type: Vial:

Unknown d:15

Instrument Model:

2.5.0.1311

Run Time(min): Injection Volume(μ1): 16.51 10.00

Instrument Software Version: Instrument Serial Number:

TQU01408

Operator:

US19_USR_INS00022

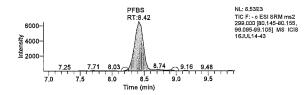
Extracted Ion Chromatogram

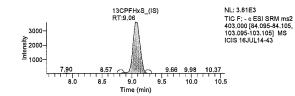
Quan Peak Table

Units	Response Ratio	ISTD Response	Response	RT	Calculated Amount	Component Name
N/A	N/A	N/A	53393.64	9.81	N/A	13C-PFNA (IS)
N/A	N/A	N/A	63318.11	9.39	N/A	13C-PFOA (IS)
N/A	N/A	N/A	33622.48	10.21	N/A	13CPFDA (IS)
N/A	N/A	N/A	40620.08	11.53	N/A	13CPFDoA (IS)
N/A	N/A	N/A	98198.27	9.10	N/A	13CPFHpA (IS)
N/A	N/A	N/A	77912.54	8.78	N/A	13CPFHxA (IS)
N/A	N/A	N/A	30459.06	9.06	N/A	13CPFHxS_(IS)
N/A	N/A	N/A	11589.08	9.78	N/A	13CPFOS_(IS)
N/A	N/A	N/A	30977.51	10.78	N/A	13CPFUdA (IS)
ng/g	2.778	30363.09	84363.05	10.85	19.818	NEtFOSAA
ng/g	3.902	31117.15	121424.97	10.50	28.767	NMeFOSAA
ng/g	2.053	30459.06	62520.90	8.42	14.409	PFBS
ng/g	2.018	33622.48	67857.11	10.21	25.452	PFDA
ng/g	1.878	40620.08	76302.54	11.49	20.571	PFDoA
ng/g	2.499	77912.54	194675.75	8.77	24.798	PFHxA
ng/g	1.619	30459.06	49299.24	9.10	14.976	PFHxS
ng/g	1.657	53393.64	88461.91	9.81	20.061	PFNA
ng/g	2.495	63318.11	157954.32	9.38	20.017	PFOA
ng/g	3.171	11589.08	36749.37	9.78	33.118	PFOS
ng/g	2.574	30977.51	79731.02	13.40	34.934	PFTeDA
ng/g	2.112	40620.08	85790.67	12.34	22.213	PFTrDA
ng/g	2.429	30977.51	75240.63	10.78	26.771	PFUdA
ng/g	2.345	98198.27	230281.79	9.09	28.391	PFhpA
N/A	N/A	N/A	31117.15	10.50	N/A	d3-NMeFOSÂA
N/A	N/A	N/A	30363.09	10.82	N/A	d5-NEtFOSAA

Component Name:

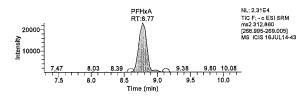
PFBS

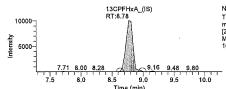




Component Name:

