

·
Laboratory Report of Analysis
To: Alyeska Pipeline Srv Co. PO Box 196660 Anchorage, AK 99519 (907)787-8627
Report Number: 1189049
Client Project: P18-010 PFAS in PS05&PS07 Well
Dear Marina Mitchell,
Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote. If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have. Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs. Sincerely, SGS North America Inc.
Justin Nelson Date Project Manager Justin.Nelson@sgs.com

Print Date: 02/19/2018 4:25:52PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com



Case Narrative

SGS Client: Alyeska Pipeline Srv Co. SGS Project: 1189049 Project Name/Site: P18-010 PFAS in PS05&PS07 Well Project Contact: Marina Mitchell

Refer to sample receipt form for information on sample condition.

P18-010-01 (1189049001) PS

PFAS per EPA 537 was analyzed by SGS of Orlando, FL.

Field Blank-2 (1189049007) PS

PFAS per EPA 537 was analyzed by SGS of Orlando, FL.

P18-010-03 MS (1189049005) BMS

PFAS per EPA 537 and MS were analyzed by SGS of Orlando, FL.

P18-010-03 MSD (1189049006) BMSD

PFAS per EPA 537 and MSD were analyzed by SGS of Orlando, FL.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 02/19/2018 4:25:54PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com

Member of SGS Group



	Sample Summary								
Client Sample ID	Lab Sample ID	Collected	Received	<u>Matrix</u>					
P18-010-01	1189049001	02/01/2018	02/06/2018	Drinking Water					
P18-010-02	1189049002	02/01/2018	02/06/2018	Drinking Water					
Field Blank-1	1189049003	02/01/2018	02/06/2018	Drinking Water					
P18-010-03	1189049004	02/02/2018	02/06/2018	Drinking Water					
P18-010-03 MS	1189049005	02/02/2018	02/06/2018	Drinking Water					
P18-010-03 MSD	1189049006	02/02/2018	02/06/2018	Drinking Water					
Field Blank-2	1189049007	02/02/2018	02/06/2018	Drinking Water					

Method

Method Description

Print Date: 02/19/2018 4:25:58PM

Ð
<u>وا:</u>
<u>ğ</u> í`
d d
<u>ري</u>
<u>_</u>
1

-	
σ	
0	
تب	
S I	
S	
÷	
0	
c	
a	
2	
Ū	
_	

CHAIN OF CUSI	FODY RE	CORD							0			
LABORATORY:			CUSTOD	Y RECORD / REP	ORT TO:				~~~	ANALYSES EQUESTED	LAB PROJECT #:	ALYESKA PROJECT #:
SGS 200 West Potter Drive			Alyeska F Attn: Mari	^p ipeline Service Co ina Mitchell	-	189	9049	_				
Anchorage, Alaska 99 (907) 562-2343 Attn.: Justin Nelson	518		P.O. Box Anchorag FAX: (90	196660 le, AK 99519-6660 7) 787-8778							PROJECT NAME:	P18-010
SAMPLER:	Complete	record, c	Phone: (907) 787-8627 send original witl	n samples.							
LABORATORY:	On receip record wi	t of samp th report.	les, comp Notify Ar	olete record. On c nalytical Services	sompletion before dis	of analys posal of s	sis, return samples.	copy of	768 A9		PFAS in PS05	& PS07 Well Water
*Sample Type - Grab, **Matrix - water, soil, ¿	Composite air, sludge,	e, flow-we organic I	eighted, co liquid, sea	ontinuous monito a-water	ring				19 nəc		REQUESTED TURNA	ROUND TIME:
SAMPLE ID	SAMPLED BY	SAMPLE	SAMPLE	SAMPLE TO CATION	SAMPLE TYPE*	CONT- AINERS	PRESERV- ATIVE	MATRIX**	a SA∃9		RUSH TAT	REQUESTED
P18-010-01 (DA-B	SJL	2/1/18	13.07	PS07 Well Head	Grab	2 x 250 mL	<6 deg F Trizma	DW	×		2 24 - 12 - 12 24 - 12 - 12 24	
PT8-010-02	SJL	2/1/18	13:07	PS07 Well Head	Crab	2 x 250 mL	<6 deg F Trizma	MD	×		Field Dup	
Freid Blank-1 34-8	SJL	2/1/18	13:07	PS07 Well Head	Grab	2 x 250 mL	<6 deg F Trizma	MQ	×			
PT8-010-03 USBA-6	SJL	2/2/18	08:02	PS05 Well Head	Grab	6 x 250 mL	<6 deg F Trizma	MQ	×		4 × 250 ml containers fo	r MS/MSD
Field Blank-2	SJL	2/2/18	08:02	PS05 Well Head	Grab	2 x 250 mL	<6 deg F Trizma	MQ	×			
				(\$							Note: All samples	go to SGS-Orlando
	4. 1											
RELANQUISHED BY: (1)					TIME:		RECEIVED	BY:			DATE:	TIME:
JOHN LEGO	ح			81-77	16:01		L'h	22	4		3-2-12	1506
RELINQUISHED BY: (2)		$\langle V \rangle$	1	DATE	TIME: 1 U/1		RECEIVED	BY:			DATE:	TIME:
PERINGUISHED BY: (3)	7			DATE:	TIME:	2 1	RECEIVED	FOR LAB	Ul BY:		DATE: 2/6//8	TIME: 09.15
AIR BILL # (attach receit	ots):			Custody seal #	Chain of Cu Hond intact	Istody See	al (circle) absent	Thermal P Cooler Te	reserva	tion Met?	Temperature Blank:	12052
10438 Rev. 4 (11/05	2)				ANC	: (F, 1B				1 NC: 5.7	\$C)#	



FAIRBANKS SAMPLE RECEIPT FORM

Note: This form is to be completed by Fairbanks Receiving Staff for all samples

Review Criteria:	C	onditi	on:	Comments/Actions Taken
Were custody seals intact? Note # & location, if applicable.	Yes	No	NA	Exemption permitted if sampler hand
COC accompanied samples?	Yes	No	N/A	carries/delivers.
Temperature blank compliant* (i.e., 0-6°C)	Yes	No		□Exemption permitted if chilled &
If >6°C, were samples collected <8 hours ago?	Yes	No	NA	collected <8hrs ago
If <0°C, were all sample containers ice free?	Yes	No	N/A	
Cooler ID: @ w/Therm. ID: $DT5$				
Cooler ID:@w/Therm. ID:				
Cooler ID:@w/Therm. ID:				
Cooler ID:@w/Therm. ID:				
Cooler ID:@w/Therm. ID:				
If samples are received without a temperature blank, the "cooler temperature" will be				
the right. In cases where neither a temp blank nor cooler temp can be obtained note				Note: Identify containers received at
ambient () or chilled (). Please check one.				non-compliant temperature. Use form
Delivery Method: (lient (hand corrigd) Other	Trees	1-1	л. Л. Д. – – – – – – – – – – – – – – – – – –	TS-0029 if more space is needed.
Derivery Method. Chefte (Italia carried) Ouler	1 rac	King/A	₩ #:	
	Or s		icnea	
For samples received with payment note amount (than a sh	$\frac{Jr}{1}$	<u>4</u>	
Were complex in good condition (no locks (angle (hugh sec))	etner cash	/ cnec	$\frac{k}{CC}$ (cir	cle one) was received.
Dealing material used (specify all that employ Dubble Ways	Yes	No	N/A	Note: some samples are sent to Anchorage without inspection by SCS
Packing material used (specify all that apply): Bubble wrap				Fairbanks personnel.
Separate plastic bags Vermiculte Other:				-
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	No	(N/A)	
For RUSH/SHORT Hold Time , were COC/Bottles flagged	Ves	No	N/A	· · · · · · · · · · · · · · · · · · ·
accordingly? Was Rush/Short HT email sent, if applicable?	Yes	No	N/A	5-day TAT
Additional notes (if applicable):				
				()
				Ű
Profile #:	an an ann airte an ann ann ann an ann an ann an ann an	in "ana "s committe i	e deservationes de la constante	alaan oo ahalala waxaa iyo oo ahaa ahaa dhalaa ahaa ahaa ahaa ahaa ah
Note to Client: any "no" circled above indicates non-compliance v	with standard	l proce	dures and ma	y impact data quality.



e-Sample Receipt Form



Review Criteria	Condition (Yes	No, N/A		Exception	Noted be	low	
Chain of Custody / Temperature Require	rements			ion permitted if	sampler hand	d carries/deliv	vers.
Were Custody Seals intact? Note # &	location ves	1-F, 1-B					
COC accompanied sa	amples? ves	-					
n/a **Exemption permitted if	chilled & colle	cted <8 hou	rs ago, or f	or samples whe	ere chilling is r	not required	
	ves	Cooler ID:		1 @	5.7 °(Therm. ID:	D20
	n/a	Cooler ID:		@	°(CTherm. ID:	
Temperature blank compliant* (i.e., 0-6 °C afte	er CF)? n/a	Cooler ID:		@	°(CTherm. ID:	
	n/a	Cooler ID:		@	°(CTherm. ID:	
	n/a	Cooler ID:		@	°(CTherm. ID:	
*If >6°C, were samples collected <8 hours	ago? n/a					1	1
		1					
If <0°C, were sample containers ice	e free? n/a						
		1					
If samples received without a temperature blank, the	"cooler						
temperature" will be documented in lieu of the temperature b	olank &						
"COOLER TEMP" will be noted to the right. In cases where ne	either a						
cemp blank nor cooler temp can be obtained, note "ambi	chilled".						
Note: Identify containers received at non-compliant temper	rature .						
Use form FS-0029 if more space is n	leeded.						
Holding Time / Documentation / Sample Condition Re	equirements	Note: Refe	to form F-	083 "Sample G	uide" for spec	ific holding tir	mes.
vvere samples received within holding	g time? yes						
De compleo metelo COC** /i a comple De datas //incores -							
**Note: If times differ the record details a large record							
Note: In times diner < fir, record details & login per							
were analyses requested unambiguous? (i.e., method is speci analyses with >1 option for ar	nalysis)						
		n	/a <mark>***Exer</mark>	nption permitte	d for metals (e	.g,200.8/602	0A).
Were proper containers (type/mass/volume/preservative***)used? yes						
Volatile / LL-Hg Req	uirements	L					
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with sar	mples? n/a						
Were all water VOA vials free of headspace (i.e., bubbles ≤	6mm)? n/a						
Were all soil VOAs field extracted with MeOH	+BFB? n/a	L					
Note to Client: Any "No", answer above indicates no	n-compliance	with standa	d procedur	es and may im	pact data qual	lity.	
Additiona	al notes (if a	nnlicable					
		phicaple	•				



Sample Containers and Preservatives

<u>Container Id</u>	Preservative	<u>Container</u> Condition	<u>Container Id</u>	<u>Preservative</u>	<u>Container</u> Condition
1189049001-A	No Preservative Required	ОК			
1189049001-B	No Preservative Required	ОК			
1189049002-A	No Preservative Required	ОК			
1189049002-В	No Preservative Required	ОК			
1189049003-A	No Preservative Required	ОК			
1189049003-В	No Preservative Required	ОК			
1189049004-A	No Preservative Required	ОК			
1189049004-B	No Preservative Required	ОК			
1189049005-A	No Preservative Required	ОК			
1189049005-B	No Preservative Required	ОК			
1189049006-A	No Preservative Required	ОК			
1189049006-В	No Preservative Required	ОК			
1189049007-A	No Preservative Required	ОК			
1189049007-В	No Preservative Required	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and let # of the preservative added

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.



Orlando, FL

The results set forth herein are provided by SGS North America Inc.

Technical Report for

SGS North America, Inc

1189049

SGS Job Number: FA51603



Sampling Dates: 02/01/18 - 02/02/18

Report to:

SGS North America, Inc 200 W Potter Dr Anchorage, AK 99518 julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: 18



attinkin

Caitlin Brice, M.S. General Manager

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV This report shall not be reproduced, except in its entirety, without the written approval of SGS. Test results relate only to samples analyzed.

SGS North America Inc. • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-6700

e-Hardcopy 2.0 Automated Report

SGS is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited. Review standard terms at: http://www.sgs.com/en/terms-and-conditions



Table of Contents

-1-

Section 1: Sample Summary Section 2: Case Narrative/Conformance Summary	3 4
Section 3: Summary of Hits	5
Section 4: Sample Results	6
4.1: FA51603-1: P18-010-01	7
4.2: FA51603-2: P18-010-02	8
4.3: FA51603-3: FIELD BLANK-1	9
4.4: FA51603-4: P18-010-03	10
4.5: FA51603-5: FIELD BLANK-2	11
Section 5: Misc. Forms	12
5.1: Chain of Custody	13
Section 6: MS Semi-volatiles - QC Data Summaries	15
6.1: Method Blank Summary	16
6.2: Blank Spike Summary	17
6.3: Matrix Spike/Matrix Spike Duplicate Summary	18





9 of 25

Sample Summary

SGS North America, Inc

FA51603

Job No:

Sample Number	Collected Date	Time By	Received	Matr Code	іх Туре	Client Sample ID
FA51603-1	02/01/18	13:07 JS	02/07/18	DW	Drinking Water	P18-010-01
FA51603-2	02/01/18	13:07 JS	02/07/18	DW	Drinking Water	P18-010-02
FA51603-3	02/01/18	13:07 JS	02/07/18	DW	Drinking Water FB	FIELD BLANK-1
FA51603-4	02/02/18	08:02 JS	02/07/18	DW	Drinking Water	P18-010-03
FA51603-4D	02/02/18	08:02 JS	02/07/18	DW	Drinking Water Dup.	P18-010-03
FA51603-4S	02/02/18	08:02 JS	02/07/18	DW	Drinking Water MS	P18-010-03
FA51603-5	02/02/18	08:02 JS	02/07/18	DW	Drinking Water FB	FIELD BLANK-2





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	SGS	North	America.	Inc
•	000	110101	i micricu,	1110

Site: 1189049

Job No: FA51603

Report Date 2/19/2018 6:54:09 PM

3 Samples and 2 Field Blanks were collected on/between 02/01/2018 and 02/02/2018 and were received at SGS North America Inc -Orlando on 02/07/2018 properly preserved, at 2.6 Deg. C and intact. These Samples received an SGS Orlando job number of FA51603. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method EPA 537

Matrix: DWBatch ID: OP68741All samples were extracted within the recommended method holding time.All samples were analyzed within the recommended method holding time.All method blanks for this batch meet method specific criteria.Sample(s)FA51603-4MS, FA51603-4MSD were used as the QC samples indicated.FA51603-4 for Perfluorododecanoic acid: Associated ISTD outside of control limits.FA51603-4 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-4 for Perfluoroundecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluoroundecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits.FA51603-5 for Perfluorotetradecanoic acid: Associated ISTD outside of control limits

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Lovelie Metzgar, QA Officer (signature on file)

Date: February 19, 2018



Summary of Hits

Job Number:	FA51603
Account:	SGS North America, Inc
Project:	1189049
Collected:	02/01/18 thru 02/02/18

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
FA51603-1 P18-010-01					
Perfluorohexanoic acid	0.523	0.038	0.019	ug/l	EPA 537
Perfluoroheptanoic acid	0.546	0.038	0.019	ug/l	EPA 537
Perfluorooctanoic acid	0.768	0.038	0.0096	ug/l	EPA 537
Perfluorononanoic acid	0.0996	0.0077	0.0019	ug/l	EPA 537
Perfluorodecanoic acid	0.0167	0.0077	0.0038	ug/l	EPA 537
Perfluorohexanesulfonic acid	0.0133	0.0077	0.0038	ug/l	EPA 537
Perfluorooctanesulfonic acid	0.0213	0.0077	0.0019	ug/l	EPA 537
FA51603-2 P18-010-02					
Perfluorohexanoic acid	0.520	0.038	0.019	ug/l	EPA 537
Perfluoroheptanoic acid	0.555	0.038	0.019	ug/l	EPA 537
Perfluorooctanoic acid	0.753	0.038	0.0096	ug/l	EPA 537
Perfluorononanoic acid	0.110	0.0077	0.0019	ug/l	EPA 537
Perfluorodecanoic acid	0.0181	0.0077	0.0038	ug/l	EPA 537
Perfluorohexanesulfonic acid	0.0141	0.0077	0.0038	ug/l	EPA 537
Perfluorooctanesulfonic acid	0.0229	0.0077	0.0019	ug/l	EPA 537

FA51603-3 FIELD BLANK-1

No hits reported in this sample.

FA51603-4 P18-010-03

Perfluorohexanoic acid	0.0594	0.0077	0.0038	ug/l	EPA 537
Perfluoroheptanoic acid	0.0602	0.0077	0.0038	ug/l	EPA 537
Perfluorooctanoic acid	0.0738	0.0077	0.0019	ug/l	EPA 537
Perfluorononanoic acid	0.0148	0.0077	0.0019	ug/l	EPA 537
Perfluorohexanesulfonic acid	0.0227	0.0077	0.0038	ug/l	EPA 537
Perfluorooctanesulfonic acid	0.0237	0.0077	0.0019	ug/l	EPA 537

FA51603-5 **FIELD BLANK-2**

No hits reported in this sample.

ω





Orlando, FL

Section 4

Sample Results

Report of Analysis





Report	of	Anal	ysis
--------	----	------	------

Client Sam Lab Sample Matrix: Method: Project:	ple ID: P18-010 e ID: FA5160 DW - D EPA 53 1189049)-01)3-1 Prinking Wate 7 EPA 537 9	r				Date Date Perc	e Samp e Receiv cent Sol	led: ved: lids:	02/01/18 02/07/18 n/a	
	File ID	DF	Analyzed	By	Pı	rep l	Date	Prep	Batc	h Analyti	cal Batch
Run #1 Run #2	2Q11322.D 2Q11383 D	1 5	02/15/18 15:22 02/16/18 15:28	NG NG	02 02	2/13/ 2/13/	/18 09:00	OP68 OP68	3741 3741	S2Q210 S2Q211	1
	2011000.0	5	02/10/10 15:20	no	01	10	10 09.00	0100	,, 11		
	Initial Volume	Final Volu	me								
Run #1	260 ml	1.0 ml									
Run #2	260 ml	1.0 ml									
Perfluorina	ted Alkyl Acids										
CAS No.	Compound		Result	MCL	RL		MDL	Units	Q		
PERFLUO	ROALKYLCAR	BOXYLIC	ACIDS								
307-24-4	Perfluorohexan	oic acid	0.523 a		0.03	38	0.019	ug/l			
375-85-9	Perfluoroheptar	noic acid	0.546 ^a		0.03	38	0.019	ug/l			
335-67-1	Perfluorooctano	oic acid	0.768 ^a		0.03	38	0.0096	ug/l			
375-95-1	Perfluorononan	oic acid	0.0996		0.00)77	0.0019	ug/l			
335-76-2	Perfluorodecan	oic acid	0.0167		0.00)77	0.0038	ug/l			
2058-94-8	Perfluoroundec	anoic acid	ND		0.00)77	0.0038	ug/l			
307-55-1	Perfluorododec	anoic acid	ND		0.00)77	0.0038	ug/l			
72629-94-8	Perfluorotridec	anoic acid	ND		0.00)77	0.0038	ug/l			
376-06-7	Perfluorotetrad	ecanoic acid	ND		0.00)77	0.0038	ug/l			
PERFLUO	ROALKYLSUL	FONATES									
375-73-5	Perfluorobutan	esulfonic acid	ND		0.00)77	0.0038	ug/l			
355-46-4	Perfluorohexan	esulfonic acid	1 0.0133		0.00)77	0.0038	ug/l			
1763-23-1	Perfluorooctane	esulfonic acid	0.0213		0.00)77	0.0019	ug/l			
PERFLUO	ROOCTANESU	LEONAMID	OACETIC AC	TDS							
2355-31-9	MeFOSAA		ND		0.01	9	0.0077	110/1			
2991-50-6	EtFOSAA		ND		0.01	9	0.0077	ug/l			
CAS No.	Surrogate Rec	overies	Run# 1	Run#	2	Lir	nits				
	13C2-PFHxA		106%	126%		70-	130%				
	13C2-PFDA		86%	101%		70-	130%				
	d5-EtFOSAA		99%	115%		70-	130%				

(a) Result is from Run# 2

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

14 of 25

SGS

N = Indicates presumptive evidence of a compound



Page 1 of 1

4

Report	of	Anal	ysis
--------	----	------	------

Client Samj Lab Sample Matrix: Method: Project:	ple ID: P18-010 PID: FA5160 DW - D EPA 53 1189049)-02)3-2)rinking Wate 7 EPA 537 9	21	r					Date Sampled: Date Received: Percent Solids:					
	File ID	DF	Analyzed	By	Pr	ep l	Date	Prep	Batc	h Ana	alytical Batch			
Run #1 Run #2	2Q11323.D	1	02/15/18 15:43	NG	02	2/13/	18 09:00	OP68	741	S2Q	210			
Kull #2	2Q11364.D	5	02/10/18 13:49	NG	02	/ 13/	18 09:00	OP08	/41	320	211			
	Initial Volume	Final Volu	me											
Run #1	260 ml	1.0 ml												
Run #2	260 ml	1.0 ml												
Perfluorina	ted Alkyl Acids													
CAS No.	Compound		Result	MCL	RL		MDL	Units	Q					
PERFLUO	ROALKYLCAR	BOXYLIC	ACIDS											
307-24-4	Perfluorohexan	oic acid	0.520 ^a		0.03	8	0.019	ug/l						
375-85-9	Perfluoroheptar	noic acid	0.555 a		0.03	8	0.019	ug/l						
335-67-1	Perfluorooctanc	bic acid	0.753 a		0.038 0.0096		0.0096	ug/l						
375-95-1	Perfluorononan	oic acid	0.110		0.00	77	0.0019	ug/l						
335-76-2	Perfluorodecan	oic acid	0.0181		0.00	77	0.0038	ug/l						
2058-94-8	Perfluoroundec	anoic acid	ND		0.00	77	0.0038	ug/l						
307-55-1	Perfluorododec	anoic acid	ND		0.00	77	0.0038	ug/l						
72629-94-8	Perfluorotrideca	anoic acid	ND		0.00	77	0.0038	ug/l						
376-06-7	Perfluorotetrade	ecanoic acid	ND		0.00	77	0.0038	ug/l						
PERFLUO	ROALKYLSULI	FONATES												
375-73-5	Perfluorobutane	esulfonic acid	1 ND		0.00	77	0.0038	ug/l						
355-46-4	Perfluorohexan	esulfonic aci	d 0.0141		0.00	77	0.0038	ug/l						
1763-23-1	Perfluorooctane	esulfonic acid	0.0229		0.00	77	0.0019	ug/l						
PERFLUO	ROOCTANESU	LEONAMI	DACETIC AC	TDS										
2355-31-9	MeFOSAA		ND	100	0.01	9	0.0077	119/1						
2991-50-6	EtFOSAA		ND		0.01	9	0.0077	ug/l						
CAS No.	Surrogate Reco	overies	Run# 1	Run#	2	Lir	nits							
	13C2-PFHxA		115%	122%		70-	130%							
	13C2-PFDA		94%	105%		70-	130%							
	d5-EtFOSAA		111%	114%		70-	130%							

(a) Result is from Run# 2

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

SGS North America Inc.

			Report	of A	nalysis	5			Page 1 of 1			
Client Sam Lab Sample Matrix: Method: Project:	ple ID: FIELD e ID: FA5160 DW - D EPA 53 1189049	D: FIELD BLANK-1 FA51603-3 Date Sampled DW - Drinking Water FB Date Received EPA 537 EPA 537 Percent Solid 1189049							: 02/01/18 : 02/07/18 : n/a			
Run #1 Run #2	File ID 2Q11324.D	DF 1	Analyzed 02/15/18 16:04	By NG	Prep 02/13	Date /18 09:00	Prep OP68	Batch 3741	Analytical Batch S2Q210			
Run #1 Run #2	Initial Volume 260 ml	Final Volu 1.0 ml	me									
Perfluorina	nted Alkyl Acids											
CAS No.	Compound		Result	MCL	RL	MDL	Units	Q				
PERFLUO	ROALKYLCAR	BOXYLIC	ACIDS									
307-24-4	Perfluorohexan	oic acid	ND		0.0077	0.0038	ug/l					
375-85-9	Perfluorohepta	noic acid	ND		0.0077	0.0038	ug/l					
335-67-1	Perfluorooctan	oic acid	ND		0.0077	0.0019	ug/l					
375-95-1	Perfluorononan	oic acid	ND		0.0077	0.0019	ug/l					
335-76-2	Perfluorodecan	oic acid	ND		0.0077	0.0038	ug/l					
2058-94-8	Perfluoroundec	anoic acid	ND		0.0077	0.0038	ug/l					
307-55-1	Perfluorododec	anoic acid	ND		0.0077	0.0038	ug/l					
72629-94-8	Perfluorotridec	anoic acid	ND		0.0077	0.0038	ug/l					
376-06-7	Perfluorotetrad	ecanoic acid	ND		0.0077	0.0038	ug/l					
PERFLUO	ROALKYLSUL	FONATES										
375-73-5	Perfluorobutan	esulfonic acid	l ND		0.0077	0.0038	ug/l					
355-46-4	Perfluorohexan	esulfonic acid	d ND		0.0077	0.0038	ug/l					
1763-23-1	Perfluorooctan	esulfonic acid	ND		0.0077	0.0019	ug/l					
PERFLUO	ROOCTANESU	LFONAMIE	OACETIC AC	CIDS								
2355-31-9	MeFOSAA		ND		0.019	0.0077	ug/l					
2991-50-6	EtFOSAA		ND		0.019	0.0077	ug/l					
CAS No.	Surrogate Rec	overies	Run# 1	Run#	2 Li	mits						

No. Surrogate Recoveries	Run# 1	Run# 2	Limits
13C2-PFHxA	117%		70-130%
13C2-PFDA	89%		70-130%
d5-EtFOSAA	110%		70-130%

ND = Not detectedMDL = Method Detection Limit MCL = Maximum Contamination Level (40 CFR 141) E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



FA51603

9 of 18

4.3

Report of Analysis

Client Samj Lab Sample Matrix: Method: Project:	ple ID: P18-010 e ID: FA5160 DW - D EPA 53 1189049	0-03)3-4 9rinking Wate 7 EPA 537 9	er			Date Date Perc	e Sampl e Receiv cent Sol	led: ved: lids:	02/02/18 02/07/18 n/a
Run #1 Run #2	File ID 2Q11325.D	DF 1	Analyzed 02/15/18 16:25	By NG	Prep 02/13	Date 3/18 09:00	Prep OP68	Batc 3741	h Analytical Batch S2Q210
Run #1 Run #2	Initial Volume 260 ml	Final Volu 1.0 ml	me						
Perfluorina	ted Alkyl Acids								
CAS No.	Compound		Result	MCL	RL	MDL	Units	Q	
PERFLUO	ROALKYLCAR	BOXYLIC	ACIDS						
307-24-4	Perfluorohexan	oic acid	0.0594		0.0077	0.0038	uø/1		
375-85-9	Perfluoroheptar	noic acid	0.0602		0.0077	0.0038	ug/1		
335-67-1	Perfluorooctano	bic acid	0.0738		0.0077	0.0019	ug/l		
375-95-1	Perfluorononan	oic acid	0.0148		0.0077	0.0019	ug/l		
335-76-2	Perfluorodecan	oic acid	ND		0.0077	0.0038	ug/l		
2058-94-8	Perfluoroundec	anoic acid ^a	ND		0.0077	0.0038	ug/l		
307-55-1	Perfluorododec	anoic acid ^a	ND		0.0077	0.0038	ug/l		
72629-94-8	Perfluorotrideca	anoic acid ^a	ND		0.0077	0.0038	ug/l		
376-06-7	Perfluorotetrad	ecanoic acid	a ND		0.0077	0.0038	ug/l		
PERFLUO	ROALKYLSUL	FONATES							
375-73-5	Perfluorobutane	esulfonic acid	l ND		0.0077	0.0038	ug/l		
355-46-4	Perfluorohexan	esulfonic acid	d 0.0227		0.0077	0.0038	ug/l		
1763-23-1	Perfluorooctane	esulfonic acid	0.0237		0.0077	0.0019	ug/l		
PERFLUO	ROOCTANESU	LFONAMID	OACETIC AC	CIDS					
2355-31-9	MeFOSAA		ND		0.019	0.0077	ug/l		
2991-50-6	EtFOSAA		ND		0.019	0.0077	ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run#	2 L	imits			
	13C2-PFHxA		115%		70	0-130%			
	13C2-PFDA		88%		70)-130%			
	d5-EtFOSAA		105%		70)-130%			

(a) Associated ISTD outside of control limits.

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

SGS North America Inc.

			Report	of A	nalysi	is			Page 1 of 1	
Client Samp Lab Sample Matrix: Method: Project:	ple ID: FIELD I 2 ID: FA51602 DW - D EPA 537 1189049	er FB			Dat Dat Pere	e Samp e Recei cent Sol	led: ved: lids:	02/02/18 02/07/18 n/a		
Run #1 Run #2	File ID 2Q11328.D	DF 1	Analyzed 02/15/18 17:30	By NG	Prep 02/1	Date 3/18 09:00	Prep OP68	Bate 3741	h Analytical Batch S2Q210	
Run #1 Run #2	Initial Volume 260 ml	Final Volu 1.0 ml	me							
Perfluorina	ted Alkyl Acids									
CAS No.	Compound		Result	MCL	RL	MDL	Units	Q		
PERFLUO	ROALKYLCAR	BOXYLIC	ACIDS							
307-24-4	Perfluorohexano	oic acid	ND		0.0077	0.0038	ug/l			
375-85-9	Perfluoroheptan	oic acid	ND		0.0077	0.0038	ug/l			
335-67-1	Perfluorooctano	ic acid	ND		0.0077	0.0019	ug/l			
375-95-1	Perfluorononano	oic acid	ND		0.0077	0.0019	ug/l			
335-76-2	Perfluorodecano	bic acid	ND		0.0077	0.0038	ug/l			
2058-94-8	Perfluoroundeca	anoic acid ^a	ND		0.0077	0.0038	ug/l			
307-55-1	Perfluorododeca	anoic acid ^a	ND		0.0077	0.0038	ug/l			
72629-94-8	Perfluorotrideca	noic acid ^a	ND		0.0077	0.0038	ug/l			
376-06-7	Perfluorotetrade	ecanoic acid	a ND		0.0077	0.0038	ug/l			
PERFLUOI	ROALKYLSULH	FONATES								
375-73-5	Perfluorobutane	sulfonic acid	d ND		0.0077	0.0038	ug/l			
355-46-4	Perfluorohexane	esulfonic aci	d ND		0.0077	0.0038	ug/l			
1763-23-1	Perfluorooctane	sulfonic acid	d ND		0.0077	0.0019	ug/l			
PERFLUO	ROOCTANESUI	LFONAMI	DOACETIC AC	TDS						
2355-31-9	MeFOSAA		ND		0.019	0.0077	ug/l			
2991-50-6	EtFOSAA		ND		0.019	0.0077	ug/l			
CAS No.	Surrogate Reco	overies	Run# 1	Run#	2 L	imits				
	13C2-PFHxA		121%		7	0-130%				
	13C2-PFDA		95%		7	0-130%				
	d5-EtFOSAA		117%		7	0-130%				

(a) Associated ISTD outside of control limits.

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Orlando, FL

Section 5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody

G





SGS North America Inc. CHAIN OF CUSTODY RECORD



http://www.sgs.com/terms and conditions.htm

Locations Nationwide

www.us.sgs

Florida

Colorado

North Carolina Virginia Louisiana .com

CLIENT:	SGS North Am	erica Inc Alas	ka Division		SGS	Refere	nce:		SGS Orlando, FL						
CONTACT:	Julie Shumway	PHONE NO:	(907) 56	2-2343	Additi reque	ional Co sted.	omment	is: A	ll soils	repo	rt oul	in dry	weight unles	s otherwise	Page 1 of 1
PROJECT	1189049	PWSID#:			#	Preserv- ative			_						
NAME:	1100010	NPDL#:			C O	Used:	400								
REPORTS TO):	E-MAIL:	Julie,Shumwa	iy@sqs.com	N T	TYPE C = COMP	537								
INVOICE TO:		QUOTE #:			î	G = GRAB	EPA								
	SGS - Alaska	P.O. #:	1189	049	N E	incre- mental	2 ber								
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME	MATRIX/ MATRIX	R S	Soila	PFA:				MS	MSD	SGS lab #	Loc ID	REMARKS
	P18-010-01	2/1/2018	1307	DW	2	GRAB	x						1189049001	PS07 Well He	ad
2	P18-010-02	2/1/2018	1307	DW	2	GRAB	Х						1189049002	PS07 Well He	ad
3	Field Blank-1	2/1/2018	1307	DW	2	GRAB	x						1189049003	PS07 Well He	ad
L	P18-010-03	2/2/2018	802	DW	2	GRAB	x						1189049004	PS05 Well He	ad
	P18-010-03 MS	2/2/2018	802	DW	2	GRAB	X				Х		1189049005	PS05 Well He	ad
10228 4 560	P18-010-03 MSD	2/2/2018	802	DW	2	GRAB	Х					X	1189049006	PS05 Well He	ad
5	Field Blank-2	2/2/2018	802	DW	2	GRAB	X						1189049007	PS05 Well He	ad
												_			
250 000									_						
61293.23												1			
Relinquished Mm	By: (1) - Um N(W	Date 2/6/18	тіте 10:06	Received B	iy: IPS				DOD I Report Cooler I	Project to DL (D:	J Flag]YE\$ s) □	⊡ NO	Data Deliveral	ole Requirements: 2 + Excel EDD
Relinquished	By: (2)	Date	Time	Received B	íy:			L	Reques	ted Tu	rnarou	und Tim	e and-or Special	Instructions:	
	UPS											5	Day RUSH. 5.0	Non-DOD	
Relinquished	i By: (3)	Date	Time	Received B	iy:	,		- I					Heport in	ug/∟ Exercite and the former of the former	anta antimana antici atabatika
				1,					Temp B	llank °	c:	2.6		Chain of Cu	istody Seal: (Circle)
Relinquished	l By: (4)	Date	Time	Received F		ratory By 62/o=	: 111 7/18	5			or A	mbient	ť)		BROKEN ABSENT

[X] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-530 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

1189049_PFAS_2.6.18.xls

FA51603: Chain of Custody Page 1 of 2







SGS Sample Receipt Summary

Job Number: FA	51603	Client:	SGS	Project: 118	9049			
Date / Time Received: 2/7	/2018 11:15:00	AM	Delivery Method:	UPS Airbill #'s: 12	za8619w0	1646156	51	
Therm ID: IR 1;			Therm CF: 0.4;	# o	of Coolers	: 1		
Cooler Temps (Raw Mea	asured) °C: C	ooler 1: (2.2);					
Cooler Temps (Cor	rected) °C: C	ooler 1: (2.6);					
Cooler Information	Y	or N	I	Sample Information		Y or	N	_N/A_
1. Custody Seals Present				1. Sample labels present on bottles		✓		
2. Custody Seals Intact	\checkmark			2. Samples preserved properly		\checkmark		
 Temp criteria achieved Cooler temp verification Cooler media 	☑ IR Gur	[Sufficient volume/containers recvd for an Condition of sample Constant according to the UT 	nalysis:	✓		
5. Cooler media	ICE (Ba	<u>(g)</u>		5. Sample recvd within H I				
Trip Blank Information	Υc	or N	N/A	7 VOCs have headspace	e Labei			
1. Trip Blank present / coole	r 🗌			8. Bottles received for unspecified tests				
2. Trip Blank listed on COC			\checkmark	9. Compositing instructions clear				\checkmark
3. Type Of TB Received	w	<u>or S</u>	N/A_ ☑	10. Voa Soil Kits/Jars received past 48hrs' 11. % Solids Jar received? 12. Residual Chlorine Present?	?			V V
Misc. Information Number of Encores: 25 Test Strip Lot #s: Residual Chlorine Test Str	-Gram pH 0-3 _ rip Lot #:	_ 5-Gram 	Num 5 pH	ber of 5035 Field Kits: Nun I 10-12219813A Oth	nber of Lab ler: (Specif	Filtered M	Metals:	
Comments								
SM001 Tech Rev. Date 05/24/17	nnician: <u>SHAYI</u>	AP	Date: <u>2/7/2018</u> 1	1:15:00 AM Reviewer: P.H			Date:	2/7/2018

FA51603: Chain of Custody Page 2 of 2



5.1

() U



Orlando, **FL**

Section 6

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

Job Number:	FA51603
Account:	SGSAKA SGS North America, Inc
Project:	1189049

	Sample OP68741-MB	File ID 2Q11321.D	DF 1	Analyzed 02/15/18	By NG	Prep Date 02/13/18	Prep Batch OP68741	Analytical Batch S2Q210
--	----------------------	-----------------------------	----------------	--------------------------	-----------------	---------------------------	------------------------------	----------------------------

The QC reported here applies to the following samples:

Method: EPA 537

FA51603-1, FA51603-2, FA51603-3, FA51603-4, FA51603-5

CAS No.	Compound	Result	RL	MDL	Units	Q
307-24-4	Perfluorohexanoic acid	ND	0.0080	0.0040	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0080	0.0040	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0080	0.0020	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0080	0.0020	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0080	0.0040	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0080	0.0040	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0080	0.0040	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0080	0.0040	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0080	0.0040	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0080	0.0040	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0080	0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.020	0.0080	ug/l	
2991-50-6	EtFOSAA	ND	0.020	0.0080	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	116%	70-130%
	13C2-PFDA	98%	70-130%
	d5-EtFOSAA	112%	70-130%



Blank Spike Summary

Job Number:	FA51603
Account:	SGSAKA SGS North America, Inc
Project:	1189049

	Sample OP68741-BS	File ID 2Q11320.D	DF 1	Analyzed 02/15/18	By NG	Prep Date 02/13/18	Prep Batch OP68741	Analytical Batch S2Q210
--	----------------------	-----------------------------	----------------	--------------------------	-----------------	---------------------------	------------------------------	----------------------------

The QC reported here applies to the following samples:

Method: EPA 537

FA51603-1, FA51603-2, FA51603-3, FA51603-4, FA51603-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
307-24-4	Perfluorohexanoic acid	0.08	0.0839	105	70-130
375-85-9	Perfluoroheptanoic acid	0.08	0.0821	103	70-130
335-67-1	Perfluorooctanoic acid	0.08	0.0856	107	70-130
375-95-1	Perfluorononanoic acid	0.08	0.0862	108	70-130
335-76-2	Perfluorodecanoic acid	0.08	0.0804	101	70-130
2058-94-8	Perfluoroundecanoic acid	0.08	0.0822	103	70-130
307-55-1	Perfluorododecanoic acid	0.08	0.0757	95	70-130
72629-94-8	Perfluorotridecanoic acid	0.08	0.0745	93	70-130
376-06-7	Perfluorotetradecanoic acid	0.08	0.0739	92	70-130
375-73-5	Perfluorobutanesulfonic acid	0.08	0.0721	90	70-130
355-46-4	Perfluorohexanesulfonic acid	0.08	0.0824	103	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.08	0.0733	92	70-130
2355-31-9	MeFOSAA	0.08	0.0892	112	70-130
2991-50-6	EtFOSAA	0.08	0.0902	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA 13C2-PFDA	110% 110%	70-130% 70-130%
	d5-EtFOSAA	110%	70-130%

Page 1 of 1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	FA51603
Account:	SGSAKA SGS North America, Inc
Project:	1189049

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68741-MS	2Q11326.D	1	02/15/18	NG	02/13/18	OP68741	S2Q210
OP68741-MSD	2Q11327.D	1	02/15/18	NG	02/13/18	OP68741	S2Q210
FA51603-4	2Q11325.D	1	02/15/18	NG	02/13/18	OP68741	S2Q210

The QC reported here applies to the following samples:

Method: EPA 537

FA51603-1, FA51603-2, FA51603-3, FA51603-4, FA51603-5

117%

92%

113%

CAS No.	Compound	FA51603-4 ug/l Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
307-24-4	Perfluorohexanoic acid	0.0594	0.0769	0.149	116	0.0769	0.150	118	1	70-130/30
375-85-9	Perfluoroheptanoic acid	0.0602	0.0769	0.153	121	0.0769	0.150	117	2	70-130/30
335-67-1	Perfluorooctanoic acid	0.0738	0.0769	0.162	115	0.0769	0.160	112	1	70-130/30
375-95-1	Perfluorononanoic acid	0.0148	0.0769	0.0998	111	0.0769	0.0978	108	2	70-130/30
335-76-2	Perfluorodecanoic acid	ND	0.0769	0.0710	92	0.0769	0.0712	93	0	70-130/30
2058-94-8	Perfluoroundecanoic acid	ND	0.0769	0.0816	106	0.0769	0.0793	103	3	70-130/30
307-55-1	Perfluorododecanoic acid	ND	0.0769	0.0819	106	0.0769	0.0799	104	2	70-130/30
72629-94-8	Perfluorotridecanoic acid	ND	0.0769	0.0801	104	0.0769	0.0782	102	2	70-130/30
376-06-7	Perfluorotetradecanoic acid	ND	0.0769	0.0833	108	0.0769	0.0818	106	2	70-130/30
375-73-5	Perfluorobutanesulfonic acid	ND	0.0769	0.0861	112	0.0769	0.0855	111	1	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0227	0.0769	0.112	116	0.0769	0.111	115	1	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0237	0.0769	0.0992	98	0.0769	0.0974	96	2	70-130/30
2355-31-9	MeFOSAA	ND	0.0769	0.0752	98	0.0769	0.0815	106	8	70-130/30
2991-50-6	EtFOSAA	ND	0.0769	0.0786	102	0.0769	0.0848	110	8	70-130/30
CAS No.	Surrogate Recoveries	MS	MSD	FA5	1603-4	Limits				

114%

107%

88%

115%

88%

105%

70-130%

70-130%

70-130%

ດ

Page 1 of 1

25 of

13C2-PFHxA

13C2-PFDA

d5-EtFOSAA