



2045 Mills Road West

TEL: (250) 655-5800

Sidney, BC, Canada V8L5X2

TOLL-FREE: 1-888-373-0881

SGS AXYS Client No.: 4066

Client Address: Tetra Tech, Inc. - Pacific Guardian Ctr.
737 Bishop St., Suite 2340, Mauka Tower
Honolulu, HI, US, 96813-3201

The SGS AXYS contact for these data is Dale Robinson.

"This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

"The sample(s) to which the findings recorded herein (the "Findings") relate was[were] drawn and [or] provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is[are] said to be extracted."

BATCH SUMMARY

Batch ID:	WG82066	Date:	23-Aug-2022
Analysis Type:	Per- and Polyfluoroalkyl Substances (PFAS)	Matrix Type:	Aqueous
BATCH MAKEUP			
Contract:	4066	Blank:	WG82066-101
Samples:			
L35976-2	SIWWTP-BIOS-1A (FA89217-1) - SPLP		
L35976-3	LIWWTP-BIOS-1A (FA89217-2) - SPLP		
L35976-4	LIWWTP-BIOS-1A (FA89217-2) - SPLP_DUP		
L35976-5	HIWWTP-BIOS-1 (FA89217-5) - SPLP		
L35976-6	KIWWTP-BIOS-1A (FA89217-6) - SPLP		
		Reference or Spike:	WG82066-102 WG82066-103
		Duplicate:	
Comments: <ol style="list-style-type: none"> 1. Data are considered final. 2. All samples (listed above) were filtered prior to extraction and instrumental analysis. The results reported for all samples represent the dissolved phase for all samples and were reported as the acid form for all target analytes. 3. For the laboratory procedural blank sample (SGS AXYS ID: WG82066-101), the target analytes PFHxA and PFOA were both detected above the method criteria limits. Where the same compounds were detected in another sample at a concentration less than 10 times larger, the results were flagged with a 'B'. Data are not blank corrected and should be taken into consideration during data review and interpretation. 4. Blank data should be evaluated against specifications using the same blank sample size as the size of the client samples. 5. For the OPR and low level OPR samples (SGS AXYS IDs: WG82066-102 and -103), the percent recoveries for the target analyte NFDHA were above the upper method criteria limit (130%) and were flagged with an 'N'. The same compound was not detected in any of the field samples. 6. For some samples, the percent recovery for some surrogate compounds did not meet the minimum signal to noise requirement or was below 1%. The results for both the surrogate compound and related target analyte were deemed to be not quantifiable and were flagged as 'NQ'. Where the percent recovery for a surrogate compound was below 10%, the result for the related target analytes were flagged with an 'H'. In all other cases, where the percent recovery for a surrogate compound did not meet the method criteria limit, the result was flagged with a 'V'. As the isotope dilution method of quantification produces data that is recovery corrected, these variances from method criteria were deemed to not affect the quantification of the target analytes. Percent surrogate recoveries are used as general method performance indicator only. 			

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February 2017

FQA-006 Rev. 4. 20-Sep-2013

SGS AXYS

FA89217

CHAIN OF CUSTODY

2045 Mills Road West TEL: (250) 655-5800 TOLL FREE 1-888-373-0881
 Sidney, British Columbia, Canada V8L 5X2 FAX: (250) 655-5811

SGS AXYS CLIENT #: 4066

REPORT TO:			INVOICE TO:			ANALYSIS REQUESTED				
Company	Hawaii DOH - HEER Office		Company	Tetrattech		PFAS - MLA IIO	TDP - MLA III	TDF - CIC	SPLP	
Address	2385 Waimano Home Rd #100 Pearl City, HI 96782		Address	737 Bishop St Ste 2340 Honolulu HI 96813						
Contact	Diana Felton		Contact	Eric Jensen						
Phone	808-586-0963		Phone	808-225-7084						
FAX			FAX							
E-mail	Liana.felton@doh.hawaii.gov		E-mail	eric.jensen@tetrattech.com						
Project Name/Number: HDOH-PFAS-MM/			Sampler's Name: Signature:							
Client Sample Identification	Matrix	Sampling Date	Sampling Time	Container Type/No.	SGS AXYS Lab Sample ID (Lab use only)					
SIWWTP-BIOS-1A	bio.solid	8/31/21	9:00pm	HDP Bag		X	X	X	X	(1)
LIWWTP-BIOS-1A	"	9/2/21	2:00pm	"		X	X		X	(2)
LIWWTP-BIOS-1B	"	9/2/21	2:00pm	"		X				(3)
LIWWTP-BIOS-1C	"	9/2/21	2:00pm	"		X				(4)
HIWWTP-BIOS-1	"	9/7/21	1:30pm	"		X	X		X	(5)
KIWWTP-BIOS-1A	"	9/14/21	1:30pm	"		X	X		X	(6)
KIWWTP-BIOS-1B	"	9/14/21	1:30pm	"		X				(7)
KIWWTP-BIOS-1C	"	9/14/21	1:30pm	"		X				(8)
Relinquished by (Signature)			Date	Time	Received by (Signature)	Courier		Waybill No.		
FX			9/21/21	10:00am	FX					
Relinquished by (Signature)			Date	Time	Received by (Signature)	Sample Receipt				
FX					9/23/21					
Remarks						Cooler				
INITIAL ASSESSMENT SP 23.4 TRI NO ICE						Temp °C				
LABEL VERIFICATION						Custody Seal #				
						Seal Intact Y/N				
						Sample Tags Y/N				



SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
 TEL 407-425-6700 FAX 407-425-0707
 www.sgs.com

SGS - ORLANDO JOB #: FA8 PAGE 1 OF 1

Client / Reporting Information				Project Information				SGS - ORLANDO Quote #										SKIFF #					
Hawaii DOH HEER Office				Project Name:				Analytical Information										Matrix Codes					
Address:				Street				TOP MLA 111 (raw aliquots) PFAS MLA 110 (dried and ground aliquots) TOF by CIC PFAS by SPLP										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid					
City: State: FL Zip:				City State																			
Project Contact: Diane Felton				Project #																			
808-586-0963				Fax #																			
Sampler(s) Name(s) (Printed)				Client Purchase Order #																			
Sampler 1: Sampler 2:																							
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	TOP MLA 111 (raw aliquots)	PFAS MLA 110 (dried and ground aliquots)	TOF by CIC	PFAS by SPLP	LAB USE ONLY			
1	FA89217-1				solid	8										1	2	1	4				
2	FA89217-2				solid	7										1	1		4				
3	FA89217-3				solid	1										3	1						
4	FA89217-4				solid	1										1	1						
5	FA89217-5				solid	7										1	1		4				
6	FA89217-6				solid	7										1	1		4				
7	FA89217-7				solid	1										1	1						
8	FA89217-8				solid	1										1	1						
	Leachate Blank																		4				
	Leachate Duplicate																		4				
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks															
10 Day (Business) Approved By: / Date: 7 Day 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other Rush TIA Data Available VIA Email or Lablink				<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S				MLA 111 2 x 5gr Raw aliquots (not dried) (Bottles sent for all samples) MLA 110 small jar dried and ground TOF by CIC (100gr aliquot) SPLP PFAS (2 x 500ml, 2 x 60ml) Remaining Dried Sample sent for Archival Remaining Wet sent for spare															
Relinquished by Sampler/Affiliation				Date Time:				Received By/Affiliation				Relinquished By/Affiliation				Date Time:				Received By/Affiliation			
1 Norman Farmer				10/11/2021				2				3				14 Oct 2021 12:00				4			
Relinquished by/Affiliation				Date Time:				Received By/Affiliation				Relinquished By/Affiliation				Date Time:				Received By/Affiliation			
5								6				7				8							

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

FA89217.xls Rev 031318

http://www.sgs.com/en/terms-and-conditions

SPLP SAMPLE PREP SHEET

Scan as: SPLPE MMDDYY

Tumbler ID RPM (28-32)

CP 10/06/21

** M = Metals, SO = Semivolatile Organics, GN = Cyanide or Nutrients

Accepted By: Date: 10/7/21

splp sample prep sheet 011817.xls

L35976

Client ID	Axys ID
SPLP BLANK	L35976-1
SIWWTP-BIOS-1A (FA89217-1) - SPLP	L35976-2
SIWWTP-BIOS-1A (FA89217-2) - SPLP	L35976-3
SIWWTP-BIOS-1A (FA89217-2) - SPLP_DUP	L35976-4
SIWWTP-BIOS-1A (FA89217-5) - SPLP	L35976-5
SIWWTP-BIOS-1A (FA89217-6) - SPLP	L35976-6
	LIWWTP-BIOS-1A (FA89217-2) - SPLP
	LIWWTP-BIOS-1A (FA89217-2) - SPLP_DUP
	HIWWTP-BIOS-1 (FA89217-5) - SPLP
	KIWWTP-BIOS-1A (FA89217-6) - SPLP

(IDs corrected by DPR 23-Dec-21)

12:00

14-Oct-2021

Received by: 

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
SIWWTP-BIOS-1A (FA89217-1) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)

Contract No.: 4066

Lab Sample I.D.:

L35976-2 R

Matrix: AQUEOUS

Sample Size: 0.493 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:39:00

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 22

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA	H	18.9	3.49 (S)		1.006
PFPeA		21.9	0.812 (Q)		1.001
PFHxA		34.1	0.582 (S)	5.08	1.000
PFHpA		2.70	0.406 (Q)	2.24	1.001
PFOA	B	6.83	0.406 (Q)	1.90	
PFNA	J	1.49	0.406 (Q)	3.09	
PFDA	J	1.05	0.406 (Q)	3.81	1.000
PFUnA	U		0.406 (Q)		
PFDaA	U		0.325 (Q)		
PFTTrDA	U		0.406 (Q)		
PFTeDA	U		0.406 (Q)		
PFBS	U		0.743 (S)		
PFPeS	R	5.18	0.716 (S)	10.9	0.878
PFHxS	R	2.70	0.570 (S)	46.6	
PFHpS	U		0.531 (S)		
PFOS		10.9	0.406 (Q)	2.72	
PFNS	U		0.406 (Q)		
PFDS	U		0.406 (Q)		
PFDoS	U		0.406 (Q)		
4:2 FTS	NQ				
6:2 FTS		35.7	1.46 (Q)	0.42	1.000
8:2 FTS	U		1.38 (Q)		
PFOSA	J	0.438	0.406 (Q)		
N-MeFOSA	U		0.406 (Q)		
N-EtFOSA	U		1.14 (Q)		
MeFOSAA	U		0.406 (Q)		
EtFOSAA	U		0.406 (Q)		
N-MeFOSE	U		4.06 (Q)		
N-EtFOSE	U		4.06 (Q)		
HFPO-DA	U		1.62 (Q)		
ADONA	U		1.62 (Q)		
9CI-PF3ONS	U		1.63 (Q)		
11CI-PF3OUdS	U		1.63 (Q)		
3:3 FTCA	U		1.68 (S)		
5:3 FTCA		419	10.2 (Q)	1.23	1.050
7:3 FTCA	J	14.6	10.2 (Q)	0.57	1.363
PFEESA	U		0.406 (Q)		
PFMPA	U		0.812 (Q)		

PFMBA	U	0.406 (Q)
NFDHA	U	3.56 (S)

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; R = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; B = analyte found in the associated blank and concentration in sample is less than 10X the concentration in the associated blank; J = concentration less than limit of quantification; H = concentration is estimated; NQ = data not quantifiable.

(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Andrew Porat_____

SGS AXYS METHOD MLA-110 Rev 02

Form 2

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
SIWWTP-BIOS-1A (FA89217-1) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)

Contract No.: 4066

Lab Sample I.D.:

L35976-2 R

Matrix: AQUEOUS

Sample Size: 0.493 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:39:00

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 22

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELLED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA	V	40.0	1.09	2.73		0.997
13C5-PFPeA	V	20.0	2.47	12.3		0.877
13C5-PFHxA	V	10.0	3.67	36.7	20.4	1.000
13C4-PFHpA		10.0	6.48	64.8		0.888
13C8-PFOA		10.0	8.12	81.2		1.000
13C9-PFNA		5.00	4.19	83.9		1.000
13C6-PFDA		5.00	4.03	80.6		1.000
13C7-PFUnA		5.00	3.64	72.8		1.041
13C2-PFDoA		5.00	2.81	56.2		1.073
13C2-PFTeDA	V	5.00	1.22	24.4		1.159
13C3-PFBS		10.0	7.71	77.0	2.96	0.792
13C3-PFHxS		10.0	8.76	87.5	2.29	1.000
13C8-PFOS		10.1	8.35	83.0	2.21	1.000
13C2-4:2 FTS	NQ					
13C2-6:2 FTS		20.0	14.5	72.4	1.93	1.001
13C2-8:2 FTS		20.0	12.1	60.6	3.19	1.270
13C8-PFOSA		10.0	9.09	90.9		1.139
D3-N-MeFOSA		10.0	5.65	56.5		1.317
D5-N-EtFOSA		10.0	4.80	48.0		1.351
D3-MeFOSAA	V	20.0	7.10	35.5		1.307
D5-EtFOSAA	V	20.0	8.97	44.8		1.329
d7-NMe-FOSE		100	52.8	52.6		1.300
d9-NEt-FOSE	V	100	47.9	47.8		1.337
13C3-HFPO-DA	V	40.0	15.5	38.6	2.92	1.030

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits; NQ = data not quantifiable.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
LIWWTP-BIOS-1A (FA89217-2) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.: 4066

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)
L35976-3 R

Lab Sample I.D.:

Matrix: AQUEOUS

Sample Size: 0.485 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:52:05

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 23

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

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Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA	H	29.2	3.95 (S)		1.006
PFPeA		25.0	1.34 (S)		1.000
PFHxA		152	0.855 (S)	4.88	1.000
PFHpA		7.53	0.412 (Q)	2.23	1.000
PFOA		28.9	0.412 (Q)	2.04	
PFNA		1.74	0.412 (Q)	3.02	
PFDA		3.59	0.412 (Q)	3.20	1.000
PFUnA	U		0.412 (Q)		
PFDaA	J	0.731	0.330 (Q)	9.06	1.000
PFTTrDA	U		0.412 (Q)		
PFTeDA	U		0.814 (S)		
PFBS		19.8	0.772 (S)	2.79	1.000
PFPeS	U		0.453 (S)		
PFHxS		2.67	0.412 (Q)	2.14	
PFHpS	U		0.412 (Q)		
PFOS		17.5	0.412 (Q)	2.78	
PFNS	U		0.412 (Q)		
PFDS	U		0.412 (Q)		
PFDoS	U		0.412 (Q)		
4:2 FTS	U		1.65 (Q)		
6:2 FTS		78.5	1.49 (Q)	0.44	1.000
8:2 FTS	U		1.40 (Q)		
PFOSA	J	0.541	0.412 (Q)		
N-MeFOSA	U		0.412 (Q)		
N-EtFOSA	U		1.15 (Q)		
MeFOSAA		1.88	0.412 (Q)	2.03	
EtFOSAA	J	1.12	0.412 (Q)	1.11	
N-MeFOSE	U		4.12 (Q)		
N-EtFOSE	U		4.12 (Q)		
HFPO-DA	U		1.65 (Q)		
ADONA	U		1.65 (Q)		
9CI-PF3ONS	U		1.65 (Q)		
11CI-PF3OUdS	U		1.65 (Q)		
3:3 FTCA	U		1.65 (Q)		
5:3 FTCA		1230	10.3 (Q)	1.29	1.051
7:3 FTCA		202	10.3 (Q)	0.70	1.363
PFEESA	U		0.412 (Q)		
PFMPA	U		0.825 (Q)		

PFMBA	U	0.412 (Q)
NFDHA	U	2.41 (S)

- (1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; J = concentration less than limit of quantification; H = concentration is estimated.
- (2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Andrew Porat_____

SGS AXYS METHOD MLA-110 Rev 02

Form 2

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
LIWWTP-BIOS-1A (FA89217-2) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)
L35976-3 R

Contract No.: 4066

Lab Sample I.D.:

Matrix: AQUEOUS

Sample Size: 0.485 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:52:05

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 23

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

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LABELLED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA	V	40.0	1.14	2.85		0.997
13C5-PFPeA	V	20.0	2.47	12.3		0.877
13C5-PFHxA		10.0	5.10	51.0	20.4	1.000
13C4-PFHpA		10.0	7.23	72.3		0.886
13C8-PFOA		10.0	8.68	86.8		1.000
13C9-PFNA		5.00	4.26	85.2		1.000
13C6-PFDA		5.00	4.43	88.6		1.000
13C7-PFUnA		5.00	3.18	63.6		1.040
13C2-PFDoA	V	5.00	1.43	28.6		1.071
13C2-PFTeDA	V	5.00	0.605	12.1		1.159
13C3-PFBS		10.0	9.07	90.5	3.20	0.790
13C3-PFHxS		10.0	8.78	87.7	2.24	1.000
13C8-PFOS		10.1	8.61	85.6	2.25	1.000
13C2-4:2 FTS	V	20.2	3.31	16.4	1.93	0.833
13C2-6:2 FTS		20.0	16.8	84.1	1.85	1.001
13C2-8:2 FTS		20.0	12.9	64.4	3.10	1.268
13C8-PFOSA		10.0	8.27	82.7		1.138
D3-N-MeFOSA	V	10.0	4.13	41.3		1.315
D5-N-EtFOSA		10.0	4.37	43.7		1.350
D3-MeFOSAA	V	20.0	7.22	36.1		1.306
D5-EtFOSAA	V	20.0	8.80	44.0		1.326
d7-NMe-FOSE	V	100	32.0	31.9		1.300
d9-NEt-FOSE	V	100	26.7	26.6		1.334
13C3-HFPO-DA		40.0	20.2	50.6	2.84	1.030

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
LIWWTP-BIOS-1A (FA89217-2) -
SPLP_DUP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)

Contract No.: 4066

Lab Sample I.D.:

L35976-4 R

Matrix: AQUEOUS

Sample Size: 0.494 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:05:10

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 24

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA	H	30.7	4.24 (S)		1.006
PFPeA	H	22.6	1.19 (S)		1.001
PFHxA		180	0.785 (S)	4.89	0.999
PFHpA		7.96	0.405 (Q)	2.38	1.000
PFOA		34.0	0.405 (Q)	2.06	
PFNA		2.32	0.405 (Q)	3.29	
PFDA		6.04	0.405 (Q)	3.07	1.000
PFUnA	J	0.677	0.405 (Q)	5.83	1.000
PFDaA	R J	1.13	0.324 (Q)	13.8	1.000
PFTTrDA	R J	1.45	0.405 (Q)	6.82	0.959
PFTeDA	U		0.932 (S)		
PFBS		22.5	0.405 (Q)	2.87	1.000
PFPeS	U		0.410 (S)		
PFHxS		3.00	0.405 (Q)	2.48	
PFHpS	U		0.405 (Q)		
PFOS		34.6	0.405 (Q)	2.50	
PFNS	U		0.405 (Q)		
PFDS	U		0.405 (Q)		
PFDoS	U		0.405 (Q)		
4:2 FTS	NQ				
6:2 FTS		87.9	1.46 (Q)	0.44	1.000
8:2 FTS	U		1.38 (Q)		
PFOSA	J	0.990	0.405 (Q)		
N-MeFOSA	U		0.405 (Q)		
N-EtFOSA	U		1.13 (Q)		
MeFOSAA		4.36	0.405 (Q)	2.13	
EtFOSAA		2.29	0.405 (Q)	1.20	
N-MeFOSE	U		4.05 (Q)		
N-EtFOSE	U		4.05 (Q)		
HFPO-DA	U		1.62 (Q)		
ADONA	U		1.62 (Q)		
9CI-PF3ONS	U		1.62 (Q)		
11CI-PF3OUdS	U		1.62 (Q)		
3:3 FTCA	U H		1.62 (Q)		
5:3 FTCA		1650	10.1 (Q)	1.32	1.051
7:3 FTCA		412	10.1 (Q)	0.68	1.363
PFEESA	U		0.405 (Q)		
PFMPA	U H		0.809 (Q)		

PFMBA	U H	0.405 (Q)
NFDHA	U	2.83 (S)

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; R = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than limit of quantification; H = concentration is estimated; NQ = data not quantifiable.

(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 2

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
LIWWTP-BIOS-1A (FA89217-2) -
SPLP_DUP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)

Contract No.: 4066

Lab Sample I.D.:

L35976-4 R

Matrix: AQUEOUS

Sample Size: 0.494 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:05:10

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 24

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELLED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA	V	40.0	0.901	2.25		0.997
13C5-PFPeA	V	20.0	1.97	9.84		0.875
13C5-PFHxA	V	10.0	3.71	37.1	24.0	1.000
13C4-PFHpA		10.0	6.95	69.5		0.887
13C8-PFOA		10.0	8.61	86.1		1.000
13C9-PFNA		5.00	4.40	88.0		1.000
13C6-PFDA		5.00	4.25	85.0		0.999
13C7-PFUnA		5.00	3.01	60.2		1.040
13C2-PFDoA	V	5.00	1.34	26.8		1.070
13C2-PFTeDA	V	5.00	0.524	10.5		1.159
13C3-PFBS		10.0	8.90	88.8	3.38	0.791
13C3-PFHxS		10.0	9.31	92.9	2.37	1.000
13C8-PFOS		10.1	8.47	84.2	2.19	1.000
13C2-4:2 FTS	NQ					
13C2-6:2 FTS		20.0	16.3	81.4	1.95	1.002
13C2-8:2 FTS		20.0	13.1	65.5	3.18	1.269
13C8-PFOSA		10.0	8.51	85.1		1.138
D3-N-MeFOSA	V	10.0	3.77	37.7		1.316
D5-N-EtFOSA	V	10.0	3.51	35.1		1.350
D3-MeFOSAA	V	20.0	6.34	31.7		1.306
D5-EtFOSAA	V	20.0	7.67	38.4		1.328
d7-NMe-FOSE	V	100	20.3	20.2		1.300
d9-NEt-FOSE	V	100	16.3	16.3		1.337
13C3-HFPO-DA	V	40.0	15.9	39.7	2.91	1.030

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits; NQ = data not quantifiable.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
HIWWTP-BIOS-1 (FA89217-5) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)

Contract No.: 4066

Lab Sample I.D.:

L35976-5 R

Matrix: AQUEOUS

Sample Size: 0.472 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:18:16

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 25

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA		6.97	1.69 (Q)		1.003
PFPeA		8.59	0.847 (Q)		1.000
PFHxA		25.9	0.423 (Q)	4.87	1.000
PFHpA	J	1.01	0.423 (Q)	1.70	1.000
PFOA	B	6.07	0.423 (Q)	2.14	
PFNA	J	1.01	0.423 (Q)	2.79	
PFDA	J	1.48	0.423 (Q)	3.09	1.000
PFUnA	U		0.423 (Q)		
PFDaA	R J	0.441	0.339 (Q)	24.2	1.000
PFTTrDA	R J	0.752	0.423 (Q)	17.6	0.958
PFTeDA	U		0.480 (S)		
PFBS	R	4.18	0.423 (Q)	8.55	0.997
PFPeS	U		1.97 (S)		
PFHxS	U		0.530 (S)		
PFHpS	U		0.423 (Q)		
PFOS		8.07	0.423 (Q)	2.76	
PFNS	U		0.423 (Q)		
PFDS	U		0.423 (Q)		
PFDoS	U		0.423 (Q)		
4:2 FTS	U		1.69 (Q)		
6:2 FTS	U		1.53 (Q)		
8:2 FTS	U		1.44 (Q)		
PFOSA	U		0.423 (Q)		
N-MeFOSA	U		0.423 (Q)		
N-EtFOSA	U		1.19 (Q)		
MeFOSAA	J	1.17	0.423 (Q)	1.35	
EtFOSAA	U		0.423 (Q)		
N-MeFOSE	U		4.23 (Q)		
N-EtFOSE	U		4.23 (Q)		
HFPO-DA	U		1.69 (Q)		
ADONA	U		1.69 (Q)		
9CI-PF3ONS	U		1.70 (Q)		
11CI-PF3OUdS	U		1.70 (Q)		
3:3 FTCA	U		1.69 (Q)		
5:3 FTCA		435	10.6 (Q)	1.32	1.051
7:3 FTCA		63.3	10.6 (Q)	0.69	1.364
PFEESA	U		0.423 (Q)		
PFMPA	U		0.847 (Q)		

PFMBA	U	0.423 (Q)
NFDHA	U	0.847 (Q)

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; R = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; B = analyte found in the associated blank and concentration in sample is less than 10X the concentration in the associated blank; J = concentration less than limit of quantification.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.
Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 2

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
HIWWTP-BIOS-1 (FA89217-5) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)
L35976-5 R

Contract No.: 4066

Lab Sample I.D.:

Matrix: AQUEOUS

Sample Size: 0.472 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:18:16

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 25

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELLED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA	V	40.0	5.15	12.9		1.000
13C5-PFPaA		20.0	12.1	60.3		0.877
13C5-PFHxA		10.0	7.84	78.4	21.2	1.000
13C4-PFHpA		10.0	7.74	77.4		0.886
13C8-PFOA		10.0	8.05	80.5		0.999
13C9-PFNA		5.00	4.19	83.9		1.000
13C6-PFDA		5.00	3.94	78.8		1.000
13C7-PFUnA		5.00	3.37	67.4		1.041
13C2-PFDoA		5.00	2.70	54.0		1.073
13C2-PFTeDA	V	5.00	1.15	22.9		1.159
13C3-PFBS		10.0	8.00	79.9	2.74	0.790
13C3-PFHxS		10.0	8.54	85.2	2.41	1.001
13C8-PFOS		10.1	8.19	81.4	2.08	1.000
13C2-4:2 FTS		20.2	13.5	66.9	1.90	0.834
13C2-6:2 FTS		20.0	15.4	77.3	2.07	1.002
13C2-8:2 FTS		20.0	11.1	55.6	3.25	1.270
13C8-PFOSA		10.0	7.40	74.0		1.138
D3-N-MeFOSA		10.0	5.00	50.0		1.315
D5-N-EtFOSA		10.0	4.62	46.2		1.349
D3-MeFOSAA	V	20.0	6.01	30.0		1.307
D5-EtFOSAA	V	20.0	8.25	41.3		1.330
d7-NMe-FOSE	V	100	49.3	49.1		1.300
d9-NEt-FOSE	V	100	38.6	38.6		1.334
13C3-HFPO-DA		40.0	30.4	76.0	2.86	1.030

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.
KIWWTP-BIOS-1A (FA89217-6) -
SPLP
Sample Collection:
07-Oct-2021 08:00

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.: 4066

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)
L35976-6 R

Lab Sample I.D.:

Matrix: AQUEOUS

Sample Size: 0.492 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:31:21

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 26

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA	H	21.3	3.98 (S)		1.003
PFPeA		84.6	0.813 (Q)		1.001
PFHxA		75.5	0.556 (S)	4.94	1.000
PFHpA		10.8	0.407 (Q)	3.05	1.000
PFOA		65.3	0.407 (Q)	2.02	
PFNA		3.46	0.407 (Q)	3.31	
PFDA		20.9	0.407 (Q)	3.03	1.000
PFUnA	J	0.427	0.407 (Q)	4.36	1.000
PFDoA		1.38	0.325 (Q)	11.3	0.999
PFTTrDA	U		0.407 (Q)		
PFTeDA	U		1.77 (S)		
PFBS		24.7	0.407 (Q)	2.60	1.000
PFPeS	U		0.409 (Q)		
PFHxS	J	1.07	0.407 (Q)	2.41	
PFHpS	U		0.407 (Q)		
PFOS		15.5	0.407 (Q)	2.68	
PFNS	U		0.407 (Q)		
PFDS	U		0.407 (Q)		
PFDoS	U		0.407 (Q)		
4:2 FTS	U		1.63 (Q)		
6:2 FTS	J	1.58	1.47 (Q)	0.46	0.999
8:2 FTS	U		1.38 (Q)		
PFOSA	U		0.407 (Q)		
N-MeFOSA	U		0.407 (Q)		
N-EtFOSA	U		1.14 (Q)		
MeFOSAA		1.69	0.407 (Q)	2.78	
EtFOSAA	J	0.684	0.407 (Q)	1.30	
N-MeFOSE	U		4.07 (Q)		
N-EtFOSE	U		4.07 (Q)		
HFPO-DA	U		1.63 (Q)		
ADONA	U		1.63 (Q)		
9CI-PF3ONS	U		1.63 (Q)		
11CI-PF3OUdS	U		1.63 (Q)		
3:3 FTCA	U		1.63 (Q)		
5:3 FTCA		656	10.2 (Q)	1.29	1.050
7:3 FTCA		173	10.2 (Q)	0.65	1.363
PFEESA	U		0.407 (Q)		
PFMPA	U		0.813 (Q)		

PFMBA	U	0.407 (Q)
NFDHA	U	3.76 (S)

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; J = concentration less than limit of quantification; H = concentration is estimated.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Andrew Porat_____

SGS AXYS METHOD MLA-110 Rev 02

Form 2

CLIENT SAMPLE NO.
KIWWTP-BIOS-1A (FA89217-6) -
SPLP
Sample Collection:
07-Oct-2021 08:00

PERFLUORINATED ORGANICS ANALYSIS REPORT

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

HDOH - PFAS IN MULTIMEDIA
(TO-17403)
L35976-6 R

Contract No.: 4066

Lab Sample I.D.:

Matrix: AQUEOUS

Sample Size: 0.492 L

Sample Receipt Date: 14-Oct-2021

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 23:31:21

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 26

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA	V	40.0	1.60	3.99		0.997
13C5-PFPeA	V	20.0	4.50	22.5		0.877
13C5-PFHxA		10.0	7.06	70.6	23.1	1.000
13C4-PFHpA		10.0	7.80	78.0		0.886
13C8-PFOA		10.0	8.59	85.9		1.000
13C9-PFNA		5.00	4.39	87.7		1.000
13C6-PFDA		5.00	4.04	80.8		0.999
13C7-PFUnA		5.00	3.23	64.7		1.040
13C2-PFDoA	V	5.00	2.03	40.7		1.072
13C2-PFTeDA	V	5.00	0.781	15.6		1.158
13C3-PFBS		10.0	7.37	73.6	2.70	0.791
13C3-PFHxS		10.0	8.94	89.3	2.48	1.000
13C8-PFOS		10.1	8.34	82.9	2.08	1.000
13C2-4:2 FTS	V	20.2	7.74	38.4	1.73	0.834
13C2-6:2 FTS		20.0	16.1	80.5	2.01	1.002
13C2-8:2 FTS		20.0	24.5	122	3.01	1.269
13C8-PFOSA		10.0	7.89	78.9		1.138
D3-N-MeFOSA		10.0	4.59	45.9		1.314
D5-N-EtFOSA		10.0	4.20	42.0		1.348
D3-MeFOSAA		20.0	13.0	64.8		1.307
D5-EtFOSAA		20.0	13.8	68.9		1.329
d7-NMe-FOSE	V	100	23.4	23.3		1.299
d9-NEt-FOSE	V	100	29.0	28.9		1.333
13C3-HFPO-DA		40.0	32.1	80.3	2.85	1.030

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 1A

CLIENT SAMPLE NO.

Lab Blank

Sample Collection:

N/A

PERFLUORINATED ORGANICS ANALYSIS REPORT

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.

N/A

Contract No.: 4066

Lab Sample I.D.:

WG82066-101

Matrix: AQUEOUS

Sample Size: 0.500 L

Sample Receipt Date: N/A

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:25:55

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 21

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng/L

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	RATIO	RRT
PFBA	U		1.60 (Q)		
PFPeA	U		0.800 (Q)		
PFHxA		2.22	0.400 (Q)	4.73	1.000
PFHpA	U		0.400 (Q)		
PFOA	J	1.06	0.400 (Q)	2.05	
PFNA	U		0.400 (Q)		
PFDA	U		0.400 (Q)		
PFUnA	U		0.400 (Q)		
PFDoA	U		0.320 (Q)		
PFTTrDA	U		0.400 (Q)		
PFTeDA	U		0.400 (Q)		
PFBS	U		0.400 (Q)		
PFPeS	U		0.402 (Q)		
PFHxS	U		0.400 (Q)		
PFHpS	U		0.400 (Q)		
PFOS	U		0.400 (Q)		
PFNS	U		0.400 (Q)		
PFDS	U		0.400 (Q)		
PFDoS	U		0.400 (Q)		
4:2 FTS	U		1.60 (Q)		
6:2 FTS	U		1.44 (Q)		
8:2 FTS	U		1.36 (Q)		
PFOSA	U		0.400 (Q)		
N-MeFOSA	U		0.400 (Q)		
N-EtFOSA	U		1.12 (Q)		
MeFOSAA	U		0.400 (Q)		
EtFOSAA	U		0.400 (Q)		
N-MeFOSE	U		4.00 (Q)		
N-EtFOSE	U		4.00 (Q)		
HFPO-DA	U		1.60 (Q)		
ADONA	U		1.60 (Q)		
9Cl-PF3ONS	U		1.60 (Q)		
11Cl-PF3OUdS	U		1.60 (Q)		
3:3 FTCA	U		1.60 (Q)		
5:3 FTCA	U		10.0 (Q)		
7:3 FTCA	U		10.0 (Q)		
PFEESA	U		0.400 (Q)		
PFMPA	U		0.800 (Q)		
PFMBA	U		0.400 (Q)		

NFDHA

U

0.800 (Q)

- (1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; J = concentration less than limit of quantification.
- (2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

For Axy Internal Use Only [XSL Template: FC2-Form1A.xsl; Created: 23-Aug-2022 07:05:48; Application: XMLTransformer-1.18.38; Report Filename: PFC_FC_LC_PFAS_WG82066-101_Form1A_FC2L_336S21_SJ3107815.html; Workgroup: WG82066; Design ID: 3989]

SGS AXYS METHOD MLA-110 Rev 02

Form 2

PERFLUORINATED ORGANICS ANALYSIS REPORT

CLIENT SAMPLE NO.

Lab Blank

Sample Collection:

N/A

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.: 4066

Project No.

N/A

Lab Sample I.D.:

WG82066-101

Matrix: AQUEOUS

Sample Size: 0.500 L

Sample Receipt Date: N/A

Initial Calibration Date: 11-Apr-2022

Extraction Date: 09-Aug-2022

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022 Time: 22:25:55

Column ID: C18

Extract Volume (uL): 4000

Sample Data Filename: FC2L_336 S: 21

Injection Volume (uL): 2

Blank Data Filename: FC2L_336 S: 21

Dilution Factor: N/A

Cal. Ver. Data Filename: FC2L_336 S: 15

Concentration Units: ng absolute

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELLED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	RATIO	RRT
13C4-PFBA		40.0	35.3	88.4		1.000
13C5-PFPeA		20.0	19.8	98.9		0.877
13C5-PFHxA		10.0	8.32	83.2	21.8	1.000
13C4-PFHpA		10.0	8.37	83.7		0.886
13C8-PFOA		10.0	8.28	82.8		1.000
13C9-PFNA		5.00	4.44	88.7		1.000
13C6-PFDA		5.00	4.38	87.6		1.000
13C7-PFUnA		5.00	4.26	85.2		1.040
13C2-PFDoA		5.00	3.89	77.9		1.071
13C2-PFTeDA		5.00	2.91	58.1		1.157
13C3-PFBS		10.0	8.31	82.9	2.65	0.790
13C3-PFHxS		10.0	7.80	77.9	2.28	0.999
13C8-PFOS		10.1	7.26	72.1	2.12	1.000
13C2-4:2 FTS		20.2	23.0	114	1.77	0.833
13C2-6:2 FTS		20.0	17.6	88.1	2.13	1.002
13C2-8:2 FTS		20.0	16.0	79.6	3.07	1.269
13C8-PFOSA		10.0	8.29	82.9		1.135
D3-N-MeFOSA		10.0	6.39	63.9		1.314
D5-N-EtFOSA		10.0	5.89	58.9		1.348
D3-MeFOSAA		20.0	14.5	72.7		1.306
D5-EtFOSAA		20.0	15.1	75.3		1.328
d7-NMe-FOSE		100	67.6	67.4		1.297
d9-NEt-FOSE		100	54.6	54.6		1.331
13C3-HFPO-DA		40.0	37.3	93.3	2.91	1.030

(1) Where applicable, custom lab flags have been used on this report.

(2) R(%) = percent recovery.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 8A

PERFLUORINATED ORGANICS ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.:	4066	Lab Sample I.D.:	WG82066-102
Matrix:	AQUEOUS	Initial Calibration Date:	11-Apr-2022
Extraction Date:	09-Aug-2022	Instrument ID:	LCMS/MS
Analysis Date:	10-Aug-2022 Time: 21:59:45	Column ID:	C18
Extract Volume (uL):	4000	OPR Data Filename:	FC2L_336 S: 19
Injection Volume (uL):	2	Blank Data Filename:	FC2L_336 S: 21
Dilution Factor:	N/A	Cal. Ver. Data Filename:	FC2L_336 S: 15

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 1 mL EXTRACT VOLUME.

COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
PFBA			20.0	20.7	103	1.003
PFPeA			10.0	9.99	99.9	1.001
PFHxA		4.91	5.00	5.29	106	1.000
PFHpA		2.03	5.00	5.03	101	1.000
PFOA		2.13	5.00	5.43	109	
PFNA		2.92	5.00	5.21	104	
PFDA		3.05	5.00	5.04	101	1.001
PFUnA		4.37	5.00	5.29	106	1.000
PFDoA		7.63	4.06	4.33	107	1.000
PFTTrDA		3.07	5.00	5.35	107	0.958
PFTeDA		2.64	5.00	5.12	102	1.000
PFBS		2.59	5.00	5.07	101	1.000
PFPeS		2.32	5.00	5.36	107	0.876
PFHxS		2.42	5.00	5.12	102	
PFHpS		1.99	5.00	5.20	104	0.936
PFOS		2.50	5.00	4.91	98.2	
PFNS		2.30	5.00	5.16	103	1.038
PFDS		2.19	5.00	5.15	103	1.071
PFDoS		2.22	5.00	4.00	80.0	1.166
4:2 FTS		0.45	20.0	23.6	118	1.000
6:2 FTS		0.43	18.0	19.5	109	1.000
8:2 FTS		0.55	16.9	17.8	105	1.000
PFOSA			5.00	5.24	105	
N-MeFOSA		0.56	5.00	5.10	102	
N-EtFOSA		0.53	14.0	13.1	93.4	
MeFOSAA		2.24	5.00	5.97	119	
EtFOSAA		1.17	5.00	5.00	100	
N-MeFOSE			50.0	51.1	102	
N-EtFOSE			50.0	56.2	112	
HFPO-DA		2.93	20.0	21.8	109	1.000
ADONA		1.15	20.0	19.5	97.6	1.100
9CI-PF3ONS		3.24	20.0	17.6	88.1	0.970
11CI-PF3OUdS		3.12	20.0	16.6	82.8	1.038
3:3 FTCA		1.86	20.0	19.3	96.6	0.881
5:3 FTCA		1.29	125	145	116	1.049

COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
7:3 FTCA		0.68	125	128	102	1.361
PFEESA		9.64	5.00	5.03	101	1.036
PFMPA			10.0	9.33	93.3	0.679
PFMBA			5.00	4.73	94.6	1.056
NFDHA	N		10.0	16.6	166	0.989

(1) Where applicable, custom lab flags have been used on this report; N = authentic recovery in the OPR is not within method/contract control limits.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

For Axys Internal Use Only [XSL Template: FC2-Form8A.xsl; Created: 23-Aug-2022 07:05:48; Application: XMLTransformer-1.18.38; Report Filename: PFC_FC_LC_PFAS_WG82066-102_Form8A_SJ3107813.html; Workgroup: WG82066; Design ID: 3989]

SGS AXYS METHOD MLA-110 Rev 02

Form 8B

PERFLUORINATED ORGANICS ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.:	4066	Lab Sample I.D.:	WG82066-102
Matrix:	AQUEOUS	Initial Calibration Date:	11-Apr-2022
Extraction Date:	09-Aug-2022	Instrument ID:	LCMS/MS
Analysis Date:	10-Aug-2022 Time: 21:59:45	Column ID:	C18
Extract Volume (uL):	4000	OPR Data Filename:	FC2L_336 S: 19
Injection Volume (uL):	2	Blank Data Filename:	FC2L_336 S: 21
Dilution Factor:	N/A	Cal. Ver. Data Filename:	FC2L_336 S: 15

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 1 mL EXTRACT VOLUME.

LABELLED COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
13C4-PFBA			40.0	35.0	87.5	1.000
13C5-PFPeA			20.0	19.5	97.5	0.878
13C5-PFHxA		24.7	10.0	8.26	82.6	1.000
13C4-PFHpA			10.0	8.55	85.5	0.886
13C8-PFOA			10.0	8.62	86.2	1.000
13C9-PFNA			5.00	4.34	86.9	1.000
13C6-PFDA			5.00	4.44	88.7	0.999
13C7-PFUnA			5.00	4.32	86.3	1.040
13C2-PFDoA			5.00	4.15	83.0	1.071
13C2-PFTeDA			5.00	3.30	66.0	1.157
13C3-PFBS		2.66	10.0	8.78	87.6	0.791
13C3-PFHxS		2.27	10.0	8.57	85.6	1.000
13C8-PFOS		2.15	10.1	8.78	87.2	1.000
13C2-4:2 FTS		1.67	20.2	21.4	106	0.834
13C2-6:2 FTS		2.08	20.0	17.4	87.1	1.002
13C2-8:2 FTS		3.29	20.0	16.5	82.6	1.269
13C8-PFOSA			10.0	8.84	88.4	1.135
D3-N-MeFOSA			10.0	7.19	71.9	1.312
D5-N-EtFOSA			10.0	6.82	68.2	1.346
D3-MeFOSAA			20.0	15.4	77.1	1.306
D5-EtFOSAA			20.0	15.9	79.7	1.327
d7-NMe-FOSE			100	79.7	79.5	1.297
d9-NEt-FOSE			100	66.1	66.0	1.332
13C3-HFPO-DA		2.70	40.0	36.0	89.9	1.030

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

SGS AXYS METHOD MLA-110 Rev 02

Form 8A

PERFLUORINATED ORGANICS ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.:	4066	Lab Sample I.D.:	WG82066-103
Matrix:	AQUEOUS	Initial Calibration Date:	11-Apr-2022
Extraction Date:	09-Aug-2022	Instrument ID:	LCMS/MS
Analysis Date:	10-Aug-2022 Time: 21:46:40	Column ID:	C18
Extract Volume (uL):	4000	OPR Data Filename:	FC2L_336 S: 18
Injection Volume (uL):	2	Blank Data Filename:	FC2L_336 S: 21
Dilution Factor:	N/A	Cal. Ver. Data Filename:	FC2L_336 S: 15

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 1 mL EXTRACT VOLUME.

COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
PFBA			6.40	6.25	97.6	1.006
PFPeA			3.20	3.05	95.4	1.000
PFHxA		4.50	1.60	1.58	98.9	1.000
PFHpA		2.02	1.60	1.52	94.9	1.000
PFOA		2.26	1.60	1.72	107	
PFNA		3.17	1.60	1.68	105	
PFDA		3.20	1.60	1.54	96.1	1.000
PFUnA		4.07	1.60	1.54	96.0	1.000
PFDoA		7.21	1.30	1.32	102	1.000
PFTTrDA		2.93	1.60	1.60	99.7	0.959
PFTeDA		2.62	1.60	1.38	86.5	0.999
PFBS		2.82	1.60	1.57	98.1	1.000
PFPeS		2.20	1.60	1.57	98.2	0.876
PFHxS		2.14	1.60	1.47	92.1	
PFHpS		2.08	1.60	1.59	99.7	0.936
PFOS		2.68	1.60	1.58	98.7	
PFNS		2.14	1.60	1.51	94.1	1.038
PFDS		2.42	1.60	1.58	99.0	1.072
PFDoS		2.31	1.60	1.24	77.7	1.167
4:2 FTS		0.42	6.40	6.50	101	1.000
6:2 FTS		0.41	5.75	5.65	98.4	1.000
8:2 FTS		0.57	5.42	5.69	105	1.000
PFOSA			1.60	1.59	99.2	
N-MeFOSA		0.52	1.60	1.39	87.0	
N-EtFOSA		0.52	4.48	3.92	87.4	
MeFOSAA		1.80	1.60	1.68	105	
EtFOSAA		1.05	1.60	1.31	82.2	
N-MeFOSE			16.0	15.4	96.0	
N-EtFOSE			16.0	16.0	100	
HFPO-DA		2.78	6.40	6.80	106	1.001
ADONA		1.19	6.40	6.32	98.7	1.101
9CI-PF3ONS		3.21	6.40	5.75	89.8	0.970
11CI-PF3OUdS		3.18	6.40	5.27	82.3	1.038
3:3 FTCA		1.74	6.40	5.10	79.7	0.881
5:3 FTCA		1.24	40.0	42.5	106	1.049

COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
7:3 FTCA		0.67	40.0	37.2	92.9	1.360
PFEESA		9.21	1.60	1.55	97.0	1.036
PFMPA			3.20	2.80	87.5	0.679
PFMBA			1.60	1.46	91.3	1.056
NFDHA	N		3.20	5.40	169	0.990

(1) Where applicable, custom lab flags have been used on this report; N = authentic recovery in the OPR is not within method/contract control limits.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

PERFLUORINATED ORGANICS ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.:	4066	Lab Sample I.D.:	WG82066-103
Matrix:	AQUEOUS	Initial Calibration Date:	11-Apr-2022
Extraction Date:	09-Aug-2022	Instrument ID:	LCMS/MS
Analysis Date:	10-Aug-2022 Time: 21:46:40	Column ID:	C18
Extract Volume (uL):	4000	OPR Data Filename:	FC2L_336 S: 18
Injection Volume (uL):	2	Blank Data Filename:	FC2L_336 S: 21
Dilution Factor:	N/A	Cal. Ver. Data Filename:	FC2L_336 S: 15

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 1 mL EXTRACT VOLUME.

LABELLED COMPOUND	LAB FLAG ¹	RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	% RECOVERY	RRT
13C4-PFBA			40.0	38.0	95.0	0.997
13C5-PFPeA			20.0	20.9	105	0.878
13C5-PFHxA		23.5	10.0	9.12	91.2	1.000
13C4-PFHpA			10.0	9.57	95.7	0.886
13C8-PFOA			10.0	9.43	94.3	1.000
13C9-PFNA			5.00	4.83	96.7	1.000
13C6-PFDA			5.00	4.84	96.8	0.999
13C7-PFUnA			5.00	4.78	95.6	1.040
13C2-PFDoA			5.00	4.48	89.6	1.071
13C2-PFTeDA			5.00	4.01	80.3	1.157
13C3-PFBS		2.67	10.0	9.90	98.8	0.791
13C3-PFHxS		2.38	10.0	10.0	99.9	1.000
13C8-PFOS		2.19	10.1	9.69	96.3	0.999
13C2-4:2 FTS		1.80	20.2	25.0	124	0.833
13C2-6:2 FTS		1.95	20.0	18.8	94.0	1.002
13C2-8:2 FTS		3.63	20.0	19.1	95.4	1.269
13C8-PFOSA			10.0	9.33	93.3	1.135
D3-N-MeFOSA			10.0	7.30	73.0	1.312
D5-N-EtFOSA			10.0	7.23	72.3	1.347
D3-MeFOSAA			20.0	17.2	86.1	1.306
D5-EtFOSAA			20.0	17.5	87.3	1.327
d7-NMe-FOSE			100	95.5	95.2	1.296
d9-NEt-FOSE			100	83.5	83.4	1.332
13C3-HFPO-DA		2.85	40.0	37.4	93.6	1.030

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Andrew Porat_____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

SGS AXYS METHOD MLA-110 Rev 02

Form 3A

INITIAL CALIBRATION RELATIVE RESPONSES

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

Instrument ID: LC MS/MS

LC Column ID: C18

CS0 Data Filename: N/A
CS1 Data Filename: FC2L_156 S: 13
CS2 Data Filename: FC2L_156 S: 14
CS3 Data Filename: FC2L_156 S: 15
CS4 Data Filename: FC2L_156 S: 16
CS5 Data Filename: FC2L_156 S: 17
CS6 Data Filename: FC2L_156 S: 18
CS7 Data Filename: FC2L_156 S: 19
CS8 Data Filename: FC2L_156 S: 20

COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)								MEAN RR	CV (%RSD) ²	
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7			CS8
PFBA			0.96	0.90	0.89	0.82	0.87	0.85	0.83	0.84	0.87	4.96
PFPeA			1.29	1.13	1.19	1.16	1.16	1.09	1.08	1.15	1.16	5.67
PFHxA			1.19	1.15	1.02	1.01	0.91	0.91	0.98	1.02	1.03	9.88
PFFHpA			1.40	1.35	1.31	1.08	1.22	1.04	1.14	1.13	1.21	11.0
PFOA			1.66	1.29	1.29	1.18	1.32	1.25	1.17	1.26	1.30	11.7
PFNA			1.11	1.04	1.12	0.96	1.01	0.96	0.97	0.99	1.02	6.35
PFDA			0.83	0.80	0.88	0.73	0.79	0.74	0.75	0.73	0.78	6.80
PFUnA			0.78	0.76	0.73	0.69	0.71	0.71	0.69		0.72	4.94
PFDoA			1.27	1.12	1.08	1.00	1.01	0.98	1.01	1.02	1.06	9.13
PFTTrDA			0.83	0.87	0.88	0.82	0.82	0.77	0.79	0.73	0.81	6.11
PFTeDA			0.91	0.78	0.85	0.76	0.80	0.76	0.78	0.72	0.80	7.64
PFBS			1.36	1.07	1.19	1.10	1.08	1.14	1.05	1.10	1.14	8.93
PFPeS			1.04	1.14	1.07	1.02	1.05	1.06	1.02	0.97	1.05	4.62
PFHxS			1.35	1.25	1.30	1.24	1.31	1.27	1.29	1.28	1.29	2.78
PFFHpS			1.09	1.04	1.01	1.04	1.11	1.03	0.98	1.02	1.04	3.83
PFOS			1.24	1.03	1.13	1.11	1.17	1.21	1.09	1.09	1.13	6.15
PFNS			1.08	1.02	1.10	1.06	1.12	1.08	1.00	1.07	1.07	3.91
PFDS			0.93	0.88	0.96	0.95	1.01	0.96	0.89	0.96	0.94	4.21
PFDoS			0.82	0.72	0.78	0.79	0.87	0.80	0.75	0.82	0.79	5.78
4:2 FTS			0.49	0.46	0.49	0.49	0.46	0.45	0.42	0.40	0.46	7.07
6:2 FTS			0.54	0.49	0.48	0.47	0.50	0.46	0.48	0.42	0.48	7.21
8:2 FTS			0.36	0.36	0.32	0.32	0.34	0.34	0.32	0.27	0.33	8.80
PFOSA			1.03	0.91	0.92	0.89	0.89	0.88	0.89	0.88	0.91	5.60
N-MeFOSA			1.13	1.02	1.01	0.93	1.03	0.91	0.95	0.95	0.99	7.46
N-EtFOSA			1.15	1.13	1.15	1.09	1.15	1.14	1.11	1.17	1.14	2.40
MeFOSAA			0.82	0.71	0.84	0.87	0.92	0.86	0.89		0.84	7.89
EtFOSAA			0.76	0.63	0.71	0.80	0.79	0.77	0.77		0.75	7.93
N-MeFOSE			0.84	0.79	0.78	0.76	0.75	0.79	0.76	0.80	0.78	3.72
N-EtFOSE			1.01	1.08	1.03	1.07	1.02	1.02	1.04	0.99	1.03	2.85
HFPO-DA			1.07	0.99	0.91	1.01	0.98	0.90	0.87	0.83	0.95	8.43
ADONA			8.90	8.53	8.10	7.54	7.52	7.36	7.45	7.68	7.89	7.19
9CI-PF3ONS			2.49	2.20	2.29	2.15	2.09	1.99	1.92	1.84	2.12	9.93
11CI-PF3OUdS			1.17	1.07	1.09	1.04	1.04	0.98	0.98	1.01	1.05	5.98
3:3 FTCA			0.09	0.08	0.08	0.08	0.09	0.08	0.08	0.11	0.09	9.41
5:3 FTCA			0.16	0.15	0.15	0.14	0.15	0.15	0.15	0.16	0.15	3.52
7:3 FTCA			0.08	0.09	0.08	0.08	0.09	0.09	0.09	0.10	0.09	5.44
PFEESA			2.77	2.72	2.65	2.48	2.58	2.46	2.61	2.70	2.62	4.24
PFMPA			1.85	1.70	1.81	1.81	1.76	1.74	1.76	2.04	1.81	5.86

COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)								MEAN RR	CV (%RSD) ²	
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7			CS8
PFMBA			2.45	2.11	2.34	2.30	2.30	2.15	2.18	2.56	2.30	6.70
NFDHA			0.009	0.01	0.02	0.02	0.01	0.01			0.01	19.5

(1) Where applicable, custom lab flags have been used on this report.
(2) For contract CV specifications, see SGS AXYS METHOD MLA-110 Rev 02

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: FC2-Form3A.xsl; Created: 23-Aug-2022 07:05:48; Application: XMLTransformer-1.18.38;
Report Filename: PFOA_FC_LC_11-Apr-2022_FC2L__Form3A_GS98639.html; Workgroup: WG82066; Design ID: 3989]

SGS AXYS METHOD MLA-110 Rev 02

Form 3B
INITIAL CALIBRATION RELATIVE RESPONSES

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

Instrument ID: LC MS/MS

LC Column ID: C18

CS0 Data Filename: N/A

CS1 Data Filename: FC2L_156 S: 13

CS2 Data Filename: FC2L_156 S: 14

CS3 Data Filename: FC2L_156 S: 15

CS4 Data Filename: FC2L_156 S: 16

CS5 Data Filename: FC2L_156 S: 17

CS6 Data Filename: FC2L_156 S: 18

CS7 Data Filename: FC2L_156 S: 19

CS8 Data Filename: FC2L_156 S: 20

LABELED COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)								MEAN RR	CV (%RSD) ²
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	
13C4-PFBA			1.17	1.22	1.16	1.16	1.19	1.16	1.19	1.18	1.72
13C5-PFPaA			0.81	0.83	0.77	0.71	0.76	0.93	0.75	0.69	9.57
13C5-PFHxA			0.75	0.69	0.72	0.67	0.70	0.83	0.69	0.70	6.89
13C4-PFHpA			3.43	3.37	3.08	3.71	3.41	3.43	3.46	3.41	4.92
13C8-PFOA			3.89	3.66	3.70	3.96	3.51	3.63	3.91	3.59	4.49
13C9-PFNA			1.05	1.07	1.03	1.05	1.11	1.07	1.05	1.09	2.43
13C6-PFDA			1.02	1.07	0.96	1.03	1.03	1.03	1.01	0.99	3.28
13C7-PFUnA			1.11	1.16	1.11	1.08	1.09	1.08	1.01	1.09	3.95
13C2-PFDoA			0.83	0.88	0.83	0.84	0.85	0.90	0.87	0.88	3.09
13C2-PFTeDA			0.73	0.75	0.68	0.66	0.69	0.71	0.68	0.73	4.58
13C3-PFBS			1.31	1.41	1.31	1.34	1.44	1.34	1.41	1.17	6.49
13C3-PFHxS			1.14	1.13	1.07	1.13	1.13	1.09	1.11	1.13	2.28
13C8-PFOS			0.98	1.01	1.00	0.93	0.92	0.96	1.01	1.00	3.84
13C2-4:2 FTS			1.09	1.14	1.07	0.97	1.00	0.98	0.95	0.88	8.29
13C2-6:2 FTS			1.01	1.00	1.01	0.93	0.91	0.93	0.93	0.97	4.25
13C2-8:2 FTS			1.42	1.45	1.37	1.27	1.24	1.22	1.29	1.27	6.52
13C8-PFOA			1.77	1.85	1.90	1.77	1.85	1.83	1.86	2.12	5.96
D3-N-MeFOSA			0.21	0.23	0.23	0.21	0.22	0.23	0.23	0.26	6.84
D5-N-EtFOSA			0.21	0.22	0.23	0.21	0.21	0.21	0.22	0.22	3.03
D3-MeFOSAA			0.68	0.74	0.74	0.65	0.69	0.72	0.78	0.71	6.19
D5-EtFOSAA			0.58	0.62	0.63	0.53	0.58	0.61	0.67	0.60	7.41
d7-NMe-FOSE			1.83	1.96	2.06	1.89	2.03	1.94	1.93	1.97	3.81
d9-NEt-FOSE			1.63	1.65	1.66	1.53	1.65	1.60	1.58	1.70	3.29
13C3-HFPO-DA			0.29	0.28	0.28	0.27	0.29	0.36	0.29	0.25	10.6

(1) Where applicable, custom lab flags have been used on this report.

(2) For contract CV specifications, see SGS AXYS METHOD MLA-110 Rev 02.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Henry Huang _____

SGS AXYS METHOD MLA-110 Rev 02

Form 3C
LC MS/MS INITIAL CALIBRATION RATIOS

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

Instrument ID: LC MS/MS

LC Column ID: C18

CS0 Data Filename: N/A

CS1 Data Filename: FC2L_156 S: 13

CS2 Data Filename: FC2L_156 S: 14

CS3 Data Filename: FC2L_156 S: 15

CS4 Data Filename: FC2L_156 S: 16

CS5 Data Filename: FC2L_156 S: 17

CS6 Data Filename: FC2L_156 S: 18

CS7 Data Filename: FC2L_156 S: 19

CS8 Data Filename: FC2L_156 S: 20

COMPOUND	LAB FLAG ¹	RATIOS								
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8
PFBA										
PFPeA										
PFHxA			6.05	5.62	5.38	4.93	5.14	4.62	4.97	5.19
PFHpA			2.24	2.26	2.05	2.06	2.21	1.95	2.14	2.25
PFOA			2.39	1.95	2.09	2.00	2.03	2.05	2.03	2.04
PFNA			2.89	3.21	3.16	2.93	2.89	2.94	2.93	2.99
PFDA			3.61	3.72	3.10	3.53	3.18	3.05	3.12	3.05
PFUnA			5.71	4.82	4.60	4.64	4.55	4.77	4.55	
PFDaA			8.19	6.94	6.46	7.87	7.04	7.62	7.04	7.62
PFTTrDA			2.95	3.32	3.13	3.20	3.19	3.12	3.16	3.20
PFTeDA			3.16	2.93	2.95	2.73	2.72	2.78	2.74	2.84
PFBS			3.08	2.79	2.44	2.54	2.66	2.72	2.63	2.51
PFPeS			2.01	2.61	2.37	2.21	2.42	2.41	2.30	2.21
PFHxS			1.86	2.17	2.12	2.30	2.41	2.33	2.39	2.38
PFHpS			2.02	2.25	1.90	2.02	2.09	2.06	2.04	2.06
PFOS			2.51	2.22	2.65	2.59	2.65	2.61	2.70	2.55
PFNS			2.34	2.00	2.26	2.22	2.23	2.31	2.19	2.30
PFDS			2.12	2.15	2.29	2.24	2.26	2.35	2.25	2.30
PFDoS			2.30	2.13	2.19	2.18	2.37	2.35	2.25	2.26
4:2 FTS			0.43	0.39	0.39	0.43	0.41	0.43	0.40	0.47
6:2 FTS			0.52	0.45	0.46	0.45	0.45	0.43	0.44	0.42
8:2 FTS			0.57	0.63	0.53	0.53	0.56	0.57	0.55	0.56
PFOSA										
N-MeFOSA			0.60	0.59	0.51	0.50	0.56	0.49	0.53	0.53
N-EtFOSA			0.53	0.51	0.53	0.51	0.52	0.51	0.52	0.50
MeFOSAA			1.26	1.06	1.62	2.05	2.04	1.91	1.99	
EtFOSAA			1.36	1.10	1.18	1.13	1.22	1.22	1.22	
N-MeFOSE										
N-EtFOSE										
HFPO-DA			2.80	3.58	2.64	2.76	2.92	2.90	2.73	2.65
ADONA			1.17	1.18	1.15	1.11	1.45	1.15	1.17	1.12
9CI-PF3ONS			3.35	3.07	3.27	3.23	3.24	3.07	3.19	3.17
11CI-PF3OUdS			3.35	2.93	3.19	3.21	3.12	3.19	3.19	3.18
3:3 FTCA			1.85	1.84	1.93	1.95	1.99	1.98	1.98	2.02
5:3 FTCA			1.34	1.26	1.37	1.26	1.27	1.27	1.25	1.27

COMPOUND	LAB FLAG ¹	RATIOS								
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8
7:3 FTCA			0.66	0.67	0.67	0.68	0.67	0.68	0.67	0.68
PFEESA			10.2	8.67	10.3	9.17	9.58	8.96	9.22	9.41
PFMPA										
PFMBA										
NFDHA										

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: FC2-Form3C.xsl; Created: 23-Aug-2022 07:05:48; Application: XMLTransformer-1.18.38; Report Filename: PFOA_FC_LC_11-Apr-2022_FC2L__Form3C_GS98639.html; Workgroup: WG82066; Design ID: 3989]

Form 3D
LC MS/MS INITIAL CALIBRATION RATIOS

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

Instrument ID: LC MS/MS

LC Column ID: C18

CS0 Data Filename: N/A
CS1 Data Filename: FC2L_156 S: 13
CS2 Data Filename: FC2L_156 S: 14
CS3 Data Filename: FC2L_156 S: 15
CS4 Data Filename: FC2L_156 S: 16
CS5 Data Filename: FC2L_156 S: 17
CS6 Data Filename: FC2L_156 S: 18
CS7 Data Filename: FC2L_156 S: 19
CS8 Data Filename: FC2L_156 S: 20

LABELED COMPOUND	LAB FLAG ¹	RATIOS								
		CS0	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8
13C4-PFBA										
13C5-PFPeA										
13C5-PFHxA			23.5	22.8	24.1	22.5	21.7	23.4	22.9	20.9
13C4-PFHpA										
13C8-PFOA										
13C9-PFNA										
13C6-PFDA										
13C7-PFUnA										
13C2-PFDoA										
13C2-PFTeDA										
13C3-PFBS			2.60	2.66	2.57	2.65	2.86	2.73	2.68	2.60
13C3-PFHxS			2.44	2.39	2.30	2.29	2.38	2.34	2.31	2.37
13C8-PFOS			2.24	2.20	2.08	2.04	2.04	2.05	2.24	2.13
13C2-4:2 FTS			1.77	2.31	1.80	1.75	1.98	1.52	1.28	0.55
13C2-6:2 FTS			2.16	2.02	2.04	1.98	1.94	1.80	1.47	0.68
13C2-8:2 FTS			3.21	3.44	3.27	3.14	2.90	2.62	2.29	1.11
13C8-PFOSA										
D3-N-MeFOSA										
D5-N-EtFOSA										
D3-MeFOSAA										
D5-EtFOSAA										
d7-NMe-FOSE										
d9-NEt-FOSE										
13C3-HFPO-DA			3.09	2.78	2.85	2.66	2.76	2.92	3.09	2.95

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

SGS AXYS METHOD MLA-110 Rev 02

Form 4A
LC MS/MS CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
 V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

VER Data Filename: FC2L_336 S: 15

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022

LC Column ID: C18

Analysis Time: 21:07:25

COMPOUND	LAB FLAG ¹	RRT	QUANT TRANSITION	RATIO	EXPECTED CONC. (ng)	CONC. FOUND (ng)	RECOVERY (%)
PFBA		1.006	213 > 169		20.0	19.0	95.2
PFPeA		1.001	263 > 219		10.0	9.03	90.3
PFHxA		1.000	313 > 269	4.48	5.00	4.54	90.8
PFFHpA		1.000	363 > 319	2.08	5.00	4.75	95.1
PFOA		1.000	413 > 369	2.09	5.00	4.95	99.0
PFNA		1.001	463 > 419	2.94	5.00	4.82	96.4
PFDA		1.000	513 > 469	2.82	5.00	4.46	89.3
PFOA		1.000	563 > 519	4.66	5.00	4.74	94.7
PFDaA		1.000	613 > 569	7.44	4.06	4.19	103
PFTTrDA		0.958	663 > 619	3.24	5.00	5.00	100
PFTTeDA		1.000	713 > 669	2.56	5.00	4.50	90.0
PFBS		1.000	299 > 80	2.49	5.00	4.65	93.0
PFPeS		0.874	349 > 80	2.08	5.00	4.93	98.6
PFHxS		1.000	399 > 80	2.34	5.00	4.77	95.4
PFFHpS		0.936	449 > 80	2.03	5.00	4.81	96.2
PFOS		1.001	499 > 80	2.60	5.00	4.48	89.7
PFNS		1.038	549 > 80	2.23	5.00	4.58	91.7
PFDS		1.072	599 > 80	2.18	5.00	4.71	94.1
PFDoS		1.168	699 > 80	2.24	5.00	4.68	93.6
4:2 FTS		1.000	327 > 307	0.46	20.0	21.1	106
6:2 FTS		1.000	427 > 407	0.42	18.0	16.4	91.2
8:2 FTS		0.999	527 > 507	0.56	17.0	16.8	99.1
PFOSA		1.000	498 > 78		5.00	4.88	97.6
N-MeFOSA		0.999	512 > 219	0.59	5.00	5.24	105
N-EtFOSA		1.000	526 > 219	0.50	14.0	12.8	91.2
MeFOSAA		1.000	570 > 419	2.10	5.00	4.94	98.7
EtFOSAA		1.001	584 > 419	1.28	5.00	5.12	102
N-MeFOSE		1.002	616 > 59		50.0	47.5	95.1
N-EtFOSE		1.002	630 > 59		50.0	49.5	98.9
HFPO-DA		1.000	285 > 169	2.88	20.0	20.1	101
ADONA		1.101	377 > 251	1.15	20.0	17.9	89.4
9CI-PF3ONS		0.970	531 > 351	3.25	20.0	17.1	85.3
11CI-PF3OUdS		1.039	631 > 451	3.09	20.0	16.9	84.6
3:3 FTCA		0.877	241 > 177	1.87	20.0	16.3	81.3
5:3 FTCA		1.049	341 > 237	1.27	125	123	98.5
7:3 FTCA		1.364	441 > 317	0.67	125	111	88.5
PFEESA		1.036	315 > 135	9.73	5.00	4.85	97.1
PFMPA		0.673	229 > 85		10.0	8.63	86.3
PFMBA		1.057	279 > 85		5.00	4.36	87.2
NFDHA		0.989	295 > 201		10.0	15.0	150

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

SGS AXYS METHOD MLA-110 Rev 02

Form 4B

LC MS/MS CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES

2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 11-Apr-2022

VER Data Filename: FC2L_336 S: 15

Instrument ID: LCMS/MS

Analysis Date: 10-Aug-2022

LC Column ID: C18

Analysis Time: 21:07:25

LABELLED COMPOUND	LAB FLAG ¹	RRT	QUANT TRANSITION	RATIO	EXPECTED CONC. (ng)	CONC. FOUND (ng)	RECOVERY (%)
13C4-PFBA		0.997	217 > 172		40.0	38.3	95.9
13C5-PFPeA		0.876	268 > 223		20.0	22.1	111
13C5-PFHxA		1.000	318 > 273	24.2	10.0	9.35	93.5
13C4-PFHpA		0.885	367 > 322		10.0	10.1	101
13C8-PFOA		1.000	421 > 376		10.0	9.86	98.6
13C9-PFNA		1.000	472 > 427		5.00	4.88	97.6
13C6-PFDA		0.999	519 > 474		5.00	4.96	99.3
13C7-PFUnA		1.040	570 > 525		5.00	4.86	97.2
13C2-PFDoA		1.071	615 > 570		5.00	4.77	95.3
13C2-PFTeDA		1.158	715 > 670		5.00	4.89	97.8
13C3-PFBS		0.788	302 > 80	2.63	10.0	10.4	104
13C3-PFHxS		1.000	402 > 80	2.28	10.0	9.87	98.5
13C8-PFOS		1.000	507 > 80	2.21	10.1	10.3	102
13C2-4:2 FTS		0.832	329 > 81	1.78	20.2	21.0	104
13C2-6:2 FTS		1.002	429 > 81	1.96	20.0	19.3	96.4
13C2-8:2 FTS		1.268	529 > 81	3.15	20.0	19.0	94.6
13C8-PFOSA		1.136	506 > 78		10.0	9.82	98.2
D3-N-MeFOSA		1.315	515 > 219		10.0	9.40	94.0
D5-N-EtFOSA		1.348	531 > 219		10.0	9.22	92.2
D3-MeFOSAA		1.305	573 > 419		20.0	18.4	92.2
D5-EtFOSAA		1.327	589 > 419		20.0	19.2	95.8
d7-NMe-FOSE		1.297	623 > 59		100	110	110
d9-NEt-FOSE		1.333	639 > 59		100	102	102
13C3-HFPO-DA		1.030	287 > 169	2.84	40.0	40.9	102

(1) Where applicable, custom lab flags have been used on this report.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____ Andrew Porat _____

For Axys Internal Use Only [XSL Template: FC2-Form4B.xsl; Created: 23-Aug-2022 07:05:48; Application: XMLTransformer-1.18.38;
Report Filename: PFOA_FC_LC_FC2L_336S15__Form4B_SJ3107366.html; Workgroup: WG82066; Design ID: 3989]

Accreditation Scope				Serum	Solids	Tissue and Tissue Flora	Urine	Water	Water, Non-Potable	AFFF	
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	ALA	Alaska DEC ANAB D+d ** ANAB ISO 17025	ALA California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Virginia DGS Washington DE	ALA ANAB D+d ** ANAB ISO 17025 ALA Florida DOH Minnesota DOH New Jersey DEP Virginia DGS	ALA	Alaska DEC ANAB D+d ** ANAB ISO 17025 California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Pennsylvania DEP Virginia DGS Washington DE *	ANAB D+d ** ANAB ISO 17025	
BFR	BTBPE	SGS AXYS MLA-033	MLA-033		Y		Y	Y			
	DBDPE	SGS AXYS MLA-033	MLA-033		Y		Y	Y			
	HBB	SGS AXYS MLA-033	MLA-033		Y		Y	Y			
	PBEB	SGS AXYS MLA-033	MLA-033		Y		Y	Y			
Bisphenols	Bisphenol A	SGS AXYS MLA-113	MLA-113		Y			Y			
	Bisphenol AF	SGS AXYS MLA-113	MLA-113		Y			Y			
	Bisphenol B	SGS AXYS MLA-113	MLA-113		Y						
	Bisphenol E	SGS AXYS MLA-113	MLA-113		Y			Y			
	Bisphenol F	SGS AXYS MLA-113	MLA-113		Y			Y			
	Bisphenol S	SGS AXYS MLA-113	MLA-113		Y			Y			
BPA and MPE	4,4'-dihydroxy-2,2-diphenylpropane (Bisphenol A) (BPA)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-(3-carboxypropyl) phthalate (MCPP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-2-ethylhexyl phthalate (MEHP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-benzyl phthalate (MBzP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-butyl phthalate (MBP) (n + iso)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-cyclohexyl phthalate (MCHP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-ethyl phthalate (MEP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-iso-nonyl phthalate (MINP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-methyl phthalate (MMP)	SGS AXYS MLA-059	MLA-059					Y			
	Mono-(2-ethyl-5-carboxypentyl) phthalate (MECPPP)	SGS AXYS MLA-059	MLA-059								
	OC Pesticides	*Organochlorine Pesticides and PCBs* category (CA only)	EPA 608	MLA-007							Y
		EPA 625	MLA-007							Y	
Organochlorine Pesticides category (CA only)		EPA 8081	MLA-007			Y					
Pesticides category (CA only)		EPA 8270	MLA-007			Y					
2,4'-DDD		EPA 625	MLA-007							Y	
		EPA 8270	MLA-007				Y				
		EPA 1699	MLA-028			Y				Y	
		SGS AXYS MLA-028	MLA-028	Y	Y	Y	Y	Y		Y	
		SGS AXYS MLA-007	MLA-007		Y	Y			Y		
		SGS AXYS MLA-228	MLA-228		Y	Y	Y	Y	Y	Y	
2,4'-DDE		EPA 625	MLA-007							Y	
		EPA 8270	MLA-007			Y					
		EPA 1699	MLA-028			Y				Y	
		SGS AXYS MLA-028	MLA-028	Y	Y	Y	Y	Y		Y	
		SGS AXYS MLA-007	MLA-007		Y	Y		Y	Y		
		SGS AXYS MLA-228	MLA-228		Y	Y	Y	Y	Y	Y	
2,4'-DDT		EPA 625	MLA-007							Y	
		EPA 8270	MLA-007			Y					
		EPA 1699	MLA-028			Y				Y	
		SGS AXYS MLA-028	MLA-028	Y	Y	Y	Y	Y		Y	
		SGS AXYS MLA-007	MLA-007		Y	Y		Y	Y		
		SGS AXYS MLA-228	MLA-228		Y	Y	Y	Y	Y	Y	
4,4'-DDD		EPA 625	MLA-007							Y	Y
		EPA 8270	MLA-007			Y	Y	Y		Y	Y
		EPA 1699	MLA-028			Y				Y	
		SGS AXYS MLA-028	MLA-028	Y	Y	Y	Y	Y	Y		Y
		SGS AXYS MLA-007	MLA-007		Y	Y		Y	Y		
		SGS AXYS MLA-228	MLA-228		Y	Y	Y	Y	Y	Y	Y
4,4'-DDE		EPA 625	MLA-007							Y	Y
		EPA 8270	MLA-007			Y	Y	Y			

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				Serum	Solids								Tissue and Tissue Flora		Urine	Water	Water, Non-Potable								AFFF	
				CALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	CALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	ANAB D+D **	ANAB ISO 17025	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DGS	Washington DE *
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID																							
	C2-Naphthalenes	SGS AXYS MLA-021	MLA-021			Y		Y										Y								
	C2-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021			Y													Y							
	C3-Benz(a)anthracenes/Chrysenes	SGS AXYS MLA-021	MLA-021			Y		Y												Y						
	C3-Dibenzothiophene	SGS AXYS MLA-021	MLA-021			Y														Y						
	C3-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021			Y		Y												Y						
	C3-Fluorenes	SGS AXYS MLA-021	MLA-021			Y														Y						
	C3-Naphthalenes	SGS AXYS MLA-021	MLA-021			Y		Y												Y						
	C3-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021			Y														Y						
	C4-Benz(a)anthracenes/Chrysenes	SGS AXYS MLA-021	MLA-021			Y		Y												Y						
	C4-Dibenzothiophene	SGS AXYS MLA-021	MLA-021			Y														Y						
	C4-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021			Y														Y						
	C4-Naphthalenes	SGS AXYS MLA-021	MLA-021			Y														Y						
	C4-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021			Y														Y						
	Chrysene	EPA 1625	MLA-021																				Y	Y		Y
		EPA 8270	MLA-021					Y	Y	Y			Y	Y				Y								
		SGS AXYS MLA-021	MLA-021					Y		Y				Y	Y			Y	Y		Y				Y	
	Dibenzo[a,h]anthracene	EPA 1625	MLA-021						Y	Y	Y			Y	Y									Y	Y	
		EPA 8270	MLA-021					Y	Y	Y				Y	Y				Y					Y	Y	
		SGS AXYS MLA-021	MLA-021					Y		Y				Y	Y			Y	Y		Y				Y	
	Dibenzothiophene	SGS AXYS MLA-021	MLA-021					Y						Y	Y					Y					Y	
	Fluoranthene	EPA 1625	MLA-021																					Y	Y	
		EPA 8270	MLA-021					Y	Y	Y			Y	Y					Y					Y	Y	
		SGS AXYS MLA-021	MLA-021					Y		Y				Y	Y			Y	Y		Y				Y	

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Accreditation Scope				Serum		Tissue and Tissue Flora										Urine		Water	Water, Non-Portable										AFF	
SGS AXYS Analytical Services Ltd. file ref.: ACC-103 Rev. 65				ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DCS	Washington DE	ANAB D+D **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DCS	Washington DE *	ANAB D+D **	ANAB ISO 17025		
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	<	ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DCS	Washington DE	ANAB D+D **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DCS	Washington DE *	ANAB D+D **	ANAB ISO 17025	
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	<	ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DCS	Washington DE	ANAB D+D **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DCS	Washington DE *	ANAB D+D **	ANAB ISO 17025	
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	<	ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DCS	Washington DE	ANAB D+D **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DCS	Washington DE *	ANAB D+D **	ANAB ISO 17025	
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	<	ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DCS	Washington DE	ANAB D+D **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DCS	Washington DE *	ANAB D+D **	ANAB ISO 17025	
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	<	ALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	ALA	California WB																				

Accreditation Scope				SGS AXYS Analytical Services Ltd. file ref.: ACC-103 Rev. 65																																				
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids														Tissue and Tissue Flora																					
				CALA	Alaska DEC	ANAB D+D **	ANAB ISO 17025	CALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	ANAB D+D **	ANAB ISO 17025	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	Urine	Water	Water, Non-Portable	ANAB D+D **	ANAB ISO 17025	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Pennsylvania DEP	Virginia DGS	Washington DE *	ANAB D+D **	ANAB ISO 17025	
Compound Class	PCB 59 2,3,3',6-Tetrachlorobiphenyl	EPA 1628	MLA-908							Y	Y		Y	Y	Y	Y			Y										Y	Y	Y	Y	Y	Y	Y	Y				
		EPA 1668	MLA-010																						Y															
	PCB 59 2,3,3',6-Tetrachlorobiphenyl	SGS AXYS MLA-010	MLA-010	Y				Y											Y	Y					Y					Y	Y	Y	Y	Y	Y	Y	Y			
		SGS AXYS MLA-210	MLA-210					Y		Y						Y							Y								Y		Y	Y	Y	Y	Y	Y		
		SGS AXYS MLA-908	MLA-908							Y					Y	Y				Y			Y							Y		Y	Y	Y	Y	Y	Y	Y		
		EPA 1628	MLA-908							Y																					Y									
	PCB 6 2,3'-Dichlorobiphenyl	EPA 1668	MLA-010							Y	Y		Y	Y	Y	Y			Y				Y							Y	Y		Y	Y	Y	Y	Y			
		EPA 8270	MLA-007																																					
		SGS AXYS MLA-010	MLA-010	Y				Y		Y									Y	Y					Y															
		SGS AXYS MLA-210	MLA-210					Y		Y						Y				Y			Y		Y						Y		Y	Y	Y	Y	Y	Y		
		SGS AXYS MLA-908	MLA-908												Y	Y				Y			Y		Y						Y	Y	Y	Y	Y	Y	Y	Y		
	PCB 60 2,3,4,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010							Y	Y		Y	Y	Y	Y				Y			Y							Y	Y		Y	Y	Y	Y	Y			
		SGS AXYS MLA-010	MLA-010	Y				Y											Y	Y					Y						Y									
		SGS AXYS MLA-210	MLA-210					Y								Y							Y			Y						Y		Y	Y	Y	Y	Y		
		SGS AXYS MLA-908	MLA-908																																					

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Accreditation Scope				SGS AXYS Analytical Services Ltd. file ref.: ACC-103 Rev. 65																					
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum Solids																Tissue and Tissue Flora	Urine	Water	Water, Non-Potable	AFF	
				ALA	Alaska DEC	ANAB DoD **	ANAB ISO 17025	ALA	California WB	Florida DOH	Maine DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	ANAB DoD **	ANAB ISO 17025	ALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	Washington DE *	ANAB DoD **
Compound Class	Compound	DoD QSM Version 5.3	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		DoD QSM Version 5.4	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		Draft EPA 1633	MLA-110	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		SGS AXYS MLA-060	MLA-060																						
	Perfluorohexanesulfonate (PFHxS)	SGS AXYS MLA-041	MLA-041																						
		SGS AXYS MLA-043	MLA-043																						
		SGS AXYS MLA-042	MLA-042	Y																					
		SGS AXYS MLA-110	MLA-110	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		DoD QSM Version 5.3	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		DoD QSM Version 5.4	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		Draft EPA 1633	MLA-110	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		SGS AXYS MLA-060	MLA-060																						
	Perfluorohexanoate (PFHxA)	SGS AXYS MLA-041	MLA-041																						
		SGS AXYS MLA-043	MLA-043																						
		SGS AXYS MLA-042	MLA-042	Y																					
		SGS AXYS MLA-110	MLA-110	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		DoD QSM Version 5.3	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		DoD QSM Version 5.4	MLA-110		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		Draft EPA 1633	MLA-110	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		SGS AXYS MLA-060	MLA-060																						
	Perfluorononanesulfonate (PFNS)	SGS AXYS MLA-041	MLA-041																						

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				Serum <div>CALA Alaska DEC ANAB D+d ** ANAB ISO 17025</div>	Solids <div>CALA California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Virginia DGS Washington DE</div>	Tissue and Tissue Flora <div>ANAB D+d ** ANAB ISO 17025 CALA Florida DOH Minnesota DOH New Jersey DEP Virginia DGS</div>	Urine <div>CALA</div>	Water <div>CALA</div>	Water, Non-Potable <div>Alaska DEC ANAB D+d ** ANAB ISO 17025 California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Pennsylvania DEP Virginia DGS Washington DE *</div>	AFFF <div>ANAB D+d ** ANAB ISO 17025</div>
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID							
	Metformin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Methylprednisolone	Metoprolol Miconazole	MLA-075 MLA-075 EPA 1694 MLA-075 SGS AXYS MLA-075							
	Minocycline	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Naproxen	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Norflloxacin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Norfluoxetine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Norgestimate	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Norverapamil	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Olfloxacn	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Ormetoprim	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Oxacillin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Oxolinic acid	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Oxycodone	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Oxytetracycline (OTC)	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Paroxetine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Penicillin G	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Penicilin V	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Prednisolone	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Prednisone	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Promethazine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Propoxyphene	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Ranitidol	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Roxithromycin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sarafloxacin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sertraline	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Simvastatin	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfachloropyridazine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfadiazine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfadimethoxine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfamerazine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfamethazine	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfamethizole	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfamethoxazole	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfanilamide	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Sulfathiazole	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							
	Tetracycline (TC)	EPA 1694 MLA-075 SGS AXYS MLA-075	MLA-075 MLA-075 MLA-075							

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-103 Rev. 65

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids	Tissue and Tissue Flora	Urine	Water	Water, Non-Portable	AFFF
				CALA	Alaska DEC ANAB DoD ** ANAB ISO 17025 CALA California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Virginia DGS Washington DE	ANAB DoD ** ANAB ISO 17025 CALA Florida DOH Minnesota DOH New Jersey DEP Virginia DGS	CALA	CALA	Alaska DEC ANAB DoD ** ANAB ISO 17025 California WB Florida DOH Maine DOH Minnesota DOH New Jersey DEP New York DOH Pennsylvania DEP Virginia DGS Washington DE ** ANAB DoD ** ANAB ISO 17025	
ANAB DoD	ANSI National Accreditation Board, certificate ADE-1861, (US DoD QSM 5.3 and 5.4 Standard)		 Certificate ADE-1861							
CALA	Canadian Association for Laboratory Accreditation Inc., Lab ID A2637, (ISO/IEC 17025:2017 Standard)		