PFHxA



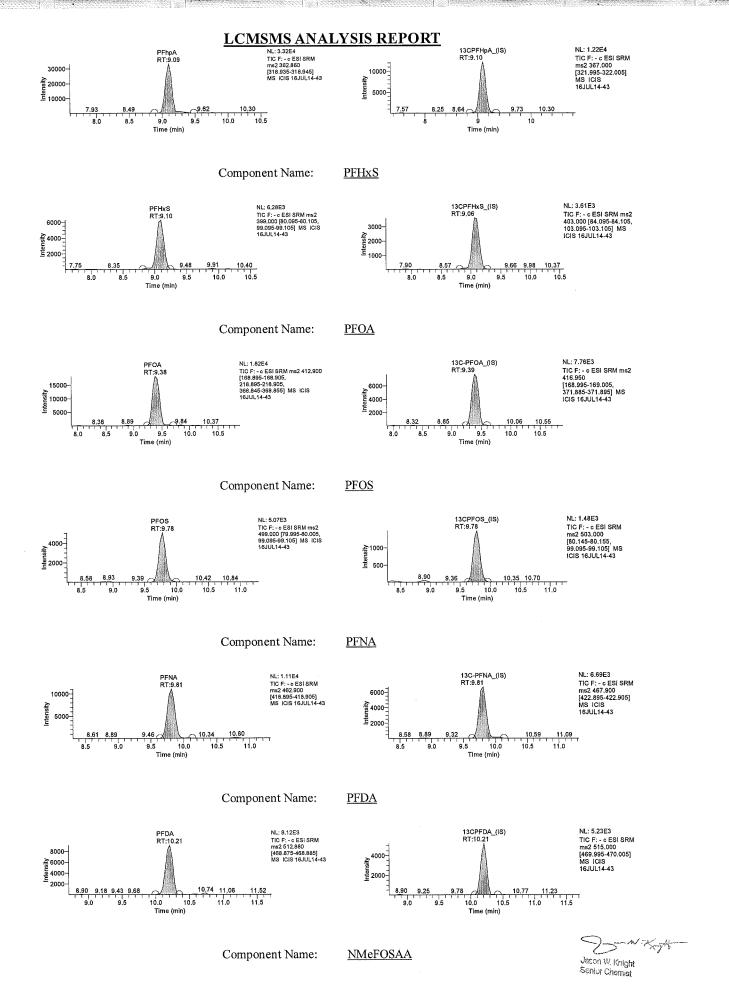


NL: 1.01E4 TIC F: - c ESI SRM ms2 314.900 [269.895-269.905] MS ICIS 16JUL14-43

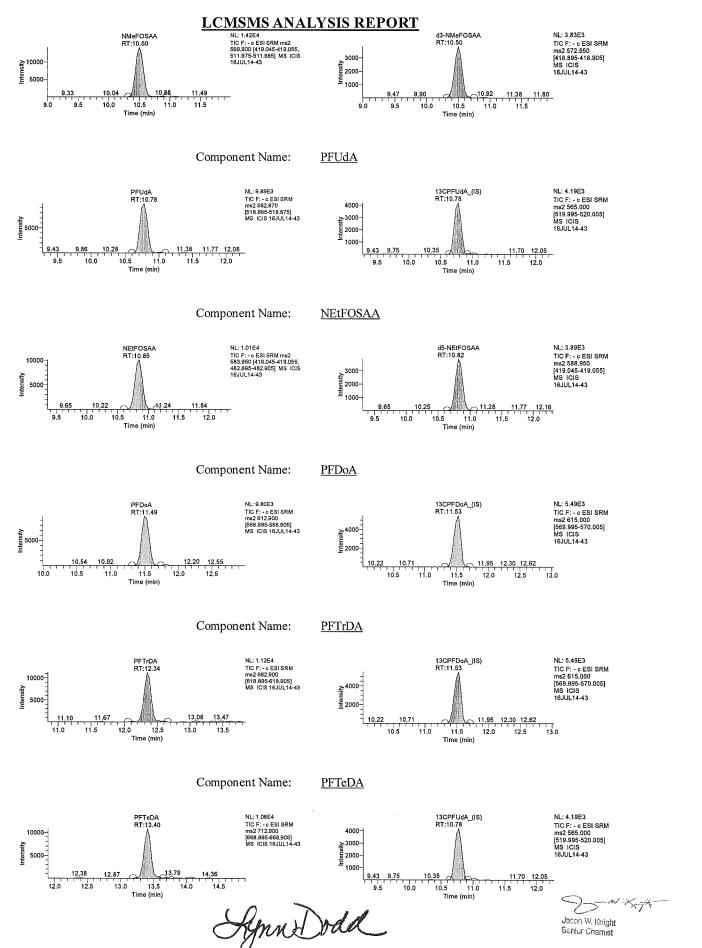
Component Name:

PFhpA

Jason W. Knight Senior Chemist



SSX50 Page 209 of 2102day, July 18, 2016, 07:24:47



JUL 1 9 2016

Preparation Logs Miscellaneous LC/MS/MS

Organic Extraction Batchlog Assigned to: 375 Robert Brown

16182005

Reviewed by: WWW Start Date: 6/30/10

Tech 1: JWK9524

Tech 2: DW 10262

Start time: 12: 15

Dept: 37	Prep Analysis: 14090 PFC Solid Prep	14090 F	PFC Solid Prep				PFC s	in Soil t	PFC s in Soil by LC/MS/MS	MS		Solvent Used	Lot No.
	Sample Amt	Amt		Amt	. (Amt FV	FV	-	-			SOIL MON: HOO	112247
၁၀	Code	(_g)	SS/IS Sol. (mL) MS Sol.	(mL)	MS Sol.	(mL) (mL)	(mL)	Нd	рн		Comments		
BLANKA	BLK182005	3.8	S.C. 235502-23A 0.70	0.70	d) N	θg		Z	Z				
LCSA	OPR182005 ്യ	3		0.76	0.10 235002-35A 0.04	0.04	-	Z	Z				
LCSDA		8.8	P	0.30	→	10.0H	,	Z	Z				

Prio	z	z	z				
Due Date	19195 07/13/2016	19195 07/13/2016	19195 07/13/2016				
List	19195	19195	19195				
Analyses	14027	14027	14027				
Comments	Cimited Samole		3				
BC	099a	099a	099a		•		
Hď	Z	Z	Z				
Hd	Z	Z	7				
FV (mL)	-	-	-				
Amt (mL)	97.0	ο Ο	5.0				
SS/IS Sol.	735001-24A						
Amt (e)	2.7O	2. 8K	3.18				
Sample Code	3122A	3124A	3123A				
Sample #	1 8450139	2 8450140	9 8450141	SX50	Page	e 212	of 212

S-bath ID Micro Temp 100? 112111212 Work Station Balance #

Documented temps are NIST corrected.

16182005

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C M-vap

C N-Evap

C S-bath ID

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DF = Dilution Factor FV = Final Volume

nternal Standard

Rack ID